Cosumnes River College
2005-2006 Catalog

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A Word from the College President

Welcome to Cosumnes River College.

At Cosumnes River College, we are proud that the 2005-06 academic year marks the 35th year of service to our students and our community. Since our inception in 1970, the college has served almost a quarter of a million students who are now making significant and lasting contributions to a wide range of professions, including those in business and industry, education, medicine, health, law, public service, arts and entertainment, and technology – to name a few. Soon, you will be amongst those ranks of students who have received an exemplary and affordable education.

Our faculty, staff, and students continue to inspire academic excellence, personal growth, and civic responsibility. Our campus possesses a dynamic and supportive learning environment that draws from our talented, culturally rich, and diverse students, faculty, and staff.

We invite you to take a close look at our comprehensive academic programs and curriculum – you’ll like what you see. CRC offers a broad range of courses and services to meet your needs. Some programs, like those in Agriculture, Dietetics, Veterinary Technology, Communications Media, Organizational Communication, Medical Assisting, and Construction are the only ones in the region. Whether its transferring to the university, obtaining a general degree or certificate for a specific profession, upgrading your skills, or simply taking courses to increase your breadth of knowledge, our goal is to help you succeed.

Throughout the year, you’ll witness the construction of new facilities on campus to better serve you. We will be opening our new Learning Resources Center near the library and expanding our college bookstore. As we continue to grow and extend our reach in the community, you will also see other campus improvements that will enhance your overall learning experience.

On behalf of my colleagues at Cosumnes River College, welcome to our college. We thank you for the confidence you have instilled in us to assist you in achieving your educational goals.

Continued Success,

Francisco C. Rodriguez

Francisco C. Rodriguez
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Calendar (Summer 2005, Fall 2005, Spring 2006)</td>
<td>iv</td>
</tr>
<tr>
<td>Alphabetical Subject Directory</td>
<td>1</td>
</tr>
<tr>
<td>Areas of Study</td>
<td>2</td>
</tr>
<tr>
<td>About the College</td>
<td>3</td>
</tr>
<tr>
<td>Admission Requirements and Procedures</td>
<td>6</td>
</tr>
<tr>
<td>Student Support Services</td>
<td>9</td>
</tr>
<tr>
<td>Financial Assistance</td>
<td>15</td>
</tr>
<tr>
<td>Graduation Requirements</td>
<td>18</td>
</tr>
<tr>
<td>Alternative Credit / Study Options</td>
<td>20</td>
</tr>
<tr>
<td>California State Universities (G.E. Requirements for Transfer)</td>
<td>23</td>
</tr>
<tr>
<td>Transfer Courses for C.S.U. System</td>
<td>24</td>
</tr>
<tr>
<td>University of California System Wide (G.E. Requirements for Transfer)</td>
<td>26</td>
</tr>
<tr>
<td>California Articulation Number System (CAN)</td>
<td>27</td>
</tr>
<tr>
<td>Intersegmental General Education Transfer Curriculum (IGETC)</td>
<td>28</td>
</tr>
<tr>
<td>Transfer Courses for UC System</td>
<td>29</td>
</tr>
<tr>
<td>Degrees &amp; Certificates</td>
<td>30</td>
</tr>
<tr>
<td>Description of Courses / Prerequisites, Co-Prerequisites and Advisories</td>
<td>33</td>
</tr>
<tr>
<td>Official Course Prefix</td>
<td>34</td>
</tr>
<tr>
<td>Cross Listed and Cross Referenced Courses</td>
<td>35</td>
</tr>
<tr>
<td>Campus Map</td>
<td>37</td>
</tr>
<tr>
<td>Map of Area</td>
<td>38</td>
</tr>
<tr>
<td>College &amp; Academic Regulations</td>
<td>39</td>
</tr>
<tr>
<td>Right to Know</td>
<td>43</td>
</tr>
<tr>
<td>College Administration</td>
<td>338</td>
</tr>
<tr>
<td>Faculty Code of Ethics</td>
<td>339</td>
</tr>
<tr>
<td>Faculty &amp; Staff</td>
<td>339</td>
</tr>
<tr>
<td>Renumbering Guide, New Course Numbering System</td>
<td>349</td>
</tr>
<tr>
<td>Index</td>
<td>356</td>
</tr>
</tbody>
</table>

**Board of Trustees**

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**Cover Design:** Kristie West and Andrea Takeda

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iii
2005-2006 ACADEMIC CALENDAR

SUMMER SESSION 2005

June 6................................................................................................................................................................. Instruction begins for 1st session
June 13.............................................................................................................................................................. Instruction begins for 8-Week / 2nd Session
June 17......................................................................................................................................................... Last Day to Petition for August Graduation and Certificates
June 20.......................................................................................................................................................... Instruction begins for 6-week / 2nd session
June 30.......................................................................................................................................................... End of 4-Week / 1st Session
July 4.................................................................................................................................................... Independence Day holiday
July 14.......................................................................................................................................................... End of 6-Week / 1st Session
July 5........................................................................................................................................................... Instruction Begins - 4-Week / 2nd Session
July 28.......................................................................................................................................................... End of 4-Week / 2nd Session
July 28.......................................................................................................................................................... End of 8-Week 1st Session
July 28.......................................................................................................................................................... End of 6-Week / 2nd Session
August 4....................................................................................................................................................... End of 8-Week 2nd Session
August 4....................................................................................................................................................... Grades due

FALL SEMESTER 2005

August 11, 12 ........................................................................................................................................ Instructional Improvement Days for Faculty
August 15........................................................................................................................................................ Instruction begins
September 5............................................................................................................................................... Labor Day holiday
October 7.................................................................................................................................................. Last Day to Petition for December Graduation and Certificates
November 11........................................................................................................................................ Veterans Day holiday
November 20........................................................................................................................................ Last day to drop full-semester classes
November 24-27 ..................................................................................................................................... Thanksgiving holiday
December 16......................................................................................................................................... Semester ends
December 19-30..................................................................................................................................... Winter recess
January 3................................................................................................................................................ Grades due
January 2-11........................................................................................................................................ Semester Break

SPRING SEMESTER 2006

January 12, 13 ........................................................................................................................................ Instructional Improvement Days for Faculty
January 16................................................................................................................................................... Dr. Martin Luther King’s Birthday holiday
January 17................................................................................................................................................... Lincoln’s Birthday holiday
February 17................................................................................................................................................ Washington’s Birthday holiday
February 20.............................................................................................................................................. Last Day to Petition for May Graduation and Certificates
March 3.......................................................................................................................................................... Last day to drop full-semester classes
April 10-16.................................................................................................................................................. Spring recess
April 30......................................................................................................................................................... Last day to drop full-semester classes
May 24........................................................................................................................................................... Graduation / End of semester
May 29........................................................................................................................................................ Memorial Day holiday
May 30........................................................................................................................................................ Grades due

Note: Fall and summer registration take place at the same time. A complete calendar including important deadlines can be found in the class schedule. TES (Telephone Enrollment Services) is available every day, including holidays. Online services are available every day through the college website — www.crc.losrios.edu. Access to TES and online services may be limited during Priority registration and during system maintenances.

REVISIONS OF REGULATIONS

The Los Rios Community College District and Cosumnes River College have made every reasonable effort to determine that everything stated in this catalog is accurate. Courses and programs offered, together with other matters contained herein, are subject to change without notice by the Administration of the Los Rios Community College District and Cosumnes River College for reasons related to student enrollment, level of financial support, or for any other reason, at the discretion of the District and the College. The District and the College further reserve the right to add, amend, or repeal any of their rules, regulations, policies, and procedures.

The newest updated information for our catalog is to be found on our CRC Catalog web site at http://www.crc.losrios.edu/catalog/
<table>
<thead>
<tr>
<th>Subject</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>46</td>
</tr>
<tr>
<td>Advertising/Public Relations</td>
<td>50</td>
</tr>
<tr>
<td>Agriculture</td>
<td>51</td>
</tr>
<tr>
<td>Agriculture Business</td>
<td>55</td>
</tr>
<tr>
<td>Allied Health</td>
<td>56</td>
</tr>
<tr>
<td>American Studies (see Interdisciplinary Studies)</td>
<td>56</td>
</tr>
<tr>
<td>Animal Science</td>
<td>58</td>
</tr>
<tr>
<td>Anthropology</td>
<td>59</td>
</tr>
<tr>
<td>Architectural Design Technology</td>
<td>61</td>
</tr>
<tr>
<td>Architecture</td>
<td>64</td>
</tr>
<tr>
<td>Art, Art History and Art New Media</td>
<td>67</td>
</tr>
<tr>
<td>ASSET Program</td>
<td>74</td>
</tr>
<tr>
<td>Astronomy</td>
<td>74</td>
</tr>
<tr>
<td>Athletics</td>
<td>280</td>
</tr>
<tr>
<td>Automotive Mechanics Technology</td>
<td>73</td>
</tr>
<tr>
<td>Biology</td>
<td>79</td>
</tr>
<tr>
<td>Broadcast Journalism</td>
<td>84</td>
</tr>
<tr>
<td>Building Inspection Technology</td>
<td>85</td>
</tr>
<tr>
<td>Business</td>
<td>90</td>
</tr>
<tr>
<td>Chemistry</td>
<td>99</td>
</tr>
<tr>
<td>Communication Studies</td>
<td>102</td>
</tr>
<tr>
<td>Communications Media</td>
<td>106</td>
</tr>
<tr>
<td>Computer Information Science</td>
<td>112</td>
</tr>
<tr>
<td>Construction</td>
<td>140</td>
</tr>
<tr>
<td>Construction Management Technology</td>
<td>142</td>
</tr>
<tr>
<td>Culinary Arts Management</td>
<td>145</td>
</tr>
<tr>
<td>Desktop Publishing (see Computer Information Science)</td>
<td>145</td>
</tr>
<tr>
<td>Dietetics Technology (see Nutrition and Foods)</td>
<td>145</td>
</tr>
<tr>
<td>Digital Media</td>
<td>150</td>
</tr>
<tr>
<td>Early Childhood Education</td>
<td>151</td>
</tr>
<tr>
<td>Economics</td>
<td>161</td>
</tr>
<tr>
<td>Education/Teaching</td>
<td>163</td>
</tr>
<tr>
<td>Emergency Medical Technology</td>
<td>165</td>
</tr>
<tr>
<td>Engineering</td>
<td>167</td>
</tr>
<tr>
<td>English</td>
<td>170</td>
</tr>
<tr>
<td>English as a Second Language</td>
<td>179</td>
</tr>
<tr>
<td>Environmental Technology</td>
<td>184</td>
</tr>
<tr>
<td>Ethnic Studies (see Interdisciplinary Studies)</td>
<td>184</td>
</tr>
<tr>
<td>Family and Consumer Science</td>
<td>192</td>
</tr>
<tr>
<td>Film &amp; Media Studies</td>
<td>194</td>
</tr>
<tr>
<td>Finance</td>
<td>196</td>
</tr>
<tr>
<td>Fire Technology</td>
<td>197</td>
</tr>
<tr>
<td>Foreign Languages (see Spanish and Vietnamese)</td>
<td>197</td>
</tr>
<tr>
<td>General Education</td>
<td>200</td>
</tr>
<tr>
<td>Geography</td>
<td>201</td>
</tr>
<tr>
<td>Geology</td>
<td>206</td>
</tr>
<tr>
<td>Health Education</td>
<td>209</td>
</tr>
<tr>
<td>Health Information Technology</td>
<td>211</td>
</tr>
<tr>
<td>History</td>
<td>215</td>
</tr>
<tr>
<td>Honors</td>
<td>218</td>
</tr>
<tr>
<td>Horticulture</td>
<td>221</td>
</tr>
<tr>
<td>Human/Career Development</td>
<td>226</td>
</tr>
<tr>
<td>Human Services</td>
<td>230</td>
</tr>
<tr>
<td>Humanities</td>
<td>233</td>
</tr>
<tr>
<td>Humanities (also see Interdisciplinary Studies)</td>
<td>233</td>
</tr>
<tr>
<td>Interdisciplinary Studies</td>
<td>235</td>
</tr>
<tr>
<td>Journalism</td>
<td>238</td>
</tr>
<tr>
<td>Liberal Studies for Elementary Education (see Education/Teaching)</td>
<td>241</td>
</tr>
<tr>
<td>Library</td>
<td>241</td>
</tr>
<tr>
<td>Management</td>
<td>242</td>
</tr>
<tr>
<td>Management Information Systems</td>
<td>121</td>
</tr>
<tr>
<td>Marketing</td>
<td>248</td>
</tr>
<tr>
<td>Mathematics</td>
<td>251</td>
</tr>
<tr>
<td>Medical Assisting</td>
<td>258</td>
</tr>
<tr>
<td>Medical Records (see Health Information Technology)</td>
<td>258</td>
</tr>
<tr>
<td>Medical Technology (see Emergency Medical Technology - EMT)</td>
<td>258</td>
</tr>
<tr>
<td>Music</td>
<td>261</td>
</tr>
<tr>
<td>Nutrition &amp; Foods</td>
<td>268</td>
</tr>
<tr>
<td>Office Administration (see Business)</td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td>272</td>
</tr>
<tr>
<td>Photography</td>
<td>275</td>
</tr>
<tr>
<td>Physical Education</td>
<td>280</td>
</tr>
<tr>
<td>Physical Science</td>
<td>291</td>
</tr>
<tr>
<td>Physics</td>
<td>291</td>
</tr>
<tr>
<td>Plant Science</td>
<td>295</td>
</tr>
<tr>
<td>Political Science</td>
<td>297</td>
</tr>
<tr>
<td>Psychology</td>
<td>299</td>
</tr>
<tr>
<td>Radio Production</td>
<td>302</td>
</tr>
<tr>
<td>Real Estate</td>
<td>303</td>
</tr>
<tr>
<td>Science</td>
<td>306</td>
</tr>
<tr>
<td>Sign Language Studies</td>
<td>308</td>
</tr>
<tr>
<td>Small Business Management/Entrepreneurship (see Business)</td>
<td>308</td>
</tr>
<tr>
<td>Social Science</td>
<td>310</td>
</tr>
<tr>
<td>Sociology</td>
<td>312</td>
</tr>
<tr>
<td>Spanish</td>
<td>314</td>
</tr>
<tr>
<td>Speech (see Communication Studies)</td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>256</td>
</tr>
<tr>
<td>Student Government</td>
<td>318</td>
</tr>
<tr>
<td>Television Production</td>
<td>319</td>
</tr>
<tr>
<td>Theatre Arts</td>
<td>321</td>
</tr>
<tr>
<td>Veterinary Technology</td>
<td>326</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>331</td>
</tr>
<tr>
<td>Welding</td>
<td>334</td>
</tr>
<tr>
<td>Women’s Studies (see Interdisciplinary Studies)</td>
<td>336</td>
</tr>
<tr>
<td>Work Experience</td>
<td>336</td>
</tr>
</tbody>
</table>
### AREAS OF STUDY

#### BUSINESS
- Accounting ................................................................. 46
- Agriculture Business .................................................. 46
- Business (includes International Business) ...................... 90
- Computer Information Science ....................................... 112
- Economics ....................................................................... 161
- Finance ......................................................................... 196
- Management ................................................................. 242
- Marketing ........................................................................ 248
- Office Administration (see Business) ............................... 303
- Real Estate ..................................................................... 303

#### COMMUNICATIONS MEDIA
- Advertising/Public Relations .......................................... 50
- Broadcast Journalism ..................................................... 84
- Communications Media .................................................. 106
- Digital Media .................................................................... 150
- Film & Media Studies ..................................................... 194
- Journalism ....................................................................... 238
- Radio Production ............................................................ 302
- Television Production .................................................... 319

#### HEALTH
- Allied Health ..................................................................... 56
- Dietetics Technology ...................................................... 269
- Emergency Medical Technology (EMT) ............................ 165
- Environmental Technology (see Science) ......................... 209
- Health Education .......................................................... 211
- Health Information Technology ........................................ 211
- Medical Assisting ............................................................ 258
- Medical Records (see Health Information Technology) .... 258
- Medical Technology (see Emergency Medical Technology - EMT) 268
- Nutrition and Foods ....................................................... 268
- Veterinary Technology (see Occupational Technology) .... 268

#### HUMANITIES AND THE ARTS
- Architecture (see Occupational Technology) ...................... 67
- Communication Studies .................................................. 102
- Dance (see Physical Education) ........................................ 218
- History (see Social and Behavioral Science) ...................... 218
- Honors ........................................................................... 233
- Interdisciplinary Studies ............................................... 235
- Music .............................................................................. 261
- Philosophy ...................................................................... 272
- Speech (see Communication Studies) ............................... 321
- Theatre Arts .................................................................... 321

#### HUMAN SERVICES
- Early Childhood Education .............................................. 151
- Education/Teaching ....................................................... 163
- Family & Consumer Science ........................................... 192
- Fire Technology (see Occupational Technology) ............... 226
- Emergency Medical Technology (see Health) .................... 226
- Human/Career Development ......................................... 230
- Human Services .............................................................. 230
- Library ............................................................................ 241
- Liberal Studies for Elementary Education (see Education/Teaching) 241
- Photography ................................................................. 275
- Student Government ...................................................... 318

#### LANGUAGE ARTS
- Communication Studies .................................................. 102
- English ........................................................................... 170
- English as a Second Language ........................................ 179
- Sign Language Studies ................................................... 308
- Spanish ........................................................................... 314
- Speech (see Communication Studies) ............................... 331
- Vietnamese ....................................................................... 331

#### MATHMATICS
- Mathematics .................................................................... 251
- Statistics .......................................................................... 256

#### OCCUPATIONAL TECHNOLOGY
- Agriculture ..................................................................... 51
- Animal Science ............................................................... 58
- Architectural Design Technology ...................................... 61
- Architecture ..................................................................... 64
- Automotive Mechanics Technology (see also Welding) .... 72
- Building Inspection Technology ....................................... 85
- Construction ................................................................. 140
- Construction Management Technology ......................... 140
- Culinary Arts Management .............................................. 145
- Environmental Technology (see Science) ......................... 197
- Fire Technology .............................................................. 221
- Horticulture ...................................................................... 221
- Landscape Design (see Horticulture) ................................. 295
- Plant Science .................................................................... 326
- Veterinary Technology .................................................. 334

#### PHYSICAL EDUCATION / ATHLETICS
- Physical Education (includes Dance) ............................... 280
- Athletics .......................................................................... 280

#### SCIENCE
- Astronomy (see Physics, Physical Science, Astronomy) ........ 79
- Biology ............................................................................ 79
- Chemistry ........................................................................ 99
- Engineering ..................................................................... 167
- Environmental Technology ............................................. 184
- Geography ....................................................................... 201
- Geology ........................................................................... 206
- Physical Science ............................................................. 291
- Physics ............................................................................ 291

#### SOCIAL AND BEHAVIORAL SCIENCE
- Anthropology ..................................................................... 59
- Communication Studies .................................................. 102
- Economics (see Business) ............................................... 201
- Geography ....................................................................... 201
- History ............................................................................. 212
- Political Science ............................................................. 297
- Psychology ....................................................................... 299
- Social Science ................................................................... 310
- Sociology ......................................................................... 312
ABOUT THE COLLEGE

Since its founding in 1970, Cosumnes River College has lived by this motto: “commitment, quality and innovation.”

- Commitment to meeting our community’s needs
- Quality programs and services for students
- Innovative teaching techniques and state-of-the-art equipment

Cosumnes River College is located near the southern edge of Sacramento, at the heart of some of the city’s fastest-paced suburban development. Partnerships with local, state and national business, industry and organizations offer our students the best in educational programs and facilities.

**Cosumnes River College Mission Statement**
The mission of Cosumnes River College is to provide opportunities for individuals to achieve their maximum potential and contribute to the well being of the larger community.

To achieve this mission, the college provides:
- Transfer, general and career/technical education at the lower division level;
- Training and services that contribute to the continuous improvement of the workforce and the quality of life in the region;
- Instruction in basic skills;
- Appropriate support and instructional services to help students succeed at the community college level, to transfer to four-year colleges and universities and/or to transition to work; and
- Life-long learning and community service courses and activities.

**Cosumnes River College Vision Statement**
Cosumnes River College provides an inclusive learning environment and creates dynamic opportunities for the intellectual growth of students, staff and our community.

To fulfill its mission, the college provides student access, supports academic quality and rigor, and promotes student success in an atmosphere of collegiality, cooperation and innovation. To do this, the college:

- Values students’ goals and needs, assesses its performance in meeting those needs, and improves its processes and allocates its resources in response to that assessment;
- Communicates its direction and purpose so all members of the college community understand and support the mission through their work;
- Recognizes the value of seeking input from individuals and/or groups affected by decisions;
- Recognizes that all members of the college community share responsibility for student success;
- Recognizes and values that all college programs and services contribute to student success;
- Fosters a culture where policies, practices, values and behavior promote effective intercultural competence, thereby creating a community that
  - values all the people who work in it;
  - understands the larger community in which it operates;
- embraces its students as valuable members of both the college and extended communities;
- promotes inclusiveness;
- embraces at all levels the process of learning about differences and commonalities; and
- empowers students to be prepared to make a difference in the world;
- Supports internal and external accountability to measure the accomplishment of the college mission. In so doing, the college
  - uses data to identify problem areas,
  - hypothesizes remedies,
  - implements changes,
  - and assesses and communicates the results of those changes to strengthen planning and decision-making.

Cosumnes River College provides many types of education to meet a variety of student, staff and community needs:

**General Education:** The college is committed to the principle of providing a broad general education that includes: Natural Science, Social and Behavioral Sciences, Humanities and the Arts, and Language and Critical Thinking. The college continues to offer other courses that enhance life-long learning and prepare students for the needs and demands of everyday life. All these skills help create a balanced life in a democratic society that is diverse in its social, cultural, and educational backgrounds.

**Transfer Education:** Many courses are designed to enable students to fulfill the transfer requirements of four-year colleges and/or universities, particularly those in the UC and CSU systems. College staff are continually developing lower division educational programs that parallel the first- and second-year courses of those institutions. (See Transition Services on page 14) Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

**Career/Technical Education:** These programs and courses are designed to prepare students for employment in business and industry or to improve their current job skills.

**Basic Skills Education:** Courses designed to assist students who are deficient in the basic skills of reading, writing, speaking and analyzing are offered in several non-degree applicable programs.

**Continuing Education:** These services are designed for anyone interested in the courses and programs offered by the college.

**Contract Education / Contract Training:** Customized courses (on-site or off) for Sacramento area businesses, governmental agencies and professional organizations, both credit and non-credit, are now offered in cooperation with Los Rios Community College District’s Center for Business and Economic Development. For more information about these offerings, see page 5.

The Los Rios Community College District and Cosumnes River College do not discriminate on the basis of race, color, marital status, religion, national origin, age, age over forty, gender, sexual orientation, physical or mental disability, or Vietnam-era veteran status. For more information on policies, see page 43 of the college catalog.
**Staff Development:** CRC promotes quality and innovation in its faculty and staff by offering activities designed to further enhance classroom instruction and quality of service, which include "Flex Days" instructional activities, as well as on-going training sessions for faculty and staff.

**Community Education:** These programs are designed to respond to community needs and expectations with auxiliary programs such as credit and non-credit classes, workshops, lecture and film series, concerts, art exhibits, television courses, continuing education courses, community services classes, and specially-funded projects.

In addition to academic courses and programs, CRC offers a number of support services to assist students in achieving academic success, including:

**Matriculation:** Matriculation services are designed to enhance the student’s ability to achieve his/her educational goals. Matriculation encompasses an admission process, pre-enrollment assessment, counseling and an orientation to college programs, services and procedures. (See page 6-7).

**Counseling:** A variety of counseling services are available to help students realize their academic, career and personal goals. Seeing a counselor can be helpful in clarifying issues and exploring options. (See page 10).

**Career Services:** Career and job services are available in the "one stop" Transition Center. Students may research careers or educational programs and receive assistance with career-related activities. (See page 14).

**ACCREDITATION**

Cosumnes River College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, 3402 Mendocino Avenue, Santa Rosa, CA 95403, phone (707) 569-9177, an institutional accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and the U.S. Department of Education. In addition, the Automotive Mechanics Technology program is certified by the National Automotive Technician Education Foundation in all eight areas of Automotive Service Excellence. The Veterinary Technology program has been accredited by the American Veterinary Medical Association, and the Medical Assisting program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Committee on Accreditation for Medical Assistant Education. The Health Information Technology program is also accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the Council on Accreditation of the American Health Information Management Association. The Dietetic Technician program is accredited by the American Dietetic Association. The University of California, California State University system, and all other accredited colleges and universities give full credit for appropriate courses completed at Cosumnes River College. The college holds institutional memberships in the American Association of Community and Junior Colleges and the Community College League of California.

**STUDENT ACCESS**

Cosumnes River College, as a member of the multi-college Los Rios Community College District, endorses the open door policy of the district. As a multi-cultural institution, its academic programs and services are open to all persons without regard to race, color, marital status, religion, national origin, age, age over forty, gender, sexual orientation, physical or mental disability or Vietnam-era veteran status.

**Equal Opportunity:** CRC is committed to identifying and modifying any action that may alienate individuals and groups from each other. To do this, the college has:

- Established varied programs and services that ensure equal opportunities for women, minority, low-income, disabled, and disadvantaged students to succeed in all areas within the college program;
- Assured equal opportunity for ethnic minorities, disabled persons and women in the areas of employment, promotions and assignments; and
- Implemented programs to increase understanding and sensitivity among members of the majority group to the rising aspirations and occasionally unique needs of minority groups.

**Open Courses:** Cosumnes River College places an emphasis on providing both general education and high quality career/technical programs and is committed to offering day, evening, weekend and summer courses. The policy of this district is that, unless specifically exempted by statute or regulation, every course, course section, or class reported for state aid, wherever offered and maintained by the district, shall be fully open to enrollment and participation by any person who has been admitted to the college(s) and who meets such prerequisites as may be established.

**HISTORY AND FACILITIES**

Cosumnes River College is one of four community colleges within the Los Rios Community College District.

**Los Rios Community College District:** The Los Rios District was founded in July 1965 when voters in 10 separate school districts covering five counties opted to consolidate. The election established a regional community college district of 2,400 square miles and brought together, under one governing board, the then existing Sacramento City and American River colleges.

The newly established seven-member board approved a Master Facility Need Study in February 1967, of which plans for Cosumnes River College were a part. The plan called for a phased construction of facilities, with the first phase to be completed in the fall of 1970, to accommodate 2,000 students. Early in 1967 the Board of Trustees, the campus architects and a citizens’ advisory board studied various sites. Eventually a 180-acre site 12 miles south of metropolitan Sacramento was selected.

**Cosumnes River College:** The college opened on September 14, 1970, with 1,800 day and 350 evening students. Facilities included the science building, automotive and technology complex, physical education building, pool, and the library building. In September 1975, the Business/Social Science classroom building was dedicated, the first since the college opened. The computer laboratory, located there, is equipped with state-of-the-art computer equipment that supports many areas of the college curriculum.
The campus consists of 13 permanent buildings, including fiber optics and satellite transmission capabilities for the latest in information/communication services. The Cafeteria/College Center opened in Fall 1990 with facilities for both the instructional foodservive program and student/staff needs. Phase II of the College Center opened in June 1991 for Admissions/Records, Financial Aid, Business Services, Administration and the Bookstore. A Visual and Performing Arts complex was opened in October of 1995, thus completing the college's original facilities master plan. In addition, the permanent Child Development Center was completed in March 2002, and in December, 2003 staff moved into the new Southeast Office Complex (SOC). Fall 2005 will see the opening of a new learning resource center building; planning is underway for additional instructional facilities to be completed over the next few years.

The college offers a broad option of more than 60 career/technical degree programs, and a comprehensive curriculum of transfer courses. Cosumnes River College has emerged with very much its own identity, small enough to offer personalized attention, yet large enough to offer a comprehensive postsecondary education to the community it serves.

**Facilities Usage:** In accordance with the Civic Center Act, the college is designated as a place for community functions of various kinds. College facilities are made available for use by authorized community groups when such use does not interfere with the educational program. To rent college facilities, contact College Operations at 691-7251.

**OUTREACH PROGRAMS**

Cosumnes River College is committed to bringing the college to the community wherever there is sufficient student interest to support college classes.

Learning sites are tied to the main campus through the instructional television system. This system enables classes with a low enrollment at any one site to be offered by combining the students at several sites into one class and thereby enhancing learning opportunities.

Outreach students, as well as interactive television and online students, can now continue their education without being physically present on the main campus for each class. This flexibility has dramatically increased the educational opportunities available to Cosumnes River College students.

**Greater Sacramento Small Business Development Center (SBDC):**

The Sacramento Small Business Development Center offers personalized business counseling in:

- Business Management
- Finance Resource
- Marketing Strategy

To make a confidential appointment, call the SBDC at 563-3214 or E-mail: info@sbdc.net or visit us at www.sbdc.net. The SBDC is located at 1410 Ethan Way, between Hallmark and Hurley.

**Contract Classes/Los Rios Community College District's Business and Economic Development Center:** Customized training and education for employers and their employees in the Sacramento area is offered by CRC in collaboration with the Los Rios CCD Training Source. Contract courses are scheduled at any time throughout the year and vary from a single workshop to a series of classes provided over a few weeks or months. The Center also conducts on-site college credit and degree programs; customized instruction for an employer's assessed training requirements; as well as performance consulting. Since 1985, the Center has provided training to more than 58,000 Sacramento area employees, including Intel, Bank of America, Aerojet General, SMUD, among others, and many state and local public agencies and school districts. For more information, call (916) 563-3230.
Matriculation is a state-mandated program designed to assist students in accomplishing their educational goals. It is an agreement between the college and the students.

Cosumnes River College agrees to provide an organized process of admissions, assessment and testing, orientation, counseling and student progress follow-up. The students agree to: declare a specific educational objective, attend class regularly, complete assigned course work and maintain satisfactory progress toward the achievement of their educational plans.

The following matriculation services are designed to ensure that community college students receive every opportunity to achieve their educational goals:

**WHO IS ELIGIBLE TO APPLY FOR ENROLLMENT?**

Cosumnes River College is open to all residents who are high school graduates or who are at least 18 years of age and able to profit from the instruction offered. A completed application with declared residency and signature page must be on file prior to enrolling (registering) in classes. Others may be admitted upon approval by the college. If you are a permanent resident, verification of your residency may be required.

**COURSES OPEN TO ALL**

Every course, course section, or class offered by the Los Rios Community College District that receives state support is open to all students who have been admitted to the college and meet the course requirements (prerequisites), unless specifically exempted by law, and as may be established according to Chapter II, Division 2, Part VI, Title 5 of the California Administrative Code, commencing with Section 51006.

**Limited English Proficiency:** Career/Technical education classes are open to all students. Although the lack of proficiency in English is no barrier to enrollment in vocational education courses, it is suggested the students deficient in English utilize the services of the college that are provided for persons who are limited in English proficiency or take courses in English as a Second Language.

**Contamos con Clases de Educacion.** Vocacional para distintas ramas del trabajo abiertas a todos los estudiantes y, aun para aquellos que todavia no dominan el idioma ingles. Aunque la falta de conocimiento del idioma ingles no es un impedimento para registrarse endichos cursos, sugerimos a los estudiantes deficientes en el idioma ingles o para aquellos que estudian ingles como segunda lengua.

**Advanced Education for High School Students:** The college may allow currently enrolled high school students, age 16 or older or a sophomore with a 2.7 GPA, to enroll for advanced educational enrichment with the approval of their school principal/counselor and parent/guardian. These advanced education students (taking no more than 2 courses) are exempt from enrollment fees but not from books/materials costs. Fees for non-residents still apply. The Advanced Education Form must accompany the college registration process. Students interested in this program should first contact the CRC Counseling Center, phone 691-7316.

**Determination of Residence**

California state law requires that each student enrolled in or applying for admission to a California Community College provide proof of his/her residence classification.

The statutes regarding residence determination are found in Sections 68000-68090 and 76140 of the Education Code, Sections 54000-54072 of the California Administrative Code and in the regulations of the Los Rios Community College District. These regulations are available in the Admissions Office of the college and are subject to the interpretation of the college.

The California residency requirement has two parts, Act and Intent. To claim residency a student must have lived in, and shown intent to reside in, California by one or more of the following acts of intent:

- Paying California income taxes
- Possessing a valid California driver’s license
- Registering and voting in the state
- Owning and registering a car in California, and/or
- The absence of these ties with another state or country

Concurrent with these acts of intent, physical presence in the state for one year prior to the first day of the semester is needed to establish California residency in the District. Because the residency requirement is complicated, students with questions should contact the Admissions Office in the College Center for more information.

**Non-resident Student:** A student classified as a non-resident will be required to pay out-of-state tuition, which is set by the Board of Trustees of the Los Rios Community College District.

Under Assembly Bill 540, some non-resident students may be eligible for a waiver of non-resident tuition fees. Interested students should contact the Admissions Office to discuss eligibility. Qualified students are still responsible for the per unit general enrollment fee.

Information regarding tuition fees and refunds is found in the “Fee Requirements” and “Fee Refund” sections of this catalog.

**Undocumented Students:** Under Assembly Bill 540, a student (non-U.S. citizen) who is residing in the United States without official authorization from the U.S. Immigration and Naturalization Service (INS) may be eligible for a waiver of non-resident tuition fees. Interested students should contact the Admissions Office to discuss eligibility. Qualified students are still responsible for the per unit general enrollment fee. **All inquiries are strictly confidential, and the student’s information is not reported to the INS.**

**Incorrect Classification:** Non-resident students who have falsified information and enrolled without paying their fees will be excluded from classes upon notification, pending payment of the fee. Written notification may be given at any time. These students will not be readmitted during the semester or summer session from which they were excluded, nor shall they be admitted to any following semester or summer session until all previously incurred tuition obligations are paid.

If a student is erroneously determined to be a non-resident and a tuition fee is paid, the fee is refundable provided acceptable proof of state residence is presented within the period for which the fee was paid.
Admissions Application

Applicants must file an application by going to the college website at www.crc.losrios.edu.

Admission with Advanced Standing

Cosumnes River College welcomes transfer students from other accredited schools and colleges. Those students who have earned grades averaging less than 2.0 (“C”) will be admitted on probation.

Students who have been dismissed or disqualified from another accredited college or institution may be denied admission for one semester after dismissal or disqualification, if applying for admission to Cosumnes River College, immediately after dismissal. (See Academic Dismissal).

Admission for Veterans and/or Dependents

Students should contact the Veterans Affairs Office, located in the Admissions Office, at least two months prior to the term of attendance to initiate and complete required paperwork. In addition, all recipients must confirm their classes with the Veterans Affairs Office after completion of registration. All material submitted to the Veterans Administration takes approximately two months for processing through the Veterans Administration Regional Office in Muskogee, Oklahoma.

After enrolling at CRC, a veteran may apply for evaluation of military service experience for college credit. A copy of the veteran’s DD214 separation paper must be submitted at the Veterans Affairs Office in the Admissions Office.

For more information, veterans or dependents should contact the Veteran’s Affairs Office in Admissions or call (916) 691-7412.

Admission for International Students

International students who wish to enter Cosumnes River College must contact the Admissions Office and International Student Office (Judy Kinura in Vice President’s office), to receive admissions information. Such students should initiate an application for admission at least six months prior to the opening date of the semester in which they wish to enroll.

If accepted, international students will complete the admission process; a Certificate of Eligibility, Form I-20 is issued to indicate final acceptance. To be certified as full-time students with the USCIS (U.S. Citizenship and Immigration Service), international students must enroll in a minimum of 12 units and must maintain a 2.0 (“C”) average at all times. Students must report to the International Student Office of any reduction in course/unit load as soon as possible.

International students must pay the International Student Tuition Fee (See Fees Section) in addition to the per unit fee and capital outlay fee.

The college does not provide clinical health services, and requires a mandatory health insurance policy or equivalent medical protection for international students. In addition, the college requires the results of a current tuberculosis skin test or chest X-ray. Health insurance and skin testing services are available at the Health Services Office, P-27. (No appointment necessary except for TB skin testing.)

Beginning each semester, students on F visas are required to show evidence of approved health insurance coverage throughout the duration of their studies.

Assessment and Testing

The Assessment process is a combination of counseling, evaluating prior school transcripts, testing and identification of career and educational goals—all designed to facilitate student success. All students are encouraged to take the assessment test before enrolling in classes.

New and continuing students should refer to the current assessment schedule (at www.crc.losrios.edu) for test dates or contact the Assessment Office which is located in the Counseling Center (691-7332). Students who have tested at another community college or who have earned an Associate (or higher) degree should consult with a counselor for assistance with course selection. Students with special testing needs must sign up in advance for testing in the DSP&S Center (691-7275).

Orientation and Advising

Completing the CRC orientation program is the best way to begin your college experience. CRC’s orientation program is designed for your successful transition to the college. This program includes group academic advisement with other new students that may be in your classes and the opportunity to select your classes for registration. You will also discuss academic expectations and student success programs with counselors, staff and other CRC students. New students who participate in orientation and assessment will be allowed to register with continuing students. Appointments for advising are available by contacting the Counseling office (691-7316). Orientation can be completed online.

Registration

Complete registration instructions are in the schedule of classes each semester. Online and Touch Tone telephone enrollment (T.E.S) are available during registration periods. Consult the class schedule for details.

Transcripts

It is the applicant’s responsibility to have official high school records and official transcripts of all work attempted, completed or in progress at ALL other accredited colleges forwarded directly to the Cosumnes River College Admissions Office. The Admissions Office must receive official transcripts or any “Work in Progress” immediately after completion of such work. These records also apply to any summer session or correspondence work.

Follow-Up Counseling

All new students are encouraged to meet with their counselors at least once during their first semester. This session helps students with goal setting, selection of a major, career exploration, and the completion of a Student Educational Plan. Students are encouraged to make an appointment early in the semester to ensure preparation for the following semester’s registration.

Business Services Fee Requirements

At the time of publication of this catalog, the following fees are in effect:

General Enrollment Fees: All students must pay a general enrollment fee of $26 per unit. The California Community College Board of Governors provides a waiver of fees for qualified students (see page 15 for financial assistance information).

Non-Resident Tuition: Students classified as non-residents (see “Determination of Residence,” page 6) are required to pay a $151 per unit tuition fee, plus the per unit general enrollment fee.

(continued on next page)
**International Student Capital Outlay Fee:** International students who are both a citizen and resident of a foreign country will be assessed a $16 per unit fee for capital outlay purposes, in addition to the per unit general enrollment fee, and PER UNIT non-resident tuition.

**Instructional Material Fees:** Instructional material fees for designated courses may be assessed in accordance with Title 5, Section 59400 and District Policy 2253.

**Note:** Fees are subject to change as they are set by the State Legislature. Students who have registered for classes prior to any increase may be billed for the additional amount. Fees are due and payable at time of registration.

**Student Access Card/Universal Transit Pass:** A mandatory fee was imposed by students in the Los Rios District in order to provide affordable public transit options for all students. This fee is determined by the number of enrolled units in a semester. Visit the college Web site for more information on the various uses for the Student Access Card/UT Pass. (www.crc.losrios.edu)

**Parking Fees:** All students wishing to park a motorized vehicle on campus will be subject to a parking fee. A parking permit (decal) may be purchased, and the cost is:

<table>
<thead>
<tr>
<th>SUMMER SESSION</th>
<th>FALL/SPRING SEMESTER</th>
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<tbody>
<tr>
<td>Auto $15</td>
<td>Auto $30</td>
</tr>
<tr>
<td>Motorcycle $8</td>
<td>Auto (Student w/BOG Waiver) $20</td>
</tr>
<tr>
<td>Daily Parking Permit $1</td>
<td>Motorcycle $15</td>
</tr>
<tr>
<td></td>
<td>Daily Parking Permit $1</td>
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In lieu of the permit, students wishing to park automobiles on campus may purchase a daily parking ticket for $1 from machines located in various parking lots. A daily parking ticket will be available only for automobiles - not motorcycles.

Students awarded a CCC Board of Governors fee waiver may purchase a parking decal (automobile only) for $20, a $10 discount. Vehicles not having a valid parking decal, or daily parking ticket properly displayed, will be issued a parking citation.

Parking decals may be purchased at the Business Services (Cashier) Office. If a parking decal is lost or stolen, a new decal must be purchased at full price. If a vehicle is sold or damaged (i.e., windshield replaced) during the effective term of the decal, a replacement can be issued for $2.00 if the proof of sale or repair of vehicle and the old decal (decal number intact) are submitted to the Business Services (Cashier) Office.

*All fee amounts subject to change. Students will be billed if additional fees are required by the legislature.*

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**FEE REFUNDS**

It is the responsibility of the student to apply for a fee/tuition refund. To be eligible for processing, the student **must**:

- Drop his/her classes using TES (the telephone registration system) online, or in person at the Admissions Office within the first ten days of instruction for full semester (18 week) courses and through the fifth day of instruction for short-term (greater than one day but less than 18 weeks) courses. Classes that meet only once each week should be dropped before the second class session.
- Submit a refund request form to the Business Services (Cashier) Office no later than the last day of the semester or session currently being completed. Refund requests may be completed online.
- Prorated refunds are not available under current legislative law. Checks will be mailed to eligible students approximately eight weeks after the refund application is submitted.

For all semester length courses, enrollment, tuition, and international capital outlay fees are refundable through the tenth day of instruction. Short-term courses are refundable through the fifth day of instruction. Up to $5.00 are refundable at any time for the UTP Pass. Application and installment payment plan fees are not refundable.

**Parking Fees:** Refundable only through the tenth day of instruction for semester and the fifth day of instruction for the summer session. To be eligible for a refund, the parking decal must be attached to the refund request form and submitted to the Business Services (Cashier) Office within the first ten days of instruction for 18 week courses and through the fifth day of instruction for short-term (greater than one day but less than 18 weeks) courses.

**FEDERAL EDUCATION TAX CREDITS**

(Hope Credit and Lifetime Learning Credit)

Students or parents of dependent students may be able to obtain federal tax credits for enrollment fees if enrolled in at least 6 units during any semester or summer session, and meet the other conditions prescribed by federal law. The District will automatically mail an IRS form 1098 to each student so that the student can claim any credits on their federal tax return.

More information on the Hope Credit or Lifetime Learning credit is available by obtaining a copy of IRS Publication 970 or at the following IRS website: [www.irs.gov/pub/irs-pdf/p970.pdf](http://www.irs.gov/pub/irs-pdf/p970.pdf)
The college has a variety of support services available to assist students with career decision-making, problem resolution, and goal achievement.

ASSESSMENT SERVICES

The Assessment Office, located in the Counseling Center, provides a variety of testing services to assist students in determining the appropriate course placement. Assessments are scheduled on a monthly basis for English, reading, mathematics, and English as a Second Language (ESL). Exams to meet reading and math graduation competency requirements and the Ability to Benefit (ATB) exams are also available. All tests are on a first-come, first-serve basis and there is no charge. A monthly testing schedule is available in the Admissions, Assessment or Counseling offices. Students with special testing needs should call the Disabled Students Programs & Services Center.

CAMPUS POLICE
691-7393 (24 hours) 691-7594 (Fax number)

The Campus Police Office is located at the north east corner of campus adjacent to the Technology Building. The office operates on a 24-hour basis 7 days a week. The department is a P.O.S.T. certified agency and provides both law enforcement and security services to the students. In addition to assisting and handling cases of emergencies, this office handles all parking enforcement and appeal processing, lost and found, vehicle jumpstarts and lockouts, escorts, and offers a shuttle service during the evening hours. The shuttle service operates Monday-Thursday from 5:30 P.M. to 10:30 P.M.

CAREER SERVICES

See Transition Services, page 13.

CHILD DEVELOPMENT CENTER

The Child Development Center, located on the southeast corner of the campus, cares for children of Cosumnes River College students. The Center gives priority to low income parents who meet income eligibility and need guidelines. Other children are admitted on a sliding fee scale as space permits.

The Preschool Program serves children aged 3 through 5 years.

The Infant-Toddler Programs serves children aged 6 months through 3 years.

The CRC Child Development Center Programs offer developmentally appropriate and stimulating environments with a variety of planned activities. The Centers also serve as lab schools for students of Early Childhood Education.

For more information about your child care needs, and hours of operation, call the Center at 691-7380.

COLLEGE BOOKSTORE
(Hawks Nest)

The College Bookstore (Hawks Nest), located in P-47 across from the Child Development Center, carries a complete stock of new and used textbooks, paper, and supplies needed for classes, as well as CRC souvenir sweatshirts, T-shirts and binders. Textbooks may be ordered online also.

Payment Policy:
- Checks gladly accepted with valid personal identification, student ID number, and current phone number
- Checks must be made out to the CRC Bookstore for the exact amount
- All returned checks will incur a $25 service charge
- All major credit cards (VISA, MC, Discover, American Express) are gladly accepted with valid personal identification. The card must be signed by the card bearer.
- Credit card purchases may require valid personal identification, student ID number and current phone number

Refund Policy:
- An original dated sales receipt is required for all returns
- Returns must be made during the first three weeks of the semester
- Charge card purchases will be credited only to the card that the transaction was originated on
- New books must not be written in, have eraser marks, or show any other visible marks. NO DAMAGE TO BOOK. For example: no bent corners, no worn or bent covers, and no water damage. If the book is shrink-wrapped, the book must be returned with all components accompanying the textbook (ex. CD, access card, etc.). CD envelope must be unopened and any access codes must be unused and/or not scratched off.
- Student I.D. or Computer Registration Form or Driver’s License is required for all returns.

Buyback Policy:
- The bookstore cannot guarantee the buyback of any book at any time.
- Best time to sell books is during FINALS WEEK
- Student I.D. or Driver’s License is required
- Buyback is a privilege; service will be refused if employee is verbally abused
- During the end of the semester, during final exams, the bookstore will pay up to 50% of the RETAIL PRICE, for textbooks that will be used at CRC the following semester. Market value will be paid for most textbooks in good resalable condition that are NOT needed at CRC again the following semester but are current elsewhere. All textbooks must be in good, resalable condition.

Services Provided:
- The bookstore sells postage stamps, gift certificates, pay-to-print cards, catalogs, schedules, parking pass holders and software at educational prices…proof of current enrollment is required to purchase software.
- No charge from bookstore on ATM purchases
- The bookstore is responsible for all bookstore operating costs. Bookstore Profits are used to support instructionally related programs and projects on campus. The Board of Trustees of the Los Rios College District governs the store.
- For more information on buyback dates and times, hours of operation, and days open, please call (916) 691-7319 and/or www.crc.losrios.edu/bookstore.
CO L L E G E  C A F E T E R I A

The college cafeteria serves a two-fold purpose. Open for breakfast, lunch, and dinner, Monday through Thursday, and breakfast and lunch on Friday, the staff provides balanced meals and snacks for the campus community during the Fall and Spring semesters. The cafeteria is also open during the summer session for breakfast and lunch only. Vending machines are also available at various locations throughout the campus. The state-of-the-art facility also provides a safe working environment for students in the instructional Culinary Arts Management program.


Cooperative Work Experience Education and Internships, (Co-op) is an academic program in which students apply what they have learned in the classroom to their job or internship site and work toward earning college credits. Students will develop new skills on-the-job or in a skilled professional level assignment on campus or in the community. One 50-minute weekly class is also attended which focuses on workforce and career transition. Internship and job assistance is available. Internships may be paid or non-paid, and will provide preparation for a career by providing professional skill development, employment contacts, confidence building and more.

For more information, call 691-7372 or visit https://wexp.losrios.edu.

C O U N S E L I N G

Counselors are available throughout the year on an appointment or drop-in basis. Counselors are housed in the Counseling Center, in the Library Building, L-200 (691-7316) or (TDD 691-7692). The counseling staff provides:

- Academic counseling, in which the student is assisted in assessing, planning and implementing his or her immediate and long-range and/or transfer goals.
- Career counseling, in which the student is assisted in assessing his or her aptitudes, abilities, and interests, and is advised concerning current and future employment trends.
- Personal counseling, in which the student is transitionally assisted with personal, family or other social concerns, when that assistance is related to the student's education.
- Crisis intervention, either directly or through cooperative arrangements with other resources on campus or in the community.
- Multicultural counseling, in which students are counseled with a respect for their origins and cultural values.
- Human and Career Development courses in College Success, Study Skills, Career Exploration (See page 220), and Human Services courses (See page 224).
- Consultation to the college governance process and liaison to the college community to make the environment as beneficial to the intellectual, emotional, and physical development of students as possible.


Disabled Student Programs & Services (DSP&S) provides equal educational opportunity for students with physical, psychological, or learning disabilities. Students with disabilities are encouraged to lead active and independent lives by participating in all college programs. Counseling, support services, and academic accommodations are provided to students who are eligible for the program.

Physical and Psychological Disabilities: Students with the following disabilities are eligible to receive support services and academic accommodations: hearing impaired and deaf, blind and low-vision, mobility impaired, psychologically disabled (a diagnosis from a psychiatrist), and other health problems that would require special assistance.

Learning Disabilities: Students of average or above average learning aptitude may have a specific learning disability which significantly impacts their educational progress.

The Cosumnes River College Learning Disabilities Program can provide support services and academic accommodations to students who have documentation of a specific learning disability from another school or professional. In addition, Diagnostic Assessment may be available for appropriately referred students who come to the DSP&S program for an orientation appointment.

Academic Accommodations: Accommodations are individually determined for students with disabilities, according to the functional limitations of the disability. Accommodations may include:

- The use of equipment and materials such as a tape recorder, calculator, computer, taped text or spelling checker in the classroom and/or in meeting class assignments.
- The use of personnel such as readers, interpreters, note takers (while attending classes), and scribes.
- Testing accommodations, which may include extension of time, quiet room, use of calculator, spelling checker, computer, alternative method of testing, or modification of the test response format.
- Individualized tutoring when disability prevents successful use of existing college tutorial services.

The Disabled Student Program and Services Center is located in Portable 57/58. For more information, call 691-7275 or 691-7273 (TDD/Voice).

Students with verified disabilities who do not wish to avail themselves of the services of the Disabled Students Programs and Services may still be eligible for reasonable accommodation and service. Contact the Dean of Counseling/Student Services at 691-7350.

Alternate Formats. Students with verified disabilities who require alternate formats of college publications and resources should check with Disabled Students Programs and Services. Materials available include, but are not limited to, Braille, large print, books on tape, and electronic text. These formats help accommodate our students' specific needs and are created in a timely fashion. Contact the Disabled Students Programs and Services at (916) 691-7275 or 691-7273 (TDD).

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**Programas y Servicios Para Estudiantes Incapacitados.** La Oficina de Programas y Servicios para Estudiantes Incapacitados ofrece servicios de apoyo a estudiantes que tengan incapacidades físicas, psicológicas, lingüísticas y de aprendizaje. Algunos de los servicios que se ofrecen son: ayuda con la inscripción y con la selección de clases, asesoramiento académico y vocacional, tutorías, intérpretes, facilidades para tomar exámenes, ayuda para tomar apuntes, y el dictado de textos a audio.

Para más información, comuníquese con el decano de servicios para estudiantes, al 691-7275 o 691-7273 (TDD).

If an academic accommodation is requested that is not listed above, the request will be forwarded by the DSP&S Coordinator to the Dean of Student Services/Counseling for consideration. The student has a right to appeal any decision regarding academic accommodations. See the DSP&S Coordinator for more information.

**EXTENDED OPPORTUNITY PROGRAMS AND SERVICES (EO P&S)**

(See Student Support Center, page 13).

**FINANCIAL AID SERVICES**

The Financial Aid Office publishes the “Financial Aid Handbook” which describes available programs, how to process an application, and lists important dates to remember. The handbook is available upon request.

The Financial Aid Office is located in L-107.

For additional information, please refer to the “Financial Assistance” section of this catalog. (See page 15).

**HEALTH SERVICES**

The college maintains a Health Services office staffed by College Nurses to assist students with health-related problems. Students are given first aid for any campus injury, as well as illness prevention and health maintenance advice, including referrals to the appropriate community health organizations. The office houses a variety of publications and brochures on various health related subjects. The Health Services Office is not clinically equipped; therefore, no medical care or treatment can be given.

Students with major physical disabilities or health problems should consult with Health Services staff. Other services include hearing, vision and blood pressure screening, and tuberculin skin testing.

Appointments are advised for general health issues, and necessary for TB skin testing. Phone: Health Office 691-7254

**JOB SERVICES**

Cosumnes River College is happy to announce a new job service called Job Connection. Job Connection allows students and alumni to upload resumes to our web-site and search for a variety of jobs twenty-four hours a day, seven days a week. Employers can post jobs and review student and alumni resumes.

Check the announcement page often for special career development events and activities. For questions about using the system, contact the Job Connection office (BS 106 / 691-7163) or visit the web site http://www.collegecentral.com/cosumnes.

**LIBRARY**

The Library at Cosumnes River College is housed in a three-story building located at the center of the campus. Its research collection, professional staff, and technology provide ideal study and research facilities.

The library houses over 62,000 book, media, and periodical titles. Tools for accessing library, information, and learning resources include the library catalog (LOIS, the Los Rios Online Information System), full-text periodical databases, and the Internet. Access to these tools is available on 30 computer stations within the library. Software and hardware designed for students with low vision, no vision, and/or learning disabilities is installed at several computer stations. Remote access to LOIS, the library’s web-based catalog, and periodical databases is also available 24/7 through the CRC Library homepage at http://www.crc.losrios.edu/~library.

All college course offerings and information competency requirements are supported through library instructional sessions, reference services, and acquisition of materials supporting student research and faculty requests.

**MAINTENANCE ALLOWANCE**

The Los Rios Community College District will pay a maintenance allowance in an amount determined by the State Chancellor's Office per day of scheduled attendance for a period in which the student is enrolled full-time. Payment will be issued to the parent or guardian of minor non-district students, and directly to adult non-district students and to married minors who reside in California outside the Los Rios Community College area and/or more than sixty (60) miles from the nearest public community college campus. Application for maintenance allowance is available in the Admissions Office, and must be submitted during the semester of attendance. Additional information may be obtained from the Admissions Office.

**MATH CENTER**

The Math Center is located on the third floor of the Library building in room L303. Staffed by math instructors, instructional assistants, and experienced student tutors, the Math Center provides resources and support to help CRC students be successful in their math courses. The Math Center offers drop-in tutoring, peer-assisted study groups, workshops, computer-assisted instruction, video support, and computer support for online classes. Services to students not enrolled in a math class who wish to work independently to brush up on math skills or prepare for placement or employment exams are also welcome. Sign up for MATH 81/82 to use the Math Center services in conjunction with a math class or MATH 83 to work independently.
Student Support Services

MESA/CCCP

The Math Engineering Science Achievement/California Community College Program is active at CRC. The program focuses on preparing economically disadvantaged students for professions related to engineering, computer science, science, and mathematics. The program provides support services to help students succeed in college and explore their career choices. The services include, but are not restricted to:
- Academic Advising
- Group and Individual Tutoring
- Workshops
- Scholarship and Summer Internship Opportunities
- Field Trips to Transfer Universities and Local Industries

Call (916) 691-7338 for more information.

PUBLICATIONS

The COLLEGE CATALOG and CLASS SCHEDULES are important resources for student success. Both publications include valuable and current information on available services, course/program selection and graduation and transfer requirements. Students should keep one or both publications as references throughout the year.

The college newspaper, THE CONNECTION, is published under the general supervision of the Journalism Department on the main campus.

THE RIVER HAWK, circulated bi-weekly by the Student Development Office, contains announcements regarding up-coming campus events and student activities information.

A STAFF HANDBOOK is published by the college to provide pertinent information, both general and specific, to college faculty and staff.

READING/Writing Center

The Reading/Writing Center (RWC), located in L-313, is a place where students can get help on their reading and writing assignments. Staffed by English professors, an instructional assistant, and student tutors, the RWC is also equipped with 32 computers that students can use to compose their essays or to access the Internet for class assignment research. Sign up for ENGLB 70 to use the RWC.

STUDENT DEVELOPMENT

The Student Development Office, located in Library Building, L103, offers a variety of ways for students to become involved:

Informational Services: Although Cosumnes River College does not provide dormitories or other types of accommodations for students who are enrolled at the institution, it does maintain a current housing list and board in the Student Development Office and an updated Housing Board in the glass cases outside the Library Building entrance (fountain side). Student Development Office also has bus schedules, rideshare forms, and health and dental insurance information available.

Other services include: Assistance to student clubs and organizations in the planning and implementation of campus events and fundraisers; and posting flyers and posters; assistance in starting a new club; assistance to faculty and staff initiated campus and cultural events that include student involvement. Student Development Office also coordinates graduation and the annual honors and awards ceremonies.

Clubs and Organizations: These activities offer diversified social and educational opportunities. Each club must have a faculty advisor, an Inter-Club Council representative and be approved by the Student Development Office.

The Inter-Club Council works to ensure the quality of campus social, cultural and educational life through its membership comprised of student representatives from the variety of campus clubs and organizations. Chaired by the ASG Vice President for Activities, the ICC serves as a liaison to ASG for student clubs and organizations.

Associated Student Government (ASG): The basis for student government at CRC is the constitution of the ASG. This organization, recognized as the voice of the students on campus, operates under the direction of officers who are elected at-large.

The ASG is the vehicle through which students may actively participate. Representatives who serve on college committees are appointed by the elected ASG president and many also serve on districtwide committees.

Special allocations for student body representation fees are made by the CRC ASG.

ASG Bike Locker Rental: ASG provides bike lockers for rental fee. Each semester requires a rental renewal. Visit the Student Development office to apply.
STUDENT SUPPORT CENTER

The Student Support Center offers many programs and services. Students may stop by or call 691-7465 to make appointments for any of the following programs:

**CalWORKs:** The CalWORKs office is here to support students who are currently receiving cash aid from the county. We have many services to offer qualified students:
- Job Placement Referrals
- Transportation
- Case Management Referrals
- Book Service
- Study Groups/Tutoring
- Child Care services on and off campus
- Support Groups
- Workshops

**CARE (Cooperative Agencies Resources for Education):** The CARE Program is a state-funded program providing academic, career, and personal counseling; campus and community referrals; child care and/or transportation financial assistance (financial aid process must be completed); meal program; supply voucher; peer advising; priority registration; transfer assistance; tutorial services; and support workshops.

**To be eligible, a student must:**
- Be eligible for the Extended Opportunity Programs and Services (EOP&S) program
- Be a recipient of AFDC/TANF/CALWORKs
- Be a single head of household
- Be a parent of at least one child age 13 or under (at the time of acceptance into the program)
- Be a California resident
- Be at least 18 years of age
- Be a full-time student (enrolled in 12 or more units) with a vocational or academic objective.

For further information, call 691-7365.

**Department of Human Assistance (DHA):** Staff from DHA provide information and support for CalWORKs/TANF students.

**Extended Opportunity Programs and Services (EOP&S):** EOP&S provides the following comprehensive support services to students who are educationally and economically disadvantaged. Services are open to students enrolled at Cosumnes River College:
- Application Fee Waivers (CSU, UC)
- Book Service Program
- Career Assessment
- Case Management Referrals
- Cooperative Agencies Resources for Education (CARE) program
- Counseling
- EOP&S Orientation
- Field Trips to 4-Year colleges and universities
- Priority Registration
- Progress Reports
- Recruitment
- Transfer Information
- Workshops

To be eligible, a student must follow the guidelines for the EOP&S program:
- Be a California resident (have lived in the state one year and one day before school starts)
- Be enrolled in 12 units (some students with exceptional conditions may be accepted at a reduced load)
- Qualify to receive the Board of Governors Waiver (BOGW - method A or B)
- Not have completed more than 70 units or six consecutive semesters in the EOP&S program
- Submit an application to the EOP&S program
- Be educationally disadvantaged as determined by the EOP&S program.

The EOP&S Office is located in the Student Support Center. Call 691-7365 for information. Applications may be picked up in the EOP&S Office.

**On Campus Student Employment:** Students are limited to a maximum of 26 hours per week.

Students may be employed as part of their financial aid package and should consult the Financial Aid Office, at (916) 691-7325.

**Re-Entry Student Services:** Re-entry is a beginning point for all students returning to school after an absence. The Re-entry program welcomes students to a supportive environment where they can access information and referrals for programs and services available on campus.

**Scholarships:** Information and applications are available, see page 17.

**TRANSCRIPTS TO OTHER COLLEGES**

The Admissions Office will send the first two official copies of a student’s college record to any college or university without charge. Additional copies may be obtained for $2 each. Same day official transcripts may be obtained for $10 each. The required number of transcripts varies according to institution, and students should refer to the catalog or bulletin of the college or university which they expect to enter. Unofficial transcripts can be printed using eServices (online).

(continued on next page)
TRANSITION SERVICES

Transition Services offers help with:
- Careers
- Transfer

Career Services offers a variety of activities and resources to help meet your individual career needs. Activities include:
- Job search - online
- Transition Faire - employers are on campus to provide career information, employment, internships, and transfer information to students
- Computers/Internet - self assessment, and researching career-related topics
- Reference materials - books, videos, and handouts

For more information, contact 691-7456.

Transfer Services: Cosumnes River College is committed to transferring qualified students to the four-year university of their choice. Located in the Library Building (2nd floor), the Center offers a large supply of applications, catalogs and other resource materials. Students may talk with Cosumnes River College counselors as well as representatives from various four-year colleges and universities about course work, housing, financial aid, and more. Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

The Center also helps students to concurrently enroll at CSUS and UCD (with fees waived) and provides for admission through a Transfer Admissions Agreement (TAA) to CSU, Sacramento; UC Davis; and University of the Pacific. On-line application services are available for some colleges. For more information, call 691-7456.

The Center also houses ASSIST, a computerized student transfer information system that can be accessed over the World Wide Web. It displays reports for transferring course credits from one California college or university to another. ASSIST is the official repository of articulation for California's colleges and universities and, therefore, provides the most accurate and up-to-date information available about student transfer in California. The Internet address for ASSIST is: www.assist.org.

TUTORING SERVICES

Enrolled CRC students can receive tutoring assistance, free of charge, from several campus tutorial centers. These centers are listed below. To find out more information about a specific center, call the printed telephone number listed.

- Business English Help Line 691-7444
  Provides telephone assistance for short Business English questions.
- Computer Information Science Lab 691-7297
  Provides individual and group tutoring for most of the CIS Classes.

- Disabled Student Programs & Services (DSP&S) 691-7275
  Provides tutoring assistance to students with disabilities who cannot be adequately accommodated at other tutorial centers.
- Language Lab 691-7407
  Provides individualized and small group tutoring for students enrolled in ESL classes, and provides tutoring for students enrolled in Spanish and Vietnamese classes.
- Tutoring Center 691-7425
  Provides individualized and small group tutoring for many courses across the disciplines with a focus on helping students develop effective study strategies. Depending upon availability of tutors, students may make appointments, standing appointments, or see the tutor on a drop-in basis. Also, the center provides test proctoring on specific days and times throughout both semesters. Please call the Center for the tutoring and test proctoring schedule.
- Laboratory for Accounting & Business 691-7449
  Provides tutoring in accounting, economics, and general business subjects.
- Math Center 691-7459
  Provides math tutoring on a drop-in basis, computer assisted instruction, subject specific workshops and group tutoring. (see page 11)
- MESA 691-7338
  A S P 5 1
  Provides tutoring in Science, Mathematics, and Engineering on a drop-in or appointment basis. Preference is given to students enrolled in the MESA program. (see page 12)

VETERANS ASSISTANCE

The CRC Veteran's Affairs Office, located in the Admissions Office (College Center), is established to help process Veterans Administration (VA) Educational Benefit paperwork and to coordinate with other campus services. The student veteran, children, spouse or surviving spouse of a veteran using the VA Educational Benefits with a variety of services should contact the VA Office.

To receive an educational allowance, the Veterans Administration requires a student veteran or dependent to:
- Request "official" transcripts from other colleges attended
- Identify an educational objective, see a counselor and fill out a Program Planner
- Take only courses that are required for the educational objective
- Complete satisfactorily the courses for which benefits are received, and attend classes regularly.

For more information, veterans or dependents should contact the Veterans Affairs Clerk in the Admissions Office or call (916) 691-7412. (see page 7 for more information)
Cosumnes River College’s Financial Aid Office, located in L-107, provides a wide range of financial assistance to students in the form of part-time employment, grants, and loans. All awards are contingent upon availability of funds.

The basic premise for all need-based financial aid programs is that the primary responsibility for financing a student’s post-secondary education rests with the student and his/her family. Student financial aid is intended to assist with those educational costs that remain after the student’s resources and an expected contribution from the family have been taken into account. To be considered for financial aid, a student must complete a Free Application for Federal Student Aid (FAFSA) each academic year. FAFSAs are available at the Financial Aid Office. FAFSA on the Web is available on the Internet for those students who wish to apply for financial aid electronically. The website address is: www.fafsa.ed.gov. The school code for Cosumnes River College is: 007536.

Cosumnes River College participates in the following programs:

EMPLOYMENT

FEDERAL WORK-STUDY PROGRAM (FWS)
The Federal Work Study program allows students to earn money for their educational expenses while in school. Students are encouraged to find jobs relating to their program of study. Work study wages are based on federal minimum wage guidelines. Students may qualify by virtue of their need, satisfactory academic standing, availability and feasible work skills.

GRANTS

BOGW
(Board of Governors Enrollment Fee Waiver)

- BOGW is for California residents only.
- BOGW does not require repayment.
- BOGW is a simple, quick process that is not connected to other Federal aid programs.
- BOGW applicants will be required to complete a simple application form available in the Financial Aid Office. Applicants may be asked to provide proof of eligibility. There are three methods by which you may qualify:
  - Method A: TANF/CalWorks, SSI, General Assistance or General Relief recipients must bring a photo identification and an Aid Verification Summary or provide a copy of their last voucher or check when completing the application.
  - Special Eligibility: Eligible dependents of veterans, recipient or a child of a recipient, of the Congressional Medal of Honor, must submit certification from the local county Veterans Services Office, California Department of Veterans Affairs or the National Guard Adjutant General. Dependent of a victim of the September 11, 2001 terrorist attack must submit documentation from the California Victim Compensation and Government Claims Board, (916) 322-4426. eligible dependents of deceased law enforcement/fire suppression personnel killed in the line of duty must submit documentation from the public agency that employed the decedent.
  - Method B: If you meet household (low) income standards.
  - Method C: If you have been determined to have any financial need based on Federal calculation.
- BOGW pays enrollment fees for one fiscal year: summer session and fall/spring semester. Only one application a year is necessary, and you must reapply each fiscal year, starting with the summer session.

CAL GRANTS
The Free Application for Federal Student Aid (FAFSA) and a GPA Verification form must be completed by March 2 prior to the award year. The completed GPA Verification must be received by the California Student Aid Commission for consideration.

1. CAL GRANT A
Cal Grant A helps low- and middle-income students with tuition costs at 4-year colleges and universities. Grant recipients are selected on the basis of financial need and grade point average.

The California Student Aid Commission will hold tuition fee awards for those who qualify, until the student transfers to a four-year college. Students must maintain eligibility each year.

2. CAL GRANT B
Cal Grant B is administered and processed by the California Student Aid Commission and aids high-potential students from low income and disadvantaged backgrounds. Applicants must be a new freshman in college, completed no more than 16 units or completed a full-time semester of college, or 4.5 months at a vocational/technical college by June 30 of the prior school year.

3. CAL GRANT C
Cal Grant C is administered and processed by the California Student Aid Commission and provides assistance for low- and middle-income students who are formally enrolled in and pursuing a vocational training program at Cosumnes River College.

FEDERAL PELL GRANT
The Federal PELL Grant program is an aid program designed to provide financial assistance to students who have not yet received a bachelor’s degree from any institution. The Federal PELL Grant is intended to be the “foundation” of a student’s financial aid package with other sources of aid to supplement it.

In order to determine a student’s eligibility, a Free Application for Federal Student Aid (FAFSA) must be completed and mailed to a federal processor.

A Student Aid Report (SAR) will be mailed directly to the student and duplicate information transmitted electronically to the designated school. The student may be asked to complete verification documentation as required by federal guidelines. Eligibility will vary according to enrollment status and federally determined Expected Family Contribution (EFC).

(continued on next page)
Financial Assistance

FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS (FSEOG)

The Federal Supplemental Educational Opportunity Grants (FSEOG) program is limited to undergraduate students with exceptional financial need who, for lack of financial means, would be unable to enter or remain in college. Funding for this program is limited; therefore, students are encouraged to apply early.

LOANS

FEDERAL STAFFORD LOAN PROGRAM (Subsidized)

To apply for a federally insured loan, institutional policy requires that a student must:

- Apply for other forms of federal financial aid
- Attend a loan management/default prevention workshop
- Satisfactorily complete a student loan pre-test

Applications for the Federal Stafford Loan Program are available in the Financial Aid Office. The amount is based on current Federal guidelines. Interest charged on this loan is variable, not to exceed 8.25 percent.

FEDERAL STAFFORD LOAN PROGRAM (Unsubsidized)

The unsubsidized Stafford Loan is offered for middle and higher income borrowers and is available at Cosumnes River College. With the exception of demonstrating financial need, the unsubsidized Federal Stafford Loan has the same eligibility criteria as the regular Federal Stafford Loan. This means that family income will not affect loan eligibility or disqualify a student from receiving an Unsubsidized loan. Loan limits and interest rates are also based on current Federal guidelines.

Accepting any federal student loan is accepting a responsibility. Defaulting on any federal student loans will result in disqualification of all financial aid, adverse credit and severe legal action. By accepting a Federal Stafford Student Loan, the student accepts the responsibility to repay it.

SHORT-TERM STUDENT LOAN (STSL)

(30 Day Maximum Repayment Loan)

Emergency short-term loans are available through the Financial Aid Office and are contingent upon availability of funds. Generally, these funds are available to students who have unanticipated financial difficulties. Short Term book loans are given to students who need assistance in purchasing books during the first four weeks of a semester. Eligible students may obtain a maximum of three loans per school year, with a maximum of one loan given in any one semester. Loan requests will not be considered from students with outstanding loans. Students must also be enrolled in at least 6 units and must have visible means of repayment within thirty (30) days. The funds are established and supported by contributions from CRC staff, community groups and individuals.

REQUIREMENTS FOR FEDERAL/STATE FINANCIAL AID

Ability to Benefit: Applies to students who are admitted to college but who do not have a high school diploma or the equivalent. To receive Federal student aid, a student admitted on the basis of ability to benefit must pass a standardized placement test which measures the student's ability to complete the course of study.

Eligibility for financial assistance is determined by:

- A demonstrated financial need. Financial need exists when the cost of education exceeds all of the resources available to a student. This need must be determined each academic year for which a student applies.
- Being a U.S. citizen, a permanent resident, or status as a resident alien with the appropriate visa.
- Making satisfactory academic progress. Academic progress will be monitored periodically to continue eligibility status. The Financial Aid Office must ascertain satisfactory progress and may deny aid to any student who fails to meet the minimum stated academic progress guidelines.

Satisfactory Progress Policy: Satisfactory academic progress is defined by the Federal Department of Education as 150 percent of normal length of time for a student to achieve an educational objective. Congress and the Federal Department of Education want funds awarded only to students who are making satisfactory progress toward their educational objective. Therefore, the Financial Aid Office is required to monitor this progress and deny aid to any student who fails to meet satisfactory academic progress policies. Please check with the Financial Aid Office for specific details.

Basis for Denial of Financial Aid: Financial Aid may be denied for the following reasons:

- Default on Stafford Loans.
- Owing a refund or repayment on PELL or FSEOG.
- Failure to meet the satisfactory progress standard adopted by Cosumnes River College for financial aid recipients. (Specific details are available in the Financial Aid Office.)
- Completion of an AA or AS Degree or 72 or more units (whichever comes first) unless a special petition has been approved by the Financial Aid Office.
- Falsification of information that affects the determination of eligibility or aid.
- Failure to provide necessary verification/documentation of income and resources.

A student may be placed on financial aid probation for one semester. If the student fails to make satisfactory academic progress during the probationary semester, financial aid will be denied. The student may file a Financial Aid Petition to reinstate financial aid, if there are extenuating circumstances that caused the dismissal.

(continued on next page)
Selective Service Notice to Men: Federal and state laws require that men must be registered with the U.S. Selective Service System to be eligible for school Financial Aid (50 U.S.C. App. 451, et seq.)

SCHOLARSHIPS AND AWARDS

The Student Support Center maintains a list of local and national scholarships available to students. As scholarship information becomes available, it is listed in the college bulletin and/or sent to the appropriate instructional area for posting. Watch for special bulletins!

There are also scholarships available to CRC students exclusively. Scholarships from many donors are available for the student who is returning for a second year, as well as for the student who plans to transfer to a four-year institution. The CRC scholarship application is available online beginning the first day of the Spring semester.

Students are strongly urged to contact the Student Support Center for details and applications on all scholarships.
GRADUATION REQUIREMENTS 2005-2006

MINIMUM GRADUATION REQUIREMENTS

A. Satisfactory completion of 60 units of collegiate work with a “C” (2.0) grade point average in a curriculum that the district accepts toward the degree. At least 12 units must be earned at Cosumnes River College.

Effective summer 2004, students who possess a BA/BS degree or higher will have satisfied general education and competency requirements for the AA/AS degree.

B. MAJOR Complete one of the following:
   1. One of the degree programs listed in this catalog with a minimum of a "C" grade in each course for the major.
   2. California State University Transfer General Education Requirements or IGETC. (Note: ENGWR 300 required) (See pages 24, 28 and 163).
   3. Lower division general education requirements of an accredited four-year college or university. Students should see a counselor.

C. Completion of the following general education requirements (21 units minimum):

1. NATURAL SCIENCE (3 units minimum) selected from:
   - Animal Science 300; Anthropology 300; Astronomy 300; Biology 100, 102, 110, 111, 300, 307, 310, 342, 350, 366, 400, 401, 410, 420, 430, 440, 462, 470, 481 (must have 3 units); Chemistry 305, 306, 307, 321, 332, 400, 410; Environmental Technology 304, 306; Geography 300, 306, 482 (must have 3 units); Geology 300, 305, 310, 330, 342, 345, 351; Honors 380, 383, 384 (must have 3 units); Horticulture 300, 302; Physical Science 302; Physics 310, 311, 350, 411; Plant Science 300, 310; Psychology 312.

2. AMERICAN INSTITUTIONS (3 units minimum) selected from:
   - History 312, 313, 314, 320, 321, 331, 371; Political Science 301.

3. OTHER SOCIAL AND BEHAVIORAL SCIENCES (3 units minimum) selected from:
   - Agriculture Business 321; Anthropology 310, 319, 320, 330, 332, 334, 341; Business 320, 330, 345; Communication Studies 325, 341, 480; Communications Media 330; Economics 100, 302, 304, 320; Geography 310, 312, 320, 322; History 301, 302, 307, 308, 344, 360, 370, 373; Honors 340, 370 (must have 3 units); Journalism 310, 320; Philosophy 360; Political Science 302, 310; Psychology 300, 320, 340, 351, 365; Social Science 330, 338, 360, 480 (must have 3 units); Sociology 300, 301, 305, 321, 325, 341.

4. HUMANITIES (3 units minimum) selected from:
   - Architecture 310, 332; ARTH 300, 303, 309, 311, 312, 326, 332; Art 300, 304, 307, 320, 323, 330, 361, 362, 364, 370, 372, 394, 410, 430; Art New Media 324; Communications Media 305; ENGWR 301; ENGCW 300, 301, 302, 305, 308, 309, 341, 343, 345, 360, 370, 402; Film & Media Studies 300, 305, 310, 320, 488, 489; Geography 481; Honors 350, 352, 360 (must have 3 units), 382; Humanities 300, 310, 320, 324, 332, 334, 340, 348, 486 (must have 3 units); MUFHL 300, 306, 310, 315, 330; MUSM 334, 370; Philosophy 304, 310, 330, 331, 338, 350, 352, 356; Photography 301, 425; Sign Language 305, 306, 315, 316; Spanish 101, 102, 401, 402, 411, 412, 413, 425, 426, 427; Theatre Arts 300, 306, 322, 323, 350, 380, 401, 407; Vietnamese 101, 102, 401, 402, 411, 412.

5. LANGUAGES AND RATIONALITY (6 units). Select 3 units each from (a) and (b):
   (a) English Composition (3 units minimum) selected from:
       - Business 310; ENGWR 101, 103, 300, ENGED 305.
   (b) Communication and Analytical Thinking (3 units minimum) selected from:
       - Accounting 101, 301; Communication Studies 301, 311, 315, 331, 361, 363; CISC 310*, CISP 320, 350, 360, 365, 400; ENGRD 310; ENGW 302; ENGW 400, 410, 420, 430; History 402; Journalism 300; Management 360; Mathematics 100, 102, 105, 106 or higher level mathematics course; Philosophy 300, 320, 325, 328; Psychology 330, 335; Sociology 305; Statistics 300.

6. LIVING SKILLS (3 units minimum)
   (a) Any physical education activity course with a ADAPT, DANCE, FITNS, PACT, SPORT, TMAC designation, totaling one unit. Students with medical excuses on file may enroll in Adapted Physical Education or be exempt from the physical education activity course requirement. Students receiving an exemption for any reason must complete a minimum of 3 units under (b) of this section.

   AND
   (b) Completion of a minimum of two units selected from the following:
       - BUSTEC 302, 306; CISC 302 or 310* or Journalism 330; Communication Studies 321; Early Childhood Education 350, 415; ENGED 320; Family and Consumer Science 312, 314, 322, 324; Health Education 300, 302, 313, 314, 320, 350; Human/Career Development 112, 122, 132, 310, 333, 334, 340, 354; Human Services 302; Library 318, 325; Math 315; Nutrition and Foods 300, 320; PET 301, 403 (.5 unit); Psychology 354, 356, 358, 360, 372; Sociology 310; Work Experience 198, 298, 498.

OR
   (c) Military Service Credit (Honorable discharge) with minimum of one (1) year active duty service. Submit copy of DD214 to Admissions Office.

D. ETHNIC/MULTICULTURAL STUDIES REQUIREMENT

Students must fulfill a 3-unit Ethnic/Multicultural Studies course requirement. (Most of these courses may also be used to meet general education requirements.) Courses which satisfy this requirement are: Anthropology 310, 330; Art History 332; Business 330; Communication Studies 325; Culinary Arts Management 302; Early Childhood Education 430; ENGLT 336, 340, 343, 345, 360; Geography 310, 320, 322; History 308, 344; Humanities 324, 332; Journalism 320; MUFHL 360; Nutrition and Foods 310; Philosophy 352; Social Science 325, 330, 338; Sociology 321; and Theatre Arts 306.

* Courses with an asterisk (*) are listed in more than one category but may be used to satisfy a requirement in ONLY ONE CATEGORY.

Graduation Competency Requirements

E. Demonstrate college-level competency in reading, in written expression and in mathematics. Competency in Basic Skills is satisfied by completing the following:

1. READING COMPETENCY - Completion with a grade of "C" or better in English 115, 310 or an equivalent college reading course at an accredited college. Students who possess an A.A./A.S. degree or higher shall be deemed competent in reading.

2. WRITTEN EXPRESSION COMPETENCY - May be satisfied by one of the following:
   - Completion with a grade of “C” or better in ENGWR 101, 103, 300 or Business 310 or an equivalay course at an accredited college. Students who possess an A.A./A.S. degree or higher shall be deemed competent in writing.

3. MATHEMATICS COMPETENCY - Competency must be demonstrated by either:
   (a) Completion with a grade of “C” or better in Mathematics 100, 102, 105, OR designated higher level mathematics course;
       CISP 340, Psychology 330, OR equivalent college math course at an accredited college.
   (b) Obtaining a satisfactory score on a mathematics examination.
Graduation Requirements

DEGREE AND CERTIFICATE PROGRAMS

Cosumnes River College offers certificate and degree career/technical curricula to students planning to enter occupations directly upon completing their work at a community college. The college also offers two-year general education curricula for students who do not seek intensive training for specific jobs but rather desire to broaden their cultural backgrounds or become more effective citizens and/or parents. Many four-year institutions will give partial or full credit for courses in those areas completed with acceptable grades; however, these courses are not specifically designed for students planning to transfer to four-year institutions. Some of our degree programs are directly aligned with 4-year programs.

COMMENCEMENT EXERCISES

All students expecting to graduate must complete a petition for graduation available in the Admissions Office and Counseling Center by the date published in the academic calendar.

Students may graduate at the end of the fall semester, end of the spring semester, or end of the summer sessions. Because commencement ceremonies are held only once a year in May, students who will complete their degree requirements during the following summer may attend the May commencement ceremonies with special arrangements made through the Student Development Office. Those who complete their Associate in Arts or Associate in Science degree requirements in fall or spring are invited to attend the May ceremonies.

CATALOG RIGHTS REGARDING GRADUATION

Students attending regular sessions at any California community college, any California State University, the University of California, or any accredited institution of higher education, or any combination of same, may elect to meet the requirements in effect at the Los Rios college from which they intend to graduate as follows:

- Requirements in effect at the time of admission to a Los Rios college; or;
- Requirements in effect at the time the student originally enrolled in a regionally accredited college or university; or,
- Requirements in effect at the intended date of graduation from a Los Rios college.

A college may authorize or request substitution for discontinued courses. Students changing their major field of study may be required to complete those requirements in effect at the time of the change of major.

Students must have attendance in at least one session (i.e. quarter, semester, or summer session) in each calendar year. Absence for attendance at another accredited institution will not be considered an interruption in attendance.

DEGREE PROGRAMS

Students majoring in a two-year curriculum and planning to graduate with the Associate in Arts or Science degree must comply with the graduation requirements listed in this catalog. Candidates for graduation must file an application for graduation.

Check the Academic Calendar (pages ii to iv) in this catalog and class schedules for the last date to file for graduation.

CERTIFICATE PROGRAMS

Certificate programs have been developed to assist those already employed in business and industry or those who desire to upgrade their skills or acquire specialized training, but who do not wish to pursue a degree program at the college. A planned sequence of courses has been developed with the assistance of community advisory committees. Upon completion of required courses, a Certificate of Completion is awarded.

Although some equivalent course work at other accredited institutions might apply toward a Certificate of Completion, a grade of “C” is required in each course leading to a certificate. A minimum of twelve (12) units must be completed at Cosumnes River College. Certificate programs which are scheduled for fewer than twelve (12) units may be completed by satisfying the certificate program requirements.

Students who qualify for a Certificate of Completion in any of the certificate programs listed in this catalog may petition for the issuance of the Certificate of Completion through the Admissions Office.
In addition to regularly scheduled credit classes, students may receive college credit for participation in the following alternative credit and study options:

**ADVANCED PLACEMENT TESTS (CEEB)**

Students enrolling at Cosumnes River College may be awarded units of credit for each Advanced Placement Test (CEEB) they have passed with scores of 3, 4, or 5. After completing 12 units at Cosumnes River College, a student in good standing may submit their CEEB/Advanced Placement Test. A maximum of 15 units may be earned by examination. Credit/units posted will be used when evaluating an A.A. or A.S. degree, but grades are not awarded. Credit may not be posted to the CRC transcript for courses which duplicate credit already allowed for Advanced Placement Examinations/CEEB. Students should meet with a counselor to obtain information on Advanced Placement Tests.

<table>
<thead>
<tr>
<th>Course Exam</th>
<th>AP Score</th>
<th>CRC Equivalency</th>
<th>Credit Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art General</td>
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<td>5</td>
<td>ARTH 300, 309 &amp; 311</td>
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</tr>
<tr>
<td>COMPUTER SCIENCE</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Computer Sci</td>
<td>3, 4, 5</td>
<td>Check with Dean, new 2000</td>
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<tr>
<td>ENGLISH</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Engl Lit/Comp</td>
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<td>ENGWR 300</td>
<td>3 Units</td>
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<tr>
<td>Engl Lit/Comp</td>
<td>4, 5</td>
<td>ENGWR 300 &amp; 301</td>
<td>6 Units</td>
</tr>
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<td>FOREIGN LANGUAGES</td>
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<tr>
<td>Foreign Lang</td>
<td>3, 4, 5</td>
<td>Credit for 1st &amp; 2nd semester courses in subject/area</td>
<td>6 Units total</td>
</tr>
<tr>
<td>HISTORY (Am, European, World), Politics &amp; Gov.</td>
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<tr>
<td>American History</td>
<td>3, 4, 5</td>
<td>HIST 312 &amp; 313</td>
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<tr>
<td>Politics &amp; Gov.</td>
<td>3, 4, 5</td>
<td>HIST 312 &amp; 313</td>
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</tr>
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<td>MATH / SCIENCES</td>
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<tr>
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<tr>
<td>Biology</td>
<td>4, 5</td>
<td>BIOL 400 or BIOL 310</td>
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<td>CHEM 400</td>
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<td>Environmental Science</td>
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<td>Math A/B</td>
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<td>Math 350 or Math 341 satisfies prerequisite for Math 400</td>
<td>3 units</td>
</tr>
<tr>
<td>Math B/C</td>
<td>3</td>
<td>Math 350</td>
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<td>Math B/C</td>
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<td>Math 400</td>
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</tr>
<tr>
<td>Stats</td>
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<td>Stat 300</td>
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</tbody>
</table>

**COLLEGE LEVEL EXAMINATION PROGRAM (CLEP) - GENERAL EXAMINATIONS**

After completing 12 units at Cosumnes River College, a student in good standing may submit scores on General Examinations, from the College Level Examination Program (CLEP) to the Admissions Office for college credit evaluation. A maximum of 30 units of credit may be granted toward completion of the general education requirements with the exception of the English requirement. No credit is granted for CLEP Subject Examinations. Scores must be at least in the 50th percentile. Students should be aware that some two-year and four-year colleges have the right to accept, modify, or reject the CLEP units. Students should meet with a counselor for more information on College Level Examination Program (CLEP).

<table>
<thead>
<tr>
<th>Course Exam</th>
<th>Credit Allowed</th>
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<tr>
<td>Mathematics Exam</td>
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</tr>
<tr>
<td>Humanities Exam</td>
<td>6.0 Units of Humanities</td>
</tr>
<tr>
<td>Natural Sciences Exam</td>
<td>6.0 Units of Natural Science</td>
</tr>
<tr>
<td>Social Sciences and History Exam</td>
<td>6.0 Units of Social Science/History</td>
</tr>
</tbody>
</table>

Actual credit awarded may be affected by coursework previously taken.

**CREDIT BY EXAMINATION**

Students may receive credit for some courses by taking an exam. Students must have completed 12 units at Cosumnes River College and have a cumulative GPA of 3.00 or better at CRC to be eligible for this option. Please follow these steps to participate:

1. Find a professor who is willing to administer the exam.
2. Complete the appropriate paperwork at the Admissions Office. Staff will verify your eligibility. Keep copies of transcripts attached to the credit by examination petition.
3. Have the examination professor sign the petition.
4. Have the appropriate area dean sign the petition.
5. Return completed petition to the Admissions Office for enrollment in a test section and payment of appropriate enrollment fees.
6. Take exam and have the professor submit the grade to the Admissions Office.

**CREDIT FOR MILITARY SERVICE**

Credit for military service is granted upon presentation of papers showing honorable discharge from and active duty of one year or more in the United States armed forces. A veteran may receive four (4) units of elective credit by submitting a copy of the DD 214 separation papers and a petition. Veterans may also receive credit for satisfactory training completed in service school.

After enrolling at CRC, a veteran may apply for evaluation of military service experience for college credit. A copy of the veteran’s DD214 separation paper MUST be submitted at the Veterans Affairs Office and a petition completed after the first semester of attendance. Credit granted for military service is based on A Guide to the Evaluation of Educational Experiences in the Armed Services, published by the American Council on Education. Students in the six-month reserve training program are not eligible for military credit. This is in accordance with the recommendation of the American Council on Education.
HONORS PROGRAM

The Cosumnes River College Honors program is designed specifically for academically accomplished students—and those seeking a challenge with the ability and desire for high achievement. Through its series of special Honors courses, the program provides opportunities for intellectual growth beyond those generally found in most lower division programs. Designed for motivated students, these one to three unit courses are intended to augment and enhance a student’s knowledge and educational experience. In the broad plan of the program, some of these courses are linked to a particular course and are intended to provide in-depth, rigorous treatment of certain related topics. These classes may require concurrent or previous enrollment in another course. Prospective Honors Program students should possess the ability to think and work independently, to write clearly and purposefully, and to cooperate in the spirit of discovery and understanding.

Honors courses are special intensive courses in which students will confront and attempt to resolve difficult questions that arise in a careful study of the issues found in the discipline(s). Honors students are expected to research aspects of these questions and present their findings to the class in written form for seminar discussion. Field trips to attend events or to do research may be an integral part of the Honors course experience. Students who successfully complete units from Honors courses may be able to count these units as part of the Transfer Breadth Requirements (see page 24). Students who complete 15 units or more in honors-designated courses will earn special recognition as an Honors Scholar, a distinction that may entitle the student to guaranteed transfer and scholarship opportunities at select transfer colleges and universities. Interested students should contact their counselor, the Honors Director, or the Vice President of Instruction and Student Learning. This designation will be placed in permanent transcripts.

Students interested in applying for membership in the Honors Program should contact the Honors Director (L-310) or the Vice President for Instruction and Student Learning (College Center) for application materials.

ON-LINE INSTRUCTION

Cosumnes River College offers instruction via the Internet. Learning opportunities using this medium will come in two modes. In the first, all or most course instruction takes place on-line through the use of materials and activities posted on an Internet site. In the second mode, the instructor of a class that meets face-to-face in the traditional way may use the Internet to post learning materials, resources and assignments, as well as provide individual contact with students through e-mail or other electronic means. Registration and rules governing these courses are the same as those of traditional in-class courses.

ROTC

Aerospace Studies: Air Force ROTC is available to Cosumnes River College students through a program offered at CSU, Sacramento. There is no obligation to join the military to take the course. Students may take courses to explore an interest in a military career. Two-, three-, and four-year programs are available, leading to a commission in the United States Air Force. Scholarships are available to qualified students. Classes are conducted at CSUS. Topics include military history, management, leadership, problem solving, ethics, public speaking, world politics, international relations, and current events.

To apply for the program or for more information, contact the Unit Admissions Officer at (916) 278-7315. It is recommended that applications be submitted no later than the first semester of the sophomore year.

Military Science: Army ROTC is available to Cosumnes River College students at CSU, Sacramento. Military Science Department offers hands-on training in management and leadership. There is no obligation to join the military by taking the course. The program stresses the following leadership dimensions: oral and written communications, oral presentations (formal briefings), initiative, sensitivity, influence, planning and organizing, delegation, administrative control, problem analysis, judgment, decisiveness, physical stamina, and mission accomplishment. Also stressed are current events, national and international politics, military affairs, ethics training, and human relations with emphasis on eliminating racial and gender discrimination. Management and leadership are taught using the U.S. Army as a model. Two and three year scholarships are available, covering up to $9,000 per year for tuition, $225 per semester for books and supplies, $200 per semester for lab fees, and $150 a month tax free stipend during the academic year.

SPECIAL STUDIES

Experimental Offerings. An experimental offering is a course that is offered on a trial basis. Students enroll in experimental offerings through the regular registration process. Note: Transfer institutions may not accept units earned in experimental offerings.

Independent Studies. An Independent Studies project involves an individual student or small group of students in study, research, or activities beyond the scope of regularly offered courses.

Students may petition to enroll in one to three units in a single department per semester, with a maximum of six (6) units of Independent Studies allowed per semester. A maximum of nine (9) units of Independent Studies is allowed toward graduation requirements. Anyone may apply for permission to pursue an Independent Studies project, designed to foster special knowledge, skills, and experience not available in any one regularly scheduled course. It is the student’s responsibility to develop a program of study and evaluation approved by the supervising instructor. Petitions should be filed prior to the end of the first nine-week classes. (See Academic Calendar - page ii.)

Students can normally expect to successfully accomplish only one such project per semester, as one unit of credit represents approximately 54 hours of work.

It is recommended that students, prior to enrolling, complete college courses or have actual experience and training in the field in question. To obtain special studies credit, the student must:

• Discuss and outline the proposal with the supervising instructor
• Obtain an application from the area dean’s office
• Submit the completed application to the supervising instructor who will obtain the necessary approval, and
• Upon approval, register for Independent Studies 295 or 495 in the Admissions Office

NOTE: Transfer institutions may or may not accept special studies units.

STUDY ABROAD PROGRAMS

Your assignment is to visit and record your reactions to the Mona Lisa, or to ride to the top of the London Eye, or to discover the narrowest street in Florence. Studying abroad can be the most fascinating and life-changing experience students will have in the whole course of their college careers. Living and studying in a completely different culture challenges students to re-

(Continued on next page)
examine their basic attitudes and outlooks, and helps them become globally aware and culturally competent. The Study Abroad program is learning 24 hours a day, seven days a week when the classroom is an entire country and culture. Plus it is incredible fun.

The Los Rios Community College District offers study opportunities in cooperation with the American Institute for Foreign Study. Programs take place in both summer sessions and full semesters. Classes are taught in English by community college faculty from Los Rios and other consortium colleges, and students take 12 units of GE classes—the same classes that are offered in the community colleges here. Programs are offered on a rotating basis in London, Paris, Madrid, Florence and Dublin, and have enriched curriculum that include travel and field trips, cross-cultural experiences, and resources not available at home to enhance the learning process.

For more information on how to apply for Study Abroad programs call the Study Abroad office at (916) 691-7187 or visit the CRC home page and click on the Study Abroad link, which will take you to the Study Abroad Consortium home page at www.crc.losrios.edu/abroad.

**TELEVISION INSTRUCTION**

Cosumnes River College’s televised instruction provides a different way for students to take courses toward an Associate of Arts or Associate of Science Degree, certificate or transfer. Taking the courses at home or at a convenient outreach center can save time, money and transportation or childcare costs.

CRC offers two types of televised instruction:

**Interactive Television:** The instructional television system brings students live, interactive classes, broadcast from the main campus in Sacramento to outreach centers throughout the district, and over several area cable systems. Students participate in classes by telephone (toll free) to report attendance and ask questions or participate in discussions. Students need to attend on-campus classes only to take exams, with accommodations made for student schedules. With the exception of textbooks, class materials may be picked up or mailed. Assignments may be faxed or mailed to instructors. Student participation is expected.

**Telecourses:** Telecourses are lessons on video carried over cable television. Students may tape programs for later viewing, but must attend an orientation and a specified number of lectures with the local instructor. Orientations and follow-up meetings are scheduled for various campuses. Assignments may be mailed, faxed, or in some cases, e-mailed to the local instructor.

CRC also serves sites located at businesses, schools, fire stations and community centers. For more information, call (916) 691-7289 or consult the current class schedule.
CO S U M N E S R I V E R C O L L E G E C O U R S E S
C E R T I F I E D T O M E E T C S U G E N E R A L E D

CO S U M N E S R I V E R C O L L E G E C O U R S E S
C E R T I F I E D T O M E E T C S U G E N E R A L E D

A total of 39 units of lower division general education may be certified by Cosumnes River College. There are additional general education units which will be taken at the upper division level, to be completed at the university from which the student will graduate.

THE COMPLETION OF THIS PATTERN WILL ALSO SATISFY THE “MAJOR” REQUIREMENTS OF AN AA DEGREE.

IT IS VERY IMPORTANT THAT THE STUDENT SEEK THE AID OF A COUNSELOR WHEN SELECTING COURSES, SINCE MANY VARIABLES, LIKE CHOICE OF MAJOR, AFFECT WHICH COURSES WOULD BE APPROPRIATE.

Students completing 39 units, as specified in the General Education pattern listed below, may request certification of completion at the time of transfer to the California State University. No more than 30 semester units may be credited for categories B, C, and D combined.

A. ORAL, WRITTEN COMMUNICATION AND CRITICAL THINKING - Nine units to include one course from each group:
1. Communication Studies 301, 331, 361
2. English-Writing 300
3. Communication Studies 311, 315; English-Writing 302;
   Philosophy 300, 320, 325, 328; Sociology 305.

B. PHYSICAL UNIVERSE AND ITS LIFE FORMS - minimum of 9 units total, with at least three units from each category and at least one course containing a laboratory from (1) or (2). (Courses with single * indicate a laboratory only course; courses with double ** indicate a lecture and laboratory course.)
   Geology 300, 301*, 305, 306*, 310, 311*, 320, 330, 342, 345, 351**;
   Physical Science 302**; Physics 310, 311, 350**, 360**, 411**.
   ENVT 304, 306; Psychology 312**
3. Mathematics 300, 310, 335, 341, 343, 344, 350, 351, 370, 400, 401, 402, 410, 420; Psychology 330; Statistics 300.

The laboratory-only courses marked with * may be used to satisfy the laboratory requirement only when the corresponding lecture course is also taken; i.e., Anthropology 301* with Anthropology 300; Astronomy 400* with Astronomy 300; Geography 301* with Geography 300; Geology 301* with Geology 300; Psychology 312** with Psychology 310.

C. ARTS, HUMANITIES, FOREIGN LANGUAGES, LITERATURE AND PHILOSOPHY - Minimum of 9 units to include at least one course from the Arts and one from the Humanities:
1. ARTS
   Architecture 310, 332; Art-History 300, 303, 309, 311, 312, 326, 332; Art 300, 302, 304, 305, 312, 320, 323, 327, 328, 361, 370, 372, 410, 430; Communication Media 305, 378; Film & Media Studies 300, 305, 320; MUFHL 300, 308, 310, 311, 315, 321, 330, 400;
   MUJVI 310, 311, 340, 341, 350, 351, 370, 371, 495;
   MUP 310, 320, 350, 357, 360, 418; Photography 300, 301, [302];

2. HUMANITIES
   ENGCW 400, 410, 480; ENGLT 303, 310, 311, 320, 321, 330, 336, 340, 341, 343, 345, 360, 370, 402; ENGWR 301, FMS 488,
   Geography 481;
   Honors 350, 360 (must have 3 units), 382;
   Humanities 300, 310, 320, 324, 332, 334, 340, 348, 486 (must have 3 units);
   Philosophy 304, 310, 330, 331, 338, 350, 352, 356;
   Sign Language 315, 316, [330];
   Spanish 401, 402, 411, 412, [413], 425, 426, 427;
   Vietnamese 311, 312, 401, 402, 411, 412.

D. SOCIAL AND BEHAVIORAL SCIENCES - Minimum of 9 units:
1. American History and Institutions can be met by one of the following combinations:
   a. One course from History 312, 313, 320, 321, 331 or 371, paired with Political Science 301, or
   b. One course from History 312 or 320 paired with one from History 313, 314 or 321.
2. Minimum of three units (one course selected from the following): Agriculture Business 321; Anthropology 310, 319,[320], 330, 332, 334, [341]; Business 330, 345; Communication Studies 325, 341, 343, 480; Communications Media 300; Economics 302, 304; Family and Consumer Science 312; Geography 310, 312, 320, 322, 481; History 301, 302, 307, 308, 344, 360, 370, 373; Honors 340, 370, 382. (must have 3 units); Humanities 484; Journalism 310, 320; Philosophy 360; Political Science 302, 310; Psychology 300, 312, 320, 335, [340], 351, [351], 365, 372; Social Science 325, 330, 338, 360, 480 (must have 3 units); Sociology 300, 301, 305, 321, 325, 341.

E. LIFE-LONG UNDERSTANDING AND DEVELOPMENT - Minimum of 3 units:
   Communication 321; English-Education 320; Family and Consumer Science 314, 322, 324; Health Education 300, 350; Human/Career Development 310; Human Services 302; Nutrition and Foods 300; Physical Education activity (one course) with one of the following prefixes: ADAPT, DANCE, FITNS, FACT, TMACT, SPORT; PET 301; Psychology 354, 356, 358, 360, or Sociology 310.

[ ] = pending approval - see counselor

UPPER DIVISION TRANSFER APPLICANTS WITH 60 OR MORE TRANSFERABLE SEMESTER UNITS

High school graduates, 1988 and later, may qualify for admission by completing a minimum of 30 semester units selected from Area A1, A2, A3, B3, C and D with a grade of “C” or better in each course. The CSU general education requirements in Areas A1, A2, A3 (at least 9 semester units) and in B3 (usually 3-4 semester units) must be completed as part of the 30-semester unit requirement with a grade of “C” or better in each course.

Each CSU campus admission practice is different and may change without notice, therefore, transfer students are highly encouraged to see a counselor every semester prior to transferring.
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

Accounting 301, 311, 341, 495, 498*, 499

Agriculture Business 300, 310, 320, 321, 330, 331, 495, 498*, 499

Animal Science 300, 495, 499

Anthropology 300, 301, 310, 319, 320, 330, 332, 334, 341, 495, 499

Architectural Design Technology 300, 310, 312, 314, 495, 498*, 499

Architecture 300, 310, 320, 321, 322, 325, 326, 327, 329, 330, 332, 334, 495, 498*, 499


Art History ARTH 300, 303, 309, 311, 312, 326, 332, 499

Art New Media ARTNM 324, 326, 495, 499

Astronomy 300, 400, 495, 499

Automotive Mechanics Technology 300, 301, 302, 304, 306, 308, 310, 312, 314, 316, 320, 322, 324, 326, 330, 332, 334, 336, 340, 495, 498*, 499

Biology 300, 307, 310, 342, 350, 366, 390, 400, 401, 410, 420, 430, 431, 440, 462, 470, 481, 495, 499

BUS 300, 310, 320, 330, 340, 341, 345, 350, 360, 360.1, 360.2, 365, 480, 490, 495, 498*, 499

BUSTEC 302, 303, 304, 306, 499


Communication Studies (Speech) 301, 311, 315, 321, 325, 331, 341, 361, 363, 373, 480, 494, 495, 499


CISS 300, 310, 320, 330, 341, 342, 350, 355, 360

CISW 300, 310, 350, 380, 380.1, 380.2, 400, 410, 420, 440, 499

Construction Management Technology 300, 310, 313, 330, 495, 498*, 499

Culinary Arts Management 300, 301, 302, 306, 310, 312, 314, 316, 320, 322, 324, 326, 330, 332, 334, 340, 495, 498*, 499

Early Childhood Education 300, 302, 304, 320, 322, 324, 326, 330, 332, 334, 340, 495, 498*, 499

Economics 302, 304, 320, 495, 499

Engineering 300, 303, 310, 312, 400, 412, 420, 495, 499

English ENGCW 400, 410, 420, 430, 452, 453, 480, 495, 499;

ENGLD 305, 320, 495, 499;

ENGLT 303, 309, 310, 311, 320, 330, 332, 334, 340, 341, 343, 345, 360, 370, 402, 495, 499

ENGRO 310

ENGWR 300, 301, 302, 309, 330, 331, 495, 499;


Family and Consumer Science 312, 314, 322, 324, 494, 495, 499

Film & Media Studies 300, 305, 310, 320, 488, 489, 495, 499

Fire Technology 300, 301, 302, 303, 304, 320, 495, 498*, 499

continued on next page
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

<table>
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<tr>
<th>Department</th>
<th>Courses</th>
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<td>Health Education</td>
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<td>History</td>
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<td></td>
<td>Vietnamese 311, 312, 401, 402, 411, 412, 495, 499</td>
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</table>

* Work Experience 498 - up to 16 units are transferable depending on the CSU campus - please see a counselor for assistance with transfer.
OTHER TRANSFER ADMISSION REQUIREMENTS

UNIVERSITY OF CALIFORNIA
TRANSFER ADMISSION REQUIREMENTS

Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

1. Students who were eligible for admission to the university when they graduated from high school (meaning they satisfied the Subject Scholarship and Examination Requirements) are eligible to transfer if they have a C (2.0) average in transferable coursework.

2. Students who met the Scholarship Requirement but not the Subject Requirement must take transferable college courses in the missing subjects earning a "C" or better in each required course, and have an overall "C" average in all transferable coursework to be eligible to transfer.

3. Students who were not eligible for admission to the University when they graduated from high school because they did not meet the Scholarship Requirement must:
   a. Complete 90 quarter units or 60 semester units of transferable college credit with a grade point average of at least 2.4, and;
   b. Complete the following courses pattern, earning a grade of C or better in each course:
      • two transferable college courses (3 semester or 4-5 quarter units) in English composition; and
      • one transferable college course (3 semester or 4-5 quarter units) in mathematical concepts and quantitative reasoning; and
      • four transferable college courses (3 semester or 4-5 quarter units each) chosen from at least two of the following subject areas: the arts and humanities, the social and behavioral sciences, the physical and biological sciences.

   (Students who satisfy the Intersegmental General Education Transfer Curriculum prior to transferring to UC will satisfy Option 3b above of the new transfer admission requirements.

4. Students transferring to the University of California system should contact a counselor regarding certain course unit limitations or visit the counseling web site (http://crc.losrios.edu/~counsel) for more information.

INDEPENDENT CALIFORNIA COLLEGES AND UNIVERSITIES

California’s fully accredited independent colleges and universities provide a host of options at undergraduate, graduate and professional levels for students planning to continue their education beyond community college.

Students who transfer to independent colleges or universities will be given academic credit for most, if not all, of their community college studies. Virtually all institutions give full credit for general education courses and usually for other courses designated for transfer by the community college.

Some colleges and universities stipulate a certain number of completed units before considering students eligible for transfer. Others do not and will accept students at any time. The requirements are outlined in the respective college catalogs, available upon request from the college’s Admissions Office. Students are urged to contact their counselors for additional information.

CALIFORNIA ARTICULATION NUMBER SYSTEM (CAN)

The California Articulation Number (CAN) identifies some of the transferable, lower division, introductory, and preparatory courses commonly taught within each academic discipline on college campuses.

Lists of courses from campuses participating in the CAN system are available in counseling offices. The system assures students that CAN courses on one participating campus will be accepted “in lieu of” the comparable CAN course on another participating campus. Example: CAN ECON 2 on one campus will be acceptable for CAN ECON 2 on another participating campus. Each campus also retains its own numbering system.

California Articulation Numbers are listed parenthetically at the beginning of each course description in this catalog. (see page 27)

Students planning to use CAN course numbers as course equivalencies should see a counselor for more information.
# CAN California Articulation Number
## System Qualified Courses at Cosumnes River College

Transferable courses **may or may not** satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a [counselor](#) for specific transfer course evaluation.

<table>
<thead>
<tr>
<th>CAN ID</th>
<th>COSUMNES RIVER COLLEGE COURSE</th>
<th>CAN ID</th>
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<td>ARTH 309</td>
<td>CAN HIST SEQ A</td>
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<td>CAN JOUR 2</td>
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<td>ART 372</td>
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<td>CAN ART 16</td>
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<td>CAN MATH 12</td>
<td>MATH 344</td>
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<td>ACCT 301</td>
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<td>ACCT 311</td>
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<td>BUS 340</td>
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<td>ACCT 301+311</td>
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<td>CAN MATH SEQ C</td>
<td>MATH 400+401+402</td>
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<td>CAN CHEM 6</td>
<td>CHEM 307</td>
<td>CAN MATH SEQ D</td>
<td>MATH 350+351</td>
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<td>CAN CSCI 12</td>
<td>CISP 365</td>
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<td>CISP 430</td>
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<td>PHYS 411</td>
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<td>COMM 371</td>
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<td>PHYS 411+421+431</td>
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<td>CAN PSY 2</td>
<td>PSYC 300</td>
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<td>CAN SPAN SEQ A</td>
<td>SPAN 401+402</td>
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<td>ENGR 420</td>
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<td>CAN ENGR 10</td>
<td>ENGR 310</td>
<td>CAN STAT 2</td>
<td>STAT 300</td>
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</tbody>
</table>

Students planning to use CAN course numbers as course equivalencies should see a counselor for more information.
Students transferring to CSU and UC (students enrolling in college Fall 1991 or later) may fulfill the lower division breadth and general education requirements for any campus of the University of California or the California State University by completing the IGETC or completing the specific lower division breadth and general education requirements of the campus to which they intend to transfer.

Completion of all of the requirements in the Intersagmental General Education Transfer Curriculum (IGETC) will permit a student to transfer from a community college to a campus in either the California State University or University of California system without the need, after transfer, to take additional lower-division general education courses to satisfy campus general education requirements.

The course requirements for ALL AREAS must be completed before the IGETC can be certified. All courses must be completed with grades of “C” or better.

### AREA 1 - English Communication

**CSU** - Three courses required, one from each group below.

**UC** - Two courses required, one each from Group A and Group B

**GROUP A: English Composition (one course required)**
- ENGW 300

**GROUP B: Critical Thinking-English Composition**
- (one course required)
- ENGW 302
- PHIL 328

**GROUP C: Oral Communication - CSU ONLY**
- (one course required)
- COMM 301, 331, 361

### AREA 2 - Mathematics Concepts and Quantitative Reasoning

(One course required)
- MATH 341*, 344, 350*, 351*, 370*, 400*, 401*, 402*
- PSYC 330; STAT 300

### AREA 3 - Arts and Humanities

(At least three courses, with at least one from the Arts and one from Humanities, nine semester units required)

**ARTS:**
- ARTH 300, 303, 309, 311, 312, 326, 332
- CMED 305*
- Film & Media Studies 300, 305, 320
- MUFHL 300*, 310, 311, 315, 321*, 330, 400
- Theatre Arts 300, 302, 303, 306, 322, 323

**HUMANITIES:**
- ENGL 303, 310, 311, 320, 321, 330, 336, 340, 341, 343, 345, 360, 402
- FMS 488*
- Geography 481*
- Honors 350*, 382*
- Humanities 300, 310, 320, 324, 332, 334, 340, 484*
- Philosophy 300, 304, 310, 330, 331, 338, 350, 352, 356, 360
- Spanish 411, 412, [413], 425, 426, 427
- SILA 316
- Vietnamese 411, 412

### AREA 4 - Social and Behavioral Sciences

(At least three courses from at least two disciplines, nine semester units required)

- Anthropology 310, [320, 332] 330, [334, 341]
- Business 345*
- Communication 325, 480*
- Communications Media 300*
- Economics 302, 304; Family and Consumer Science 312*
- Geography 310, 312, 320, 322, 481*
- Humanities 484*
- Journalism 310*, 320; Political Science 301*, 302, 310; Psychology 300, 320, 351, 356, 360, 372*
- Social Science 325, 330, 338, 360*
- Sociology 300, 301, 321, 325, 341

* Indicates that this course may not be used for AREA 4 credit if the course is used for CSU U.S. History, Constitution, and American Ideals requirement.

### AREA 5 - Physical and Biological Sciences

(Two courses, one Physical Science course and one Biological Science course, at least one must include a laboratory, seven to nine semester units)

#### PHYSICAL SCIENCES:
- Astronomy 300, 400**
- Geography 300, 301**, 306
- Geology 300, 301**, 305, 306**, 310, 311**, 330, 345
- Physical Science 302**

#### BIOLOGICAL SCIENCES:
- Anthropology 300, 301**
- ENVT 306
- Psychology 312**

* Credit limit - see counselor for specific limitation.
** Lab courses.

[ ] = pending approval - see counselor

### Language Other than English (UC Requirement ONLY)

Competency is demonstrated by completion of one foreign language course, or completion of two years of a foreign language in high school with a grade of “C” or better.

Sign Language Studies 305, Spanish 401, Vietnamese 401

### CSU Graduation Requirement in U.S. History, Constitution, and American Ideals

*(NOT part of IGETC; may be completed prior to transfer)*

Six semester units, choose one two-course combination from section 1 or 2:

1) Political Science 301 plus one course from History 312, 313, 320, 321, 331, or 371
2) History 312 or 320 paired with one course from History 313, 314 or 321

**Note:** Effective Fall 2005, junior and senior transfers may be admitted to CSU campuses with a grade point average of 2.0 in 60 transferrable semester units and have completed (with a grade of “C” or better) 30 semester units from CSU’s G.E. Breadth or all IGETC requirements, including the completion of CSU’s G.E. requirements in Area 1 and Area 2. Transfer students are highly encouraged to see a counselor every semester prior to transferring.
## COSUMNES RIVER COLLEGE COURSES ACCEPTABLE AT ALL UNIVERSITY OF CALIFORNIA CAMPUSES SYSTEMWIDE REVIEW 2004-2005

Transferable courses **may or may not** satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a **counselor** for specific transfer course evaluation.

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<th>Course</th>
<th>Code</th>
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<td>Agriculture Business</td>
<td>300, 310, 321</td>
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<tr>
<td>Animal Science</td>
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<td>Anthropology</td>
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<td>Architecture</td>
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<tr>
<td>Astronomy</td>
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<tr>
<td>Business</td>
<td>300, 340*, 341*, 345</td>
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<td>Communication Studies (Speech)</td>
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<td>Communications Media</td>
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<td>Computer Information Science</td>
<td>CISC 310, CISP 300, 310, 320, 340, 350, 360, 365, 370, 400*, 405, 409, 430, 440</td>
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<td>Drafting</td>
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<td>Film &amp; Media Studies</td>
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<td>Journalism</td>
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<td>Mathematics</td>
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<td>Nutrition &amp; Foods</td>
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<td>Photography</td>
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<tr>
<td>Psychology</td>
<td>300, 301, 312, 320, 330*, 335, 351, 356, 360, 372*</td>
</tr>
<tr>
<td>Sign Language Studies</td>
<td>305, 306, 315, 316</td>
</tr>
<tr>
<td>Social Science</td>
<td>325, 330, 338, 360</td>
</tr>
<tr>
<td>Sociology</td>
<td>300, 301, 305, 321, 325, 341</td>
</tr>
<tr>
<td>Spanish</td>
<td>401, 402*, 411, 412, 413*, 425, 426, 427</td>
</tr>
<tr>
<td>Experimental Offerings in Subject (Special Studies)</td>
<td>499*</td>
</tr>
<tr>
<td>Statistics</td>
<td>300*</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>401, 402, 411, 412</td>
</tr>
</tbody>
</table>

* All campuses of the University of California system give credit toward graduation for the above courses; however, a certain combination of courses has unit limitations. All Physical Education Activity courses limited to 4 semester units of transfer credit. Check with your counselor regarding these limitations or visit the counseling web site at http://crc.losrios.edu/~counsel/. Also special topics and experimental offering courses will require approval at the time of admission at the UC campus.
DEGREES AND CERTIFICATES

Requirements are identified for each vocational and general education program and, for most, a course sequence is suggested. The courses required in a program must all be completed to earn the degree or certificate, regardless of the order in which they are completed.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an associate’s degree in this major may be different from the requirements needed for the bachelor’s degree.

<table>
<thead>
<tr>
<th>DEGREES</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting (AA)</td>
<td>47</td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
</tr>
<tr>
<td>• General Agriculture (AS)</td>
<td>52</td>
</tr>
<tr>
<td>Agriculture Business (AS)</td>
<td>54</td>
</tr>
<tr>
<td>Architectural Design Technology (AS)</td>
<td>62</td>
</tr>
<tr>
<td>Architecture (AS)</td>
<td>64</td>
</tr>
<tr>
<td>Art (AA)</td>
<td></td>
</tr>
<tr>
<td>• Studio Art</td>
<td>67</td>
</tr>
<tr>
<td>• Design</td>
<td>68</td>
</tr>
<tr>
<td>• Art History</td>
<td>68</td>
</tr>
<tr>
<td>Automotive Mechanics Technology (AA)</td>
<td>74</td>
</tr>
<tr>
<td>Biology (AS)</td>
<td>79</td>
</tr>
<tr>
<td>• Biology Option</td>
<td>79</td>
</tr>
<tr>
<td>• Health Science / Pre-Professional Option</td>
<td>80</td>
</tr>
<tr>
<td>• Pre-Nursing Option</td>
<td>80</td>
</tr>
<tr>
<td>Building Inspection Technology (AS)</td>
<td>85</td>
</tr>
<tr>
<td>Business (AA)</td>
<td>91</td>
</tr>
<tr>
<td>• Administrative Assistant</td>
<td>92</td>
</tr>
<tr>
<td>• Business: General</td>
<td>91</td>
</tr>
<tr>
<td>• Business: General, Transfer</td>
<td>91</td>
</tr>
<tr>
<td>• Small Business Management/Entrepreneurship</td>
<td>93</td>
</tr>
<tr>
<td>Chemistry (AS)</td>
<td>99</td>
</tr>
<tr>
<td>Communication Studies, Organizational Communication (AA)</td>
<td>103</td>
</tr>
<tr>
<td>Communications Media (AA)</td>
<td></td>
</tr>
<tr>
<td>• Advertising/Public Relations</td>
<td>50</td>
</tr>
<tr>
<td>• Broadcast Journalism</td>
<td>84</td>
</tr>
<tr>
<td>• Digital Media</td>
<td>150</td>
</tr>
<tr>
<td>• Film and Media Studies</td>
<td>194</td>
</tr>
<tr>
<td>• Journalism</td>
<td>238</td>
</tr>
<tr>
<td>• Radio Production</td>
<td>302</td>
</tr>
<tr>
<td>• Television Production</td>
<td>319</td>
</tr>
<tr>
<td>Computer Information Science (AS)</td>
<td></td>
</tr>
<tr>
<td>• Computer Programming (transfer)</td>
<td>113</td>
</tr>
<tr>
<td>• CIS Programming</td>
<td>114</td>
</tr>
<tr>
<td>• Information Systems Security</td>
<td>120</td>
</tr>
<tr>
<td>• Management Information Systems</td>
<td>121</td>
</tr>
<tr>
<td>• Network Systems Engineer</td>
<td>116</td>
</tr>
<tr>
<td>• Network Systems Administrator</td>
<td>117</td>
</tr>
<tr>
<td>Construction (AS)</td>
<td>140</td>
</tr>
<tr>
<td>Construction Management Technology (AS)</td>
<td>142</td>
</tr>
<tr>
<td>Culinary Arts Management (AA)</td>
<td>146</td>
</tr>
<tr>
<td>Dietetic Technician (see Nutrition and Foods)</td>
<td></td>
</tr>
<tr>
<td>Digital Media (see Communications Media)</td>
<td></td>
</tr>
<tr>
<td>Early Childhood Education (AA)</td>
<td>152</td>
</tr>
<tr>
<td>• Early Childhood Education</td>
<td>152</td>
</tr>
<tr>
<td>• ECE Site Supervisor</td>
<td></td>
</tr>
<tr>
<td>Education/Teaching (see Liberal Studies for Elementary Education)</td>
<td></td>
</tr>
<tr>
<td>Engineering (AS)</td>
<td>167</td>
</tr>
<tr>
<td>English (AA)</td>
<td>170</td>
</tr>
<tr>
<td>Environmental Technology (AS)</td>
<td>185</td>
</tr>
<tr>
<td>Finance (AA)</td>
<td>196</td>
</tr>
<tr>
<td>Fire Technology (AA)</td>
<td>197</td>
</tr>
<tr>
<td>General Education - Transfer (AA)</td>
<td>200</td>
</tr>
<tr>
<td>Geography (AS)</td>
<td>202</td>
</tr>
<tr>
<td>Geology (AS)</td>
<td>207</td>
</tr>
<tr>
<td>Health Information Technology (AS)</td>
<td>212</td>
</tr>
<tr>
<td>Horticulture (AS)</td>
<td></td>
</tr>
<tr>
<td>• Landscape Design</td>
<td>222</td>
</tr>
<tr>
<td>• Landscape Industry</td>
<td>222</td>
</tr>
<tr>
<td>• Nursery Industry</td>
<td>223</td>
</tr>
<tr>
<td>Human Services, General (AA)</td>
<td>230</td>
</tr>
<tr>
<td>Intercultural Studies (AA)</td>
<td>235</td>
</tr>
<tr>
<td>• American Studies</td>
<td>236</td>
</tr>
<tr>
<td>• Ethnic Studies</td>
<td>236</td>
</tr>
<tr>
<td>• Humanities</td>
<td>236</td>
</tr>
<tr>
<td>• Women’s Studies</td>
<td>236</td>
</tr>
<tr>
<td>Liberal Studies for Elementary Education (AA)</td>
<td>164</td>
</tr>
<tr>
<td>Management (AA)</td>
<td>243</td>
</tr>
</tbody>
</table>
DEGREES

Marketing (AA) ................................................................. 249
Mathematics (AS) ............................................................. 251
Medical Assisting (AS) ...................................................... 258
Music - General (AA) ....................................................... 261
Nutrition and Foods, Dietetic Technician (AS) ................. 269
Photography (AA) ............................................................ 275
Physical Education (AA) .................................................... 281
Physics (AS) ................................................................. 292
Real Estate (AA) .............................................................. 304
Science, General (AS) ...................................................... 306
Social Science - General (AA) ......................................... 310
Spanish (AA) .................................................................. 314
Theatre Arts - General (AA) ............................................. 321
Veterinary Technology (AS) ........................................... 327

CERTIFICATES

Accounting
- Accounting, General .................................................. 47
- Accounting-Advanced ................................................ 47
- Accounting Clerk ...................................................... 47
- Accounting Computer Applications .......................... 47
- Certificate of Taxation ................................................. 48

Agriculture
- General Agriculture .................................................... 52

Agriculture Business
- Agriculture Business ................................................. 54

Allied Health
- Phlebotomy ............................................................... 56

Architectural Design Technology .................................... 62

Architectural Technology .................................................. 65

CERTIFICATES - continued

Automotive Mechanics Technology
- Automotive Mechanics Technology ............................ 75
- Automatic Transmissions/Transaxles ......................... 75
- Automotive Brakes .................................................... 74
- Automotive Electrical Systems .................................. 74
- Automotive Engine Performance .............................. 75
- Automotive Engine Repair ....................................... 74
- Automotive Heating & Air Conditioning .................... 74
- Automotive Emission Control .................................. 75
- Automotive Suspension & Steering ......................... 75
- Small Engine Repair ................................................ 75

Building Inspection Technology
- Building Inspection Technology ............................... 86
- Concrete Construction Inspection ............................. 86
- Electrical Construction Inspection ......................... 86
- HVAC Inspection ...................................................... 86
- Masonry Construction Inspection ............................ 86
- Plumbing Inspection .................................................. 86
- Soils & Asphalt Construction Inspection .................. 86
- Steel Construction Inspection ................................. 87
- Wood Frame Construction Inspection ...................... 87

Business
- Office Assistant .......................................................... 92
- Office Technician ...................................................... 92
- E-Business and the Internet ...................................... 93
- Small Business Management/Entrepreneurship .......... 93

Communication Studies
- Applied Communication Skills ................................. 103

Computer Information Science
- Desktop Publishing .................................................... 114
- Internet Programming ............................................. 114
- Database Design ....................................................... 119
- Database Analyst – SQL ........................................... 118
- Computer Programmer – SQL ................................. 118
- Relational Database Administration ....................... 118
- Web Publishing ......................................................... 119
- Web Programming .................................................. 120
- Information Systems Security ................................. 121
- Network Systems Administrator .............................. 117
- Network Systems Engineer ................................... 117
- Network Helpdesk Technician ................................ 114
- Programming, C/C++ ........................................... 113
- Programming, FORTRAN ..................................... 113
- Programming, Pascal ............................................. 113
- Software Development with JAVA ......................... 119
- Software Development using Visual BASIC.NET ........ 119
- MIS - (See Management Information Systems)

continued on next page
CERTIFICATES - continued

Degrees and Certificates

Construction
• Construction ................................................................. 141
• Construction Pre-Apprenticeship .............................. 141

Construction Management Technology ...................... 143

Culinary Arts Management
• Basic Culinary Services ............................................. 146
• Community Nutrition Specialist .............................. 146
• Cooking and Supervision ......................................... 146
• School Foodservice Specialist ............................... 146

Digital Media
• Communications Media, Digital Media ..................... 150

Early Childhood Education
• Assistant Teacher ................................................... 152
• Associate Teacher .................................................. 153
• Early Childhood Education Teacher ........................ 154
• Early Intervention Assistant I ................................. 155
• Elementary School Teacher Assistant ..................... 153
• Family Day Care ...................................................... 153
• Family Support Services .......................................... 153
• Infant Specialist ..................................................... 153
• Master Teacher ....................................................... 153
• Program Management ............................................ 153
• School Age Child Care ........................................... 153

Emergency Medical Technician .................................. 166

Environmental Technology
• Environmental Technology ........................................ 185
• Environmental Applications of Desktop GIS ............. 185
• Environmental Health & Safety ................................ 186
• Environmental Sampling & Analysis ......................... 185

Fire Technology ................................................................. 198

Geography
• Applications of Desktop GIS .................................... 202

Health Information Technology
• Health Information Coding Specialist ...................... 212

Horticulture
• Landscape Design .................................................... 223
• Landscape Industry ................................................ 222
• Nursery Operations ............................................... 223

Human Services
• General ................................................................. 230

Management
• Retail Management .................................................. 243

Management Information Systems
• Application Analyst .................................................. 122
• Application Data Entry ............................................. 122
• Application Manager ................................................. 122
• Application Technician ............................................. 122
• Information Processing ............................................ 122
• E-Business Infrastructure .......................................... 125
• Programming, COBOL ............................................ 121

Medical Assisting
• Medical Assisting .................................................. 259
• Medical Assisting - Administrative .......................... 259
• Medical Insurance Billing ....................................... 259

Nutrition and Foods
• Community Nutrition ............................................... 269
• Dietetic Technician .................................................. 269

Office Administration (see Business)

Photography
• Photography ............................................................ 276
• Portraiture and Wedding Photography ..................... 276
• Commercial & Studio Photography ......................... 276

Physical Education
• Coaching Certificate ................................................ 281

Real Estate
• Broker ................................................................. 304
• Sales ................................................................. 304

Television Production
• Television Production ............................................. 320
• Cable Access Production ....................................... 320

Veterinary Technology .................................................. 327

Welding ................................................................. 334
DESCRIPTION OF COURSES

NEW COURSE NUMBERING SYSTEM

(See page 349 for a Course Renumbering Guide for all classes)

Cosumnes River College adopted a new standardized course numbering system in 2003-2004 which is described below. The numbers are designed to provide students with general information regarding the focus and intent of courses.

Numbering / Designation

<table>
<thead>
<tr>
<th>Numbering</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 99</td>
<td>Courses numbered 1 through 99 are credit courses that are considered developmental or basic skills and are not acceptable for the associate degree or transfer credit.</td>
</tr>
<tr>
<td>100 - 299</td>
<td>Courses numbered 100 through 299 are college level, generally nontransfer courses applicable to the associate degree.</td>
</tr>
<tr>
<td>300 - 499</td>
<td>Courses numbered 300 through 499 are accepted for transfer by state colleges and universities and are intended to meet major, general education, breadth, or elective credit requirements.</td>
</tr>
</tbody>
</table>

WHAT ARE PREREQUISITES, COREQUISITES, and ADVISORIES?

What are PREREQUISITES, COREQUISITES, and ADVISORIES?

It is the intent of Cosumnes River College to guide students into courses in which they will have the greatest possibility for academic success. Therefore, you will find courses which have prerequisites, corequisites or advisories in their description. Following are the definitions for prerequisites, corequisites and advisories on recommended preparation:

a) A "Prerequisite" is a course that a student is required to have successfully completed (with a "C" or better) in order to demonstrate current readiness for enrollment in a course or educational program.

b) A "Corequisite" is a course that a student is required to simultaneously take in order to enroll in another course.

c) An "Advisory or recommended preparation" means that the student is advised but not required to possess a pre/corequisite class or skill level to enroll in the course.

How to demonstrate that you have met the prerequisite:

To demonstrate that you have met the prerequisite, be prepared at the first class meeting to provide either an unofficial transcript showing the appropriate course work or a copy of the appropriate certificate of completion or license.

Some prerequisites include the phrase "or equivalent." This phrase is used to encourage students who have gained the prerequisite skills through other experiences to discuss proper course placement with a counselor.

Prerequisite Challenge

Procedure For Students

If you feel that you can meet the requirements, or one of the conditions below exists, then you can challenge a prerequisite.

A Prerequisite Challenge Form can be obtained from the Counseling Office or any instructional area office. The form will explain procedures. Criteria for challenging a course are:

1) You have knowledge or ability to succeed in the course without the prerequisite.

2) The course which provides the prerequisite is not readily available.

3) You believe that the prerequisite is discriminatory or being applied in that manner.

4) You believe that the prerequisite was established in violation of regulations and/or the established district-approved policy and procedures.

Once you have completed the challenge procedure, your challenge will be reviewed by a Prerequisite Challenge Committee. You will be informed, in writing, of the committee's determination within five (5) instructional working days.
OFFICIAL COURSE PREFIX
(used in degrees and certificates listed in this catalog)

ACCT  Accounting
ADT   Architectural Design Technology
AGB   Agriculture Business
AH    Allied Health
ANSC  Animal Science
ANTH  Anthropology
ARCH  Architecture
ART   Art
ARTH  Art History
ARTNM Art New Media
ASTR  Astronomy
AMT   Automotive Mechanics Technology
BIOL  Biology
BIT   Building Inspection Technology
BUS   Business
BUSTEC Business Technology
CHEM  Chemistry
COMM  Communication Studies
CMED  Communications Media
CISA  Computer Information Science - Applications
CISC  Computer Information Science - Core
CISN  Computer Information Science - Networking
CISP  Computer Information Science - Programming
CISS  Computer Information Science - Security
CISW  Computer Information Science - Web
CMT   Construction Management Technology
CAM   Culinary Arts Management
ECE   Early Childhood Education
ECON  Economics
EMT   Emergency Medical Technology
ENGR  Engineering
ENGWR English - Writing
ENGRD English - Reading
ENGLT English - Literature
ENGCW English - Creative Writing
ENGED English - Education
ENGLB English - Laboratory
ESL   English as a Second Language
ESLG  English as a Second Language - Grammar
ESLL  English as a Second Language - Listening
ESLP  English as a Second Language - Pronunciation
ESLR  English as a Second Language - Reading
ESLW  English as a Second Language - Writing
ENVT  Environmental Technology
FCS   Family & Consumer Science
FMS   Film & Media Studies
FT    Fire Technology
GEOG  Geography
GEOL  Geology
HEED  Health Education
HIT   Health Information Technology
HIST  History
HONOR Honors
HORT  Horticulture
HCD   Human/Career Development
HSER  Human Services
HUM   Humanities
INDIS Interdisciplinary Studies
JOUR  Journalism
LIBR  Library
MGMT  Management
MKT   Marketing
MATH  Mathematics
MEDA  Medical Assisting
MUFHL Music Fundamentals/History & Literature
MUIVI Music Instrumental/Voice Instruction
MUP   Music Performance
MUSM  Music Specializations
NUTRI Nutrition and Foods
PHIL  Philosophy
PHOTO Photography
PS    Physical Science
PHYS  Physics
PLTS  Plant Science
POLS  Political Science
PSYC  Psychology
PS    Physical Education
ADAPT Adaptive Physical Education
DANCE Dance
FITNS Fitness
PACT  Personal Activity
PET   Physical Education Theory
SPORT Sports
TMACT Team Activity
RE    Real Estate
SILAL Sign Language Studies
SOCSC Social Science
SOC   Sociology
SPAN  Spanish
STAT  Statistics
SGVT  Student Government
TA    Theatre Arts
VT    Veterinary Technology
VIET  Vietnamese
WELD  Welding
WEXP  Work Experience
**CROSS-LISTED AND CROSS REFERENCED COURSES**

When a course is listed under two different departments in the catalog, the course is referred to as “cross-listed.” The cross-listed course has identical content under both departments’ catalog listing. If two courses are cross-listed, a student cannot earn credit for both. The student must choose one of the courses to enroll in. Students who are not sure which course of the two courses they should enroll in are encouraged to consult with their counselor. When a cross-listed course is repeatable, the course may be taken (under either name) the total number of times stated in the catalog descriptions of the cross-listed course.

Some courses are not identical in content, but have a significant overlap of content. These courses are referred to as “cross-referenced.” Typically, one of the two courses (the larger course) contains the entire content of the other course (the smaller course). Students cannot enroll in the smaller course if they have earned credit for the larger course. But students can enroll in and earn credit for the larger course even if they have previously earned credit for the smaller course.

### CROSS-LISTED COURSES:

| ART 410 | PHOTO 301 | Beginning Photography |
| BIOL 350 | ENVT 304 | Environmental Biology |
| BIOL 366 | ENVT 306 | Intro to Toxicology: The Biology & Chemistry of Poisons |
| BIOL 481 | HONOR 383 | Honors Seminar in Biology |
| BUS 320 | ECON 320 | Concepts in Personal Finance |
| BUS 345 | SOCSC 360 | Law and Society |
| BUS 360 | CISW 380 | E-Business: Intro & Environ, Technology & Infrastructure |
| BUS 360.1 | CISW 380.1 | E-Business: Introduction and Environment |
| BUS 360.2 | CISW 380.2 | E-Business: Tools and Techniques |
| BUS 480 | HONOR 320 | Honors Seminar in Business |
| CMED 300 | JOUR 310 | Mass Media and Society |
| CMED 305 | FMS 305 | Film History |
| CMED 376 | MKT 314 | Advertising |
| CMED 378 | TA 356 | Acting for the Camera / Acting for the Camera I |
| CISA 160 | MGMT 142 | Project Management Techniques and Software |
| CISA 330 | JOUR 335 | Desktop Publishing / Introduction to Desktop Publishing |
| CISA 331 | JOUR 336 | Intermediate Desktop Publishing |
| CISC 302 | JOUR 330 | Computer Familiarization |
| CISC 303 | ECE 302 | Computer Skills for Educators |
| CISW 380 | BUS 360 | E-Business: Intro & Environ, Technology & Infrastructure |
| CISW 380.1 | BUS 360.1 | E-Business: Introduction and Environment |
| CISW 380.2 | BUS 360.2 | E-Business: Tools and Techniques |
| COMM 480 | HONOR 340 | Honors Seminar: Political Campaign Communication |
| ECE 302 | CISC 303 | Computer Skills for Educators |
| ECE 364 | PET 306 | Fundamentals of Movement and Rhythm in Early Childhood Education / Fundamentals of Games and Rhythms |
| ECE 415 | NUTRI 320 | Children’s Health, Safety and Nutrition |
| ECON 320 | BUS 320 | Concepts in Personal Finance |
| ENGWR 330 | JOUR 340 | Writing for Publication |
| ENVT 302 | GEOG 331 | Introduction to Geographic Information Systems |
| ENVT 304 | BIOL 350 | Environmental Biology |
| ENVT 306 | BIOL 366 | Intro to Toxicology: The Biology & Chemistry of Poisons |
| ENVT 330 | GEOG 335 | Intro to Desktop Geographic Information Systems Applications |
| ENVT 330.1 | GEOG 335.1 | Fundamentals of Geographic Information Systems |
| ENVT 330.2 | GEOG 335.2 | Introduction to Using Desktop GIS |
| ENVT 330.3 | GEOG 335.3 | Projects Using Desktop GIS |
| FMS 305 | CMED 305 | Film History |
CROSS-LISTED COURSES - continued

| FMS 488  | HONOR 350 | Honors Seminar: Introduction to Critical Theory |
| FMS 489  | HONOR 352 | Honors Seminar: The Films of Alfred Hitchcock |
| GEOG 331 | ENVT 302  | Introduction to Geographic Information Systems |
| GEOG 335 | ENVT 330  | Intro to Desktop Geographic Information Systems Applications |
| GEOG 335.1 | ENVT 330.1 | Fundamentals of Geographic Information Systems |
| GEOG 335.2 | ENVT 330.2 | Introduction to Using Desktop GIS |
| GEOG 335.3 | ENVT 330.3 | Projects Using Desktop GIS |
| GEOG 481 | HONOR 382 = HUM 484 | Honors Seminar: Nature and Culture |
| GEOG 482 | HONOR 384 | Honors Seminar in Geography |
| HEED 350 | PET 301  | Personal Wellness |
| HEED 360 | PET 380  | Weight Management |
| HONOR 320 | BUS 480  | Honors Seminar in Business |
| HONOR 340 | COMM 480 | Honors Seminar: Political Campaign Communication |
| HONOR 350 | FMS 488  | Honors Seminar: Introduction to Critical Theory |
| HONOR 352 | FMS 489  | Honors Seminar: The Films of Alfred Hitchcock |
| HONOR 360 | HUM 486  | Honors Seminar in Humanities |
| HONOR 370 | SOCSC 480 | Honors Seminar in Social Science |
| HONOR 382 | HUM 484 = GEOG 481 | Honors Seminar: Nature and Culture |
| HONOR 383 | BIOL 481 | Honors Seminar in Biology |
| HONOR 384 | GEOG 482 | Honors Seminar in Geography |
| HONOR 390 | MATH 480 | Honors Seminar in Mathematics |
| HORT 302 | PLTS 310 | Soils and Plant Nutrition |
| HUM 484 = GEOG 481 | HONOR 382 | Honors Seminar: Nature and Culture |
| HUM 486 | HONOR 360 | Honors Seminar in Humanities |
| JOUR 310 | CMED 300 | Mass Media and Society |
| JOUR 330 | CISC 302 | Computer Familiarization |
| JOUR 335 = CISA 330 | INTROD TO DESKTOP PUBLISHING / DESKTOP PUBLISHING |
| JOUR 336 = CISA 331 | INTERMEDIATE DESKTOP PUBLISHING |
| JOUR 340 = ENGWR 330 | WRITING FOR PUBLICATION |
| MATH 480 = HONOR 390 | Honors Seminar in Mathematics |
| MKTG 142 = CISA 160 | Project Management Techniques and Software |
| MKTG 314 = CMED 376 | Advertising |
| NUTR 320 = ECE 415 | Children’s Health, Safety and Nutrition |
| PHOTO 301 = ART 410 | Beginning Photography |
| PET 301 = HEED 350 | Personal Wellness |
| PET 306 = ECE 364 | Fundamentals of Games and Rhythms / Fundamentals of Movement and Rhythm in Early Childhood Education |
| PET 380 = HEED 360 | Weight Management |
| PLTS 310 = HORT 302 | Soils and Plant Nutrition |
| SOCSC 360 = BUS 345 | Law and Society |
| TA 356 = CMED 378 | Acting for the Camera I / Acting for the Camera |

CROSS-REFERENCED COURSES:

BUSTEC 302, Computer Keyboarding / BUSTEC 306, Computer Keyboarding & Formatting
BUSTEC 303, Computer Keyboard Formatting / BUSTEC 306, Computer Keyboarding & Formatting
CMT 330, Construction Surveying / ENGR 310, Engineering Survey Management
MATH 351, Calculus for the Life and Social Sciences / MATH 401, Analytic Geometry and Calculus II
DIRECTIONS TO COSUMNES RIVER COLLEGE

8401 Center Parkway - Sacramento, CA 95823-5799

NORTHBOUND - HWY 99
Exit at Cosumnes River Boulevard/Calvine Road.
Turn left onto overpass, turn left at Bruceville Road light, and enter at East CRC entrance;
OR after left onto overpass,
turn left at the Center Parkway light and enter at the West CRC entrance.

SOUTHBOUND - HWY 99
Exit at Cosumnes River Boulevard/Calvine Road, Turn right, then turn left at the Bruceville
Road light,
and enter at the East CRC campus entrance; OR after turning right onto CRC Blvd.,
turn left at Center Parkway light and enter at the West CRC entrance.

INFORMATION
691-7344
COLLEGE & ACADEMIC REGULATIONS

UNIT OF WORK

College work is measured in terms of the semester “unit.” In recitation-lecture courses, one hour in the classroom and two hours of study preparation per week constitute one unit of work. In the laboratory, three hours in the classroom per week with no outside study constitute one unit of work. Students can find the number of units of credit with each course description.

GRADES AND GRADE POINT AVERAGES

At the end of each semester or summer session, a report of academic performance is made for every course undertaken. The grading standards, with their grade point equivalents, are as follows:

A - Excellent ...................................................... 4 grade points per unit
B - Good ............................................................. 3 grade points per unit
C - Satisfactory ................................................. 2 grade points per unit
D - Passing, less than satisfactory ............... 1 grade point per unit
F - Failing .................................................. 0 grade points, no units earned

CR - Credit .................................................. Not computed in GPA, but (C or better) affects progress probation and dismissal
NC - No Credit ........................................... Not computed in GPA, but (less than C) affects progress probation and dismissal
I - Incomplete .............................................. Not computed in GPA, but affects progress probation and dismissal
IP - In Progress ........................................... Course transcends semester limitation
RD - Report Delayed
W - Withdrawal ........................................... Not computed in GPA, but affects progress, probation and dismissal

“CREDIT-NO CREDIT” GRADING

A student may elect one course per semester to be graded on a Credit or a No Credit basis. A request card must be filed with the Admissions Office for this option prior to the deadlines published in the class schedules and in the calendar at the front of this catalog. The equivalent of an “A,” “B” or “C” received for the course will be recorded as “CR,” with units earned. The equivalent of “D” or “F” will be recorded as “NC,” with no units earned. Units attempted for Credit-No Credit grades are not computed in the grade point average, but are used for determining Progress Probation and Progress Dismissal. (See following page.)

A maximum of 15 credit units may be applied toward the Associate in Arts or Science degree.

Once elected, the Credit-No Credit grade may not be changed to a letter grade (“A”, “B”, “C”, “D”, “F”) assigned by the instructor.

GRADES OF “INCOMPLETE”

An incomplete grade, “I”, may be assigned by the instructor when, in the judgment of that instructor, the student is unable to complete the course requirements before the end of the semester due to unforeseeable, emergency and justifiable circumstances. To receive credit for the course, the incomplete work must be finished no later than one year from the end of the semester in which it was assigned. A final grade will be assigned when the incomplet work has been finished and evaluated, or when the time limit for completing the work has elapsed. A student receiving an incomplete may NOT re-enroll in the course. A student may petition for a time extension due to extenuating circumstances.

GRADES OF “W” WITHDRAWAL FROM CLASS

A student may officially withdraw from a class without notation on the permanent academic record prior to the point in which 30% of a class has occurred. Withdrawals occurring after this time and before the point in which 75% of the class has occurred will result in a “W” notation being made on the permanent academic record. Official withdrawals are those that have been processed via TES, eServices, or by staff in the Admissions Office. Students should consult the Schedule of Classes for any given semester to obtain these important dates.

“Ws” are used for determining Progress Probation and Progress Dismissal. Under extenuating circumstances (verified cases of accidents, illness or other circumstances beyond the control of the student), a student may petition for withdrawal at any other time. After consultation with the instructor and with administrative approval, such withdrawal may be recorded as a “W.”

Military or Medical withdrawal is available when supporting documentation is provided along with a student petition. Not all circumstances meet the requirements for a military or medical withdrawal.

GOOD STANDING

Both quality of performance and progress toward completion of objectives are considered in determining a student’s eligibility to attain or remain in good standing and attendance at a Los Rios college. A student merits good standing only by completing 12 or more semester units with a 2.0 GPA on a 4-point grading scale and by completing 50 percent or more of all enrolled units.

It is the instructor’s responsibility to notify the student, at the mid-term date, if (and only if) that student is making less than satisfactory progress.
ACADEMIC HONORS

Each semester, honors may be earned by students enrolled in 12 units or more, nine (9) of which must be graded on a letter grade basis exclusive of Credit (CR). Students will be placed on the Honors List if they earn a grade point average of at least 3.0. If they earn a grade point average of 3.5 or better they will be placed on the Highest Honors List.

ACADEMIC RECOGNITION

Outstanding students are recognized for their academic achievement each year at the annual Spring Honors and Awards Night. A handout identifying both the subject areas and the eligibility requirements for the awards is available in the Student Development Office.

HONORS AT GRADUATION

Students who maintain a high scholarship average are eligible for honors at graduation. Students who maintain a scholarship average of 3.5 or better are eligible for graduation with honors. The published lists of students are compiled from the data available at time of publication and may be subject to subsequent revision.

PROBATION

There are two types of probation: academic and progress:

Academic Probation: A student who has attempted at least 12 units is placed on Academic Probation if the student has earned a grade point average below 2.0.

Progress Probation: A student who has enrolled in a minimum of 12 semester units is placed on Progress Probation when “W,” “I,” and “NC” grades are recorded in one half or more of all units in which a student has enrolled.

Unit Limitation: A student on either Academic or Progress Probation may be limited to 12 units plus a physical education activity course, or to a maximum load recommended by the student’s counselor.

Removal from Probation: A student on Academic Probation is removed from probation and achieves good standing when the student’s cumulative grade point average is 2.0 or higher.

A student on Progress Probation is removed from probation and placed in good standing when the “W”, “I” and “NC” units drop below one half.

Computations:

\[
\text{Grade Point Average} = \frac{\text{Total Grade Points Earned (divided by)}}{\text{Total Units Attempted}}
\]

\[
\text{Progress Percentage} = \frac{\text{Total Units with “W”, “I” and “NC” (divided by)}}{\text{Total Units Enrolled}}
\]

DISMISSAL

Academic Dismissal: A student on Academic Probation is subject to dismissal when the student earns a cumulative grade point average of less than 2.0 in all units attempted in each of three consecutive semesters.

Progress Dismissal: A student on Progress Probation is subject to dismissal if one half or more of the units in which the student has been enrolled have recorded entries of “W”, “I” and “NC” in at least three consecutive semesters.

Dismissal Period: A dismissed student will be required to remain out of college one semester, but may return on probationary status after one semester’s absence.

Appeal Option: A dismissed student may appeal to the Dean of Counseling and Student Services for permission to enroll without loss of semester if the student feels that extenuating circumstances caused the dismissal. It is the student’s responsibility to detail those circumstances in writing on a petition for readmission after dismissal.

ACADEMIC HONESTY POLICY

Cosumnes River College values academic honesty. Current policies prohibit dishonesty, such as cheating, plagiarism, or knowingly furnishing false information to the college. All members of the academic community are responsible for the academic integrity of the Cosumnes River College campus.

CRC Academic Honesty Process

CRC’s process with regard to plagiarism and cheating is available on CRC’s Web site at crc.losrios.edu. Course syllabi should reference the process.

1. Faculty members have the right to choose whether or not to pursue suspected cases of plagiarism and cheating.
2. When addressing plagiarism or cheating with reasonable evidence, the faculty member should notify the student of the concern.
3. Faculty members may consult with other faculty, the dean of the pertinent division, and the office of the Vice President for Student Services when determining whether plagiarism or cheating has occurred.
4. In situations where cheating or plagiarism has occurred, the faculty member is to determine consequences in compliance with board policy and regulations, which prohibit dropping a student from a course. The consequences may be any of the following options:
   - giving the student a verbal or written warning
   - giving the student an additional assignment
   - giving the student a zero on the assignment
   - assigning a grade of F for the course
   - determining other appropriate consequences that comply with board policy and regulations.
5. In situations where cheating or plagiarism has occurred, the faculty notifies the dean of the pertinent division, and the student that a “Referral for Student Code of Conduct Violation” will be filed through the area dean to the Office of the Vice President for Student Services.

6. Students have the right to grieve an action that they feel violates their student rights.

7. The office of the Vice President for Student Services (VPSS) shall be responsible for maintaining records related to cheating and plagiarism.

Probation, suspension or expulsions are courses of action that may be determined by the Vice President for Student Services, in accordance with Los Rios Community College District policy.

Definition of Plagiarism
Plagiarism is defined as representing the words, ideas, or work of another as one’s own in any academic exercise. Plagiarism consists in taking the words or substance of another work and either copying or paraphrasing without giving credit to the source. Plagiarism is applicable to written, oral, and artistic work. The following examples are only some of the many forms plagiarism may take:

1. Word-for-word copying of work written by someone else.
2. Failure to give proper credit for ideas, statements of facts, or conclusions derived by another.
3. Failure to use quotation marks when quoting directly from another, whether a paragraph, sentence, or phrase.
4. Close and extended paraphrasing of another work without acknowledging the source.

Definition of Cheating
Cheating is the act of obtaining or attempting to obtain credit for academic work through the use of dishonest, deceptive, or fraudulent means. The following are only some of the many forms cheating may take:

1. Copying another’s work on a test, paper, or project.
2. Using unauthorized materials in an exam or collaborating on work to be turned in for credit where the instructor disallows such collaboration.
3. Taking an exam for another student, purposely allowing another student to copy during a test, or providing coursework for another student to turn in as his or her own effort.
4. Submitting the same work in more than one class for credit without permission from the instructor.

ACADEMIC RENEWAL WITHOUT COURSE REPETITION

Previous substandard work (“D” or “F”) earned at Cosumnes River College may be discounted at the student’s request, if it meets certain criteria. Courses and grades that no longer reflect the student’s current educational objective and current level of academic success may upon petition be discounted in the computation of the grade point average. The following conditions must apply:

- No more than 30 units of substandard grades may be discounted.
- A minimum of 12 units must be earned with “C” grades or better.
- A minimum of 3 semesters must have elapsed between the time the substandard grades were earned and the 12 units of “C” or better grades were earned.
- Current educational objectives must be discussed with a counselor, whose recommendation must be included on the petition.
- Under no circumstances may course work be discounted if it has been granted to fulfill degree requirements.
- All grades will be recorded on the student’s permanent record and transcripts. Specific grades that have been discounted from the grade point average will, however, be noted on the transcript.
- Once elected, the Academic Renewal cannot be reversed.

ATTENDANCE

The college assumes that students will attend every session of a class for which they are registered. If, however, attendance is irregular, students may be dropped from a particular class. It is nevertheless the responsibility of the students, and not the instructors, to process a class drop by using eServices, TES (Telephone Enrollment Services) or in person with the Admissions Office. Excessive absence is defined as exceeding ten percent (10%) of the total hours of class time. For attendance purposes, the college regards a laboratory session as the equivalent of one class meeting.

Veterans who drop below the number of units required by the Veterans Administration for any reason during a semester, including being dropped from a class for excessive absences, will lose part of their government assistance allowance.

(Continued on next page)
NO SHOW

Students who are not present at the first class meeting and are not in attendance at the beginning of the second class meeting, may be dropped by the instructor as a “No Show.”

AUDITING COURSES

Cosumnes River College does not permit auditing, which is defined as attending a course or courses, without completing the registration process.

CAMPUS TRAFFIC REGULATIONS

The college has posted both maximum speed limits and designated parking areas. It is the responsibility of all students, staff and visitors to observe and honor these traffic regulations. All violators will be cited.

CHANGE OF ADDRESS

Students must report a change of address immediately to the Admissions Office. The college cannot be responsible for mail sent to the wrong address.

COURSE REPEITION

Generally, each course may be taken only once. There are five exceptions:

- A student may repeat, only once, a course that was taken in which a substandard grade was received. A student may not repeat a course in which he/she earned an Incomplete. Substandard grade is defined as “D,” “F,” or “NC.” The grade and credits earned in the second enrollment shall be used exclusively in determining the grade points earned for that particular course.

- The college finds that the student’s previous grade is, at least in part, the result of extenuating circumstances. Extenuating circumstances are verified cases of accidents, illness, or other circumstances beyond the student’s control. Grades awarded for courses repeated under this circumstance shall not be counted when calculating a student’s grade point average.

- The college recommends that a student repeat a course because there has been a significant lapse of time since the student previously took the course. Grades awarded for courses repeated under this circumstance shall not be counted when calculating a student’s grade point average.

- Courses designated as “repeatable” are those listed as such in the college catalog and are designed to enhance students’ skills or performances through supervised repetition.

- Students may repeat courses needed to meet a legally mandated training requirement as a condition of continued paid or volunteer employment.

UNIT OF CREDIT

College credit is measured in terms of the “unit.” One unit is earned by performing three hours of work per week for one semester. Three hours may be spent entirely in the classroom, or partially in the classroom and the remainder in outside study. In recitation-lecture courses, one hour in the classroom and two hours of study preparation per week constitutes one unit. In the laboratory three hours per week with no outside study constitutes one unit.

UNIT LIMITATION

Students’ course programs usually average 15 units per semester. This indicates that students normally spend 45 hours per week in preparing for and attending classes. The college recommends that students carry no more than 18 units during a given semester. Students planning to carry more than 18 units must confer with their counselor and complete a student petition.

STUDENT CLASSIFICATION

- Part-Time: A student carrying fewer than 12 units
- Full-Time: A student carrying 12 or more units
- Freshman: A student who has completed fewer than 30 units
- Sophomore: A student who has completed 30 or more units
- Graduate: A student who has been awarded the Associate degree, or a higher degree by a recognized collegiate institution

Note: During the summer session, a student carrying six (6) units is considered full-time.

FINAL EXAMINATIONS

The college requires final examinations in all courses. The college publishes a time schedule for final examinations early in each semester, so that students may be notified in sufficient time regarding the examination schedule.
**POLÍTICA CONTRA LA DISCRIMINACIÓN**

El Distrito Universitario Comunitario Los Ríos, en cumplimiento con todos los Títulos y Secciones pertinentes de la Ley de Derechos Civiles de 1964, las Enmiendas Educativas de 1972, la Ley de Rehabilitación de 1973, la Ley de Americanos con Incapacidades y todas las demás leyes aplicables federales, estatales y locales, no discrimina con base en la raza, color, estado civil, religión, preferencia sexual, nacionalidad, sexo, edad de mayor de cuarenta años, estado de inhabilitado o veterano de la guerra de Vietnam, incapacidad física o mental; y ningún estudiante será discriminado por conversar en un idioma que no sea inglés, en ninguna de sus funciones o actividades, incluyendo el empleo.

El Distrito cumple además con aquellas leyes federales y estatales y las normas de la Junta de Directores de los Colegios Comunitarios de California, las cuales prohíben el hostigamiento sexual.

Tales políticas antidiscriminatorias se extienden a todas las funciones y actividades del Distrito Universitario Comunitario Los Ríos, incluyendo el empleo y la selección de empleos, programas educativos, servicios, admisiones y ayuda financiera.

Todas las preguntas acerca de esta política pueden ser dirigidas a Equity Officer (Titles VI and VII), Katherine McLain, Science Building, Room S128 (916) 691-7204; Celia Esposito-Noy, Vice-President, Student Services and Enrollment Management, Gender Equity Coordinator (Title IX), at College Center (916) 691-7487; Juan Avalos, Dean of Counseling & Student Services, Library Building, Room L220 (916) 691-7333; or Ann Aaker, Associate Vice Chancellor of Human Resources, Los Ríos Community College District, 1919 Spanos Court, Sacramento, CA 95825 (916) 568-3101; or to the Director of the Office of Civil Rights, U.S. Department of Health, Education and Welfare, Washington, D.C.

**ACADEMICO LIBERTAD**

Academico Libertad es esencial para el cumplimiento de la misión del Distrito Universitario Comunitario Los Ríos y para la capacidad de los miembros del personal académico para realizar sus tareas. Los miembros del personal académico tienen la principal responsabilidad de determinar los métodos de enseñanza, la planificación y la presentación de los materiales, y las tarifas y métricas de la evaluación en la asignación y la retención de la propiedad del currículo y del horario del curso, y la educación de la comunidad de los estudiantes de acuerdo con las leyes federales y estatales.

Todas las preguntas acerca de esta política pueden ser dirigidas a Equity Officer (Titles VI and VII), Katherine McLain, Science Building, Room S128 (916) 691-7204; Celia Esposito-Noy, Vice-President, Student Services and Enrollment Management, Gender Equity Coordinator (Title IX), at College Center (916) 691-7487; Juan Avalos, Dean of Counseling & Student Services, Library Building, Room L220 (916) 691-7333; or Ann Aaker, Associate Vice Chancellor of Human Resources, Los Ríos Community College District, 1919 Spanos Court, Sacramento, CA 95825 (916) 568-3101; or to the Director of the Office of Civil Rights, U.S. Department of Health, Education and Welfare, Washington, D.C.

**ACCESO A LOS REGISTROS DE LOS ESTUDIANTES**

El Distrito Universitario Comunitario Los Ríos, en cumplimiento con las disposiciones de la Ley de Derechos Civiles de 1974 y la Ley de Educación, ha establecido políticas que permiten el acceso a ciertos registros de los estudiantes. Una revisión de las políticas y procedimientos para el acceso se contiene en el estatuto de los estudiantes de Derechos y Responsabilidades del Distrito Universitario Comunitario Los Ríos. Completa copias de esta Acta, la Ley de Educación, y las políticas de los miembros del distrito están disponibles en los oficinas de Admisiones y Registros y el Vice Presidente de los estudiantes.

**LOS RÍOS COMMUNITY COLLEGE DISTRICT NON-DISCRIMINATION POLICY**

The Los Rios Community College District, in compliance with all pertinent Titles and Sections of the Civil Rights Act of 1964, the Educational Amendments of 1972, the Rehabilitation Act of 1973, Americans with Disabilities Act, and all other applicable federal, state and local laws, does not discriminate on the basis of race, color, marital status, religion, sexual preference, national origin, sex, age over forty, handicap or Vietnam-era veteran status, physical or mental disability, nor shall any students be discriminated against for conversing in a language other than English, in any of its functions or activities, including employment, educational programs and services, admissions and financial aid.

The District further complies with those federal and state laws and the regulations of the Board of Governors of the California Community Colleges which prohibit sexual harassment.

Such non-discrimination policies extend to all of the functions and activities of the Los Rios Community College District including employment and employment selection, educational programs, services, admissions and financial aid.

Inquiries regarding this policy may be directed to the Equity Officer (Titles VI and VII), Katherine McLain, Science Building, Room S128 (916) 691-7204; Celia Esposito-Noy, Vice-President, Student Services and Enrollment Management, Gender Equity Coordinator (Title IX), at College Center (916) 691-7487; Juan Avalos, Dean of Counseling & Student Services (Section 504 and ADA, American Disabilities Act), Library Building, Room L220 (916) 691-7333; or Ann Aaker, Associate Vice Chancellor of Human Resources, Los Ríos Community College District, 1919 Spanos Court, Sacramento, CA 95825 (916) 568-3101; or to the Director of the Office of Civil Rights, U.S. Department of Health, Education and Welfare, Washington, D.C.

Note: The lack of English language skills is not a barrier to admission to, and participation in, vocational educational programs and services.
STUDENT GRIEVANCE PROCEDURE

Students may file a grievance in the event of alleged breach of students' rights as detailed in Los Rios Community College District Board of Trustees policies and regulations. A grievance may be filed if the student feels discrimination has occurred based upon race, color, national origin, sex, sexual preference, age or handicap.

Steps to Filing a Grievance:

- Students must make a reasonable, good faith attempt within TEN (10) days to discuss the problem with the staff member involved or with his/her immediate supervisor. Failure to do so within the prescribed period of time will constitute a waiver of any right to pursue the matter further.

- If the complaint is not resolved within TEN (10) days by the immediate supervisor and the staff member involved, the student may then file a formal grievance, within FIVE (5) days of completing the informal procedure, and not later than 25 days from the date of the alleged wrongful act.

- The student must submit a Grievance Form to the Vice President for Student Services. The grievance must contain a specific statement of the alleged act of wrong-doing, the name of the person against whom the grievance is filed, the names of any witnesses, and the nature of the relief sought by the grievant (not to include the imposition of disciplinary action on an employee). Failure to file the completed grievance form within the above-specified time period shall constitute a waiver of any right to further proceedings.

- Within TEN (10) days of the receipt of the grievance, the Vice President for Student Services will determine whether the issue is grievable under the policies and regulations of the Los Rios Community College District, at which time, if the issue is grievable, a hearing will be scheduled. The Vice President will notify the student in writing that the grievance has been rejected and state the specific reason(s) for the rejection, or that the grievance was referred to the designated hearing officer. At this time, the person(s) against whom the grievance is filed shall be notified of the status of the grievance, and shall be given a copy of the formal grievance.

- Within TEN (10) days from appointment, the Hearing Officer will schedule a hearing on the grievance. All parties shall be notified by the Hearing Officer of the time and day of the hearing. If the designated time and day are not convenient for the parties, a mutually agreeable time may be set.

- The hearing will be conducted in accordance with the guidelines set forth in board policy.

- The Hearing Officer shall deliver a written decision within TEN (10) days of the conclusion of the hearing to all parties to the grievance, with copies to the Vice President for Student Services, the college President and the Vice Chancellor, Student Services.

- Either party to the grievance may appeal the Hearing Officer’s decision to the Vice President for Student Services within FIVE (5) days. Such appeal must be submitted in writing and state specifically the grounds for appeal.

- Within TEN (10) days after receiving the appeal documents, the Vice President for Student Services will inform all parties to the grievance and the appropriate personnel in the District Office, in writing, of the decision. The decision of the Vice President for Student Services will be final.

For more detailed information, see Board Policies and Regulations 2412. Any questions regarding student conduct, rights and responsibilities, due process, and grievance procedures may be directed to the Vice President for Student Services.

DRUG AND ALCOHOL FREE POLICY

In accordance with the requirements of the U.S. Drug Free Workplace Act of 1988, the college is committed to maintaining a drug-free workplace; and, in accordance with the requirements of the Drug Free Schools and Community Act Amendment of 1989, a drug- and alcohol-free college environment for students and employees.

The unlawful manufacture, distribution, dispensing, possession or use of illicit drugs and alcohol is prohibited in the workplace and college premises. Violation of this policy by students will result in disciplinary sanctions up to and including expulsion, and may include the completion of an appropriate rehabilitation program.

In addition to disciplinary sanctions, violators may be prosecuted under applicable law. Students will be informed of the health risks associated with the use of illicit drugs and the abuse of alcohol, and will be advised of the availability of drug or alcohol counseling, treatment or rehabilitation programs through the Health Services Office. Call 691-7254 for more information.

CAMPUS SECURITY ACT OF 1990

The Campus Security Act of 1990 (Public Law 101-542) requires that all colleges and universities receiving Title IV student aid assistance to prepare and distribute an annual report which sets forth its policies on crime prevention issues and gives statistics on the number of specific crimes which occur on campus and the number of arrests on campus for liquor law violation, drug abuse violations, and weapon possessions.

In addition, the act requires colleges and universities to provide timely warnings to the campus community of certain crimes reported to campus security by local law enforcement which may be considered a threat to other students and employees.

A copy of the required documents will be available in the College Library after September 1 of each year.

NO SMOKING POLICY

It is the college's policy that there be no smoking within 30 feet of any structure with the exception of the patio area near the cafeteria.
**SEXUAL ASSAULT POLICY**

Any student, faculty, or staff member who is a victim of, or contact regarding sexual assault or a threat of sexual assault at a college facility should notify the College Police at (916) 691-7777.

With the consent of the victim, College Police shall notify the College Health Center and Vice President for Administrative Services. The information shall be provided with sensitivity and with consideration to the personal needs of the victim.

**SEXUAL HARASSMENT**

Sexual Harassment Policy

It is the desire of the Los Rios Community College District Board of Trustees to provide for all students and employees an educational environment and work place free from sexual harassment. Sexual harassment in any situation is unacceptable, and is in violation of state and federal laws and regulations. Where evidence of harassment is found, appropriate corrective action shall be taken.

Definition of Sexual Harassment

Sexual harassment means unwelcome sexual advances; requests for sexual favors; and other verbal, visual, or physical conduct of a sexual nature, made by someone from or in the work or educational setting, under any of the following conditions:

- Submission to the conduct is explicitly or implicitly made a term or a condition of an individual’s employment, academic status or progress.
- Submission to, or rejection of, the conduct by the individual is used as the basis of employment or an academic decision affecting the individual.
- The conduct has the purpose or effect of having a negative impact upon the individual’s work or academic performance, or of creating an intimidating, hostile, or offensive work or educational environment.
- Submission to, or rejection of, the conduct by the individual is used as the basis for any decision affecting the individual regarding benefits and services, honors, programs, or activities available at or through the educational institution.

For the purpose of further clarification, sexual harassment includes, but is not limited to:

- Making unsolicited written, verbal, visual, or physical contact with sexual overtones. Some examples are: epithets, derogatory comments or slurs of a sexual nature, impeding or blocking movements or any physical interference with normal work, derogatory posters or cartoons.
- Continuing to express sexual interest after being informed that the interest is unwelcome. (Reciprocal attraction is not considered sexual harassment.)
- Within the work environment, engaging in explicit or implicit coercive sexual behavior which controls, influences, or affects the career, salary, and/or work environment or any other term or condition of employment; within the educational environment, engaging in explicit or implicit coercive sexual behavior which controls, influences, or affects the educational opportunities, grades, and/or learning environment of the student.
- Making reprisals, threats of reprisal, or implied threats of reprisal following a negative response to a sexual advance. For example, within the work environment, either suggesting or actually withholding support for an appointment, promotion, or change of assignment; suggesting a poor performance report will be prepared; or suggesting probation will be failed. Within the educational environment, either suggesting or actually withholding grades earned or deserved; suggesting a poor performance will be prepared; or suggesting probation will be failed; or suggesting a scholarship recommendation or college application will be denied.
- Offering favors or educational or employment benefits, such as grades or promotions, favorable performance evaluations, favorable assignments, favorable duties or shifts, recommendations, reclassifications, in exchange for sexual favors.

Complaint Procedure and Impact

Any individual who believes that he/she has been sexually harassed is encouraged to follow the complaint procedures as set forth in the Los Rios Community College District Regulation (R-2423). Throughout the procedures, the College President and the College/District Equity Officers will insure that confidentiality will be maintained and that due process will be followed with respect to both parties. In the case of a student it shall not affect grades, class selection, or other matters pertaining to his or her status as a student. In a situation where evidence is found that an allegation of sexual harassment is brought solely for the purpose of vexation, the appropriate disciplinary action will be taken.

Sexual harassment policy, procedural steps and forms are available from the college Equity Officer, Katherine McLain, Dean of Science, Mathematics and Engineering, Science Building, Room S128 (916) 691-7204.

**STUDENT RIGHT-TO-KNOW PROGRAM COMPLETION**

In compliance with the Student Right to Know and Campus Security Act of 1990, completion and transfer rates for students attending Cosumnes River College can be found on the California Community College State Chancellor’s Office Web site at http://srtk.cccco.edu/index.asp.
Accounting

DEGREE
A.A.—Accounting

CERTIFICATES
Accounting
Accounting, Advanced
Accounting Clerk
Accounting, Computer Applications
Accounting, Certificate in Taxation

This program provides training for entry-level employment in private industry or in government accounting. Study for self-employment as a provider of computer-based bookkeeping and/or tax services is also available. In addition, those individuals already employed in accounting can work toward career advancement by taking additional courses. Generally, employment in this specialization requires proficiency in business calculations.

Career Options
Account Clerk; Accounting Technician; Accountant Trainee; Auditor; Bank Employee/Examiner; Certified Public Accountant; Cost Accountant; Insurance Employment; Revenue Agent (FTB/IRS); Tax Preparer; Bookkeeper for: Accounts Receivable, Accounts Payable, General Ledger, Full-Charge Bookkeeper

Some career options may require more than two years of college study.

Highlights
A traditional course of study in Accounting Fundamentals, three levels of Financial Reporting, Managerial Techniques, State and Federal Income Taxation, Cost Accounting, and Auditing

State-of-the-art software and equipment to provide computerized accounting training

Internships, work experience with local employers for college units, job shadowing, guest speakers from the accounting industry, field trips to accounting offices

A lab with tutorial assistance

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.
DEGREE

A.A. - Accounting

CODE #1001

REQUIRED PROGRAM ................................................................. Units
Business Core:
ACCT 301(1A) Financial Accounting ........................................ 4
BUS 310 (8) Business Communications................................. 3
BUS 330 (15) Managing Diversity in the Workplace ............. 3
BUS 340 (18A) Business Law .............................................. 4
BUS 300 (20) Introduction to Business ......... .......................... 2
BUSTEC 302 (BUS 41) Computer-Keyboarding .............. 2
MKT 300 (20) Principles of Marketing or MGMT 362 (24) Techniques of Management .......... 3
CISC 310 (CIS 3) Intro. to Computer Information Science (3) or
Four (4) units to include:
CISC 302 (CIS 1X) Financial Accounting (3)
CISC 355 (CIS 16AX) ........................................... 3

Two (2) additional units selected from:
CISA 305 (CIS 11A), CISA 315 (CIS 12AX),
CISA 320 (CIS 13A), CISA 330 (CIS 17A),
CISA 340 (CIS 15A), CISA 350 (CIS 18A),
CISC 320 (CIS 14A), CISC 350 (CIS 16A),
CISC 355 (CIS 16AX) ........................................... 3

TOTAL UNITS REQUIRED ........................................................ 19

ACCOUNTING Option:
ACCT 103 (91A) Intermediate Accounting - Part I ............ 3
ACCT 104 (91B) Intermediate Accounting - Part II ......... 3
ACCT 107 (93) Auditing ...................................................... 3
ACCT 111 (92) Cost Accounting ........................................... 3
ACCT 311 (1B) Managerial Accounting .............................. 4
ACCT 341 (5) Accounting on the Microcomputer ............. 2
BUSTEC 101 (BUS 53) Computer Keyboarding: 10-Key .... 1
TOTAL UNITS REQUIRED .................................................... 46-47

Suggested Electives:
ACCT 125 (77), 498 (98); BUS 341 (18B), 498 (98);
CISA 316 (12AX), 321 (13B);
Human/Career Development (any course); MGMT 372 (23).

General Education Graduation Requirements - See page 18.

ACCOUNTING

CERTIFICATE

Accounting

CODE #1001

REQUIRED PROGRAM ................................................................. Units
ACCT 107 (93) Auditing ...................................................... 3
ACCT 111 (92) Cost Accounting ........................................... 3
ACCT 301 (1A) Financial Accounting .................................... 4
ACCT 311 (1B) Managerial Accounting .............................. 4
ACCT 341 (5) Accounting on the Microcomputer ............. 2
BUS 340 (18A) Business Law or
BUS 341 (18B)* Business Law ........................................... 3
TOTAL UNITS REQUIRED .................................................... 19

*A business 341 recommended for students intending to enter
public accounting profession.

ACCOUNTING

CERTIFICATE

Accounting, Advanced

CODE #1004

REQUIRED PROGRAM ................................................................. Units
ACCT 301 (1A) Financial Accounting ................................. 4
ACCT 311 (1B) Managerial Accounting .............................. 4
ACCT 125 (77) Federal and State Taxation ......................... 4
ACCT 107 (93) Auditing ...................................................... 3
ACCT 111 (92) Cost Accounting ........................................... 3
BUS 300 (20) Introduction to Business ................................ 3
BUS 340 (18A) Business Law ............................................ 3
BUSTEC 101 (BUS 53) Computer Keyboarding: 10-Key .... 1
TOTAL UNITS REQUIRED .................................................... 25

ACCOUNTING

CERTIFICATE

Accounting, Computer Applications

CODE #1005

This curriculum is designed for those individuals who wish to
become proficient in the use of computers for business accounting
purposes. Students who continue their education by pursuing
another accounting certificate or an Associate in Arts degree in
business may do so without repeating any courses taken during the
Computer Applications for Accounting program.

REQUIRED PROGRAM ................................................................. Units
BUSTEC 302 (BUS 41) Computer Keyboarding or
Keyboarding speed verification at 25 wpm or better .............. 0-2
CISC 302 (CIS 1X) Computer Familiarization ..................... 2
ACCT 341 (5) Accounting on the Microcomputer .......... 2
CISA 315 (CIS 12AX) Intro to Electronic Spreadsheets .... 2
ACCT 101 (60) Fundamentals of College Accounting ...... 3
ACCT 121 (70) Payroll Accounting .................................... 3
BUS 100 (50) English for the Professional ...................... 3
BUS 105 (60) Business Mathematics ................................ 3
BUSTEC 101 (BUS 53) Computer Keyboarding: 10-Key (1) or
BUS 498 (98) Work Experience .......................................... 1-2
TOTAL UNITS REQUIRED ................................................... 19-22

ACCOUNTING

CERTIFICATE

Accounting, Computer Applications

CODE #1419

REQUIRED PROGRAM ................................................................. Units
BUSTEC 302 (BUS 41) Computer Keyboarding or
Keyboarding speed verification at 25 wpm or better .............. 0-2
CISC 302 (CIS 1X) Computer Familiarization ..................... 2
ACCT 341 (5) Accounting on the Microcomputer .......... 2
CISA 315 (CIS 12AX) Intro to Electronic Spreadsheets .... 2
ACCT 101 (60) Fundamentals of College Accounting ...... 3
ACCT 121 (70) Payroll Accounting .................................... 3
BUS 100 (50) English for the Professional ...................... 3
BUS 105 (60) Business Mathematics ................................ 3
BUSTEC 101 (BUS 53) Computer Keyboarding: 10-Key (1) or
BUS 498 (98) Work Experience .......................................... 1-2
TOTAL UNITS REQUIRED ................................................... 19-22
CERTIFICATE
Accounting, Certificate in Taxation
CODE #1495
This certificate acknowledges student achievement and proficiency
in preparing and reviewing the income tax returns of individuals and
business entities together with understanding of necessary federal
and state tax administration compliance requirements needed to
work with the Internal Revenue Service and the Franchise Tax Board.

REQUIRED PROGRAM ............................................................... Units
ACCT 121 (70) Payroll Accounting ................................................ 3
ACCT 125 (77) Federal and State Taxation ................................... 4
ACCT 128 (78) Taxation of Corps, Partnerships, Estates & Trusts .. 4
TOTAL UNITS REQUIRED ............................................................. 11

Accounting (ACCT)

ACCT 101
Fundamentals of College Accounting 3 Units
Formerly: ACCT 60
Prerequisite: None
Hours: 54 hours LEC
This accounting course focuses on basic accounting practices which
emphasizes a practical application approach to the use of accounts,
journals, ledgers, and financial statements. This course is recom-
mended for students who intend to seek employment in the business
office of a sole proprietorship organized for service or sales activity.

ACCT 103
Intermediate Accounting - Part I 3 Units
Formerly: ACCT 91A
Prerequisite: ACCT 301. Grade of “C” or better required to meet
prerequisite.
Hours: 54 hours LEC
This course provides a continuing study of the measurement and
reporting of the results of operations and the financial condition of
profit-directed business entities. Special emphasis will be given to
the valuation of assets using the Financial Accounting Standards
Board (FASB) as authority. Completion of ACCT 103 and 104 is
required to complete the “advanced accounting” requirement for
accounting classifications in state service. This course is not
intended for transfer to a four-year college.

ACCT 104
Intermediate Accounting - Part II 3 Units
Formerly: ACCT 91B
Prerequisite: ACCT 103. Grade of “C” or better required to meet
prerequisite.
Hours: 54 hours LEC
This course is a continuing study of the measurement and reporting
of the results of operations and the financial position of profit-
directed business entities. An emphasis is placed on accounting for
stockholder’s equity, long-term liabilities, retained earnings, and
dividends. This course and ACCT 103 constitute the “advanced
accounting” requirement for some professional-level accounting
classifications in California state service. This course is not intended
for transfer to a four-year college.

ACCT 107
Auditing 3 Units
Formerly: ACCT 93
Prerequisite: ACCT 301 with a grade of “C” or better
Advisory: ACCT 311.
Hours: 54 hours LEC
The procedures and practices used in the verification of financial
statement balances and accounting transactions will be the focus of
the course. The types of audits and audit occupations as well as the
legal liabilities of the auditor will be discussed. This course is
acceptable as elective units toward civil service professional
accounting education requirements.

ACCT 111
Cost Accounting 3 Units
Formerly: ACCT 92
Prerequisite: None
Advisory: ACCT 311.
Hours: 54 hours LEC
This course is an introduction to cost accounting methods, including
job order, process and standard cost system. Special attention will be
given to managerial uses of cost accounting. This course is not
intended for transfer to a four-year college.

ACCT 121
Payroll Accounting 3 Units
Formerly: ACCT 70
Prerequisite: None
Advisory: ACCT 101.
Hours: 54 hours LEC
This is a study of payroll and personnel records, procedures and
regulations. The course will include a study of the various California
and Federal laws pertaining to the computation of earnings and
withholdings. Payroll tax payment requirements and preparation of
the employer’s California and Federal payroll tax reports will be
included. A comprehensive simulation project will be completed as
part of the course. The project will include one quarterly payroll
reporting cycle.

ACCT 125
Federal and State Taxation 4 Units
Formerly: ACCT 77
Prerequisite: None
Hours: 72 hours LEC
This course is a study of basic Federal and State Income Tax
regulations with an emphasis on the skills necessary for the
preparation of individual income tax returns. Included are filing
requirements, determination of taxable income, allowable deduc-
tions, tax computation, tax credits, other taxes, payment methods,
and audit procedures. The course is acceptable as elective for civil
service professional accounting operations and recommended for
accounting majors.
ACCT 128  
Taxation of Corporations, Partnerships, Estates, and Trusts  
4 Units  
Formerly: ACCT 78  
Prerequisite: None  
Hours: 72 hours LEC  
This course provides a continuing study of federal and state income tax compliance with an emphasis on the taxation of business entities including corporations, partnerships, limited liability companies, S corporations, estates and fiduciary trusts. Included is coverage of related party transactions, filing requirements, differences in book and taxable income, tax computation, available credits, tax elections, and working with the Internal Revenue Service on tax administration matters. This course is designed for persons seeking civil service advancement, those who are currently or will be involved with company accounting operations, and persons engaged in tax preparation. It is recommended for accounting majors.

ACCT 131  
Accounting for the Small Business  
3 Units  
Formerly: ACCT 96  
Prerequisite: None  
Hours: 54 hours LEC  
This course is designed for small business owners. The course will enable the small business owner to design and maintain financial records, with emphasis on the financial records as a tool of management, including maintaining records for income and expenses, property, sales and payroll taxes, and assets.

ACCT 295  
Independent Studies in Accounting  
1-3 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

ACCT 299  
Experimental Offering in Accounting  
.5-4 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

ACCT 301  
Financial Accounting  
4 Units  
Formerly: ACCT 1A  
Prerequisite: None  
Advisory: BUS 105 or MATH 120.  
Course Transferable to UC/CSU  
(CAN BUS 2) (ACCT 301 & 311 = CAN BUS SEQ A)  
Hours: 72 hours LEC  
This course covers accounting as the basis of an information system with emphasis on concepts and assumptions underlying data accumulation for financial reports. Emphasis is on the preparation of journals, ledgers, work sheets, financial statements, and other summary reports. The course includes units in receivables and payables, inventories, depreciation, forms of business organization, corporate securities, and financial statement analysis.

ACCT 311  
Managerial Accounting  
4 Units  
Formerly: ACCT 1B  
Prerequisite: ACCT 301. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
(CAN BUS 4) (ACCT 301 & 311 = CAN BUS SEQ A)  
Hours: 72 hours LEC  
This course is a study of the use and reporting of accounting data for managerial planning, cost control, and decision making purposes. The course includes broad coverage of concepts, classifications, and behaviors of costs. Study will include cost-volume-profit relationships, short and long-term budgeting, and contribution reporting.

ACCT 341  
Accounting on the Microcomputer  
2 Units  
Formerly: ACCT 5  
Prerequisite: Two years of high school accounting, ACCT 101 or ACCT 301. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
This is a course using the computer to prepare financial accounting statements and reports used in business. Areas of study include general ledger, accounts payable, accounts receivable, inventory, payroll, and depreciation. The ability to type 20-30 WAM and to use a ten-key calculator by the touch method will be useful for completing class assignments. Students may receive two units credit for each topic (software product) offered. Consult the class schedule for specific topics.

ACCT 495  
Independent Studies in Accounting  
1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

ACCT 498  
Work Experience in Accounting  
1-4 Units  
Formerly: ACCT 98  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 336)

ACCT 499  
Experimental Offering in Accounting  
.5-4 Units  
Formerly: ACCT 49  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
Advertising / Public Relations

DEGREE
A.A.—Communications Media, Advertising/Public Relations

CERTIFICATE
Desktop Publishing (see Computer Information Science - page 114)

This CRC program is part of CRC’s offerings in Communications Media and is designed for students interested in careers in public relations and advertising. This program trains students in public relations and advertising theory and exposes them to production techniques for radio, television and the print media.

Career Options
Public Information Officer; Community Relations Specialist; Media Consultant; Public Relations Firm Representative

Some career options may require more than two years of college study.

Highlights
Instruction and practice in desktop publishing and graphics applications in the department’s Macintosh laboratory or PC computer lab

Opportunities for practical experience selling and designing ads for campus publications

Introductory production experience in radio and television advertising, writing and production

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE
A.A.—Communications Media, Advertising/Public Relations
CODE #1056

REQUIRED PROGRAM ............................................................... Units
CISC 302/JOUR 330 (CIS 1X / JOUR 1) Computer Familiarization .................. 2
CMED 300 (5)JOUR 310 (10) Mass Media and Society ...................... 3
CMED 330 (54) Basic Film/Video Camera Techniques ..................... 3
MKT 314 (26)CMED 376 (60) Advertising ........................................ 3
CMED 370 (63) Broadcast Writing and Announcing ..................... 3
JOUR 300 (20A) Newswriting and Reporting .................................. 3
JOUR 150 (54) Public Relations Media Techniques ......................... 3
MKT 310 (22) Selling Professionally .......................................... 3
COMM 341 (13) Organizational Communication ......................... 3

Plus six (6) units selected from: ................................................ 6
CMED 301 (62), 312 (56), 360 (80), 498 (98);
JOUR 325 (35A), 340 (40);
PHOTO 300 (1), 301 (40), 320 (42), 330 (45), 340 (43);
COMM 301 (1), 363 (8);
TOTAL UNITS REQUIRED ..................................................... 32

Suggested Electives:
ACCT 101 (60);
BUSTEC 303, 304 (BUS 42, 43);
CMED 316 (66), 331 (64), 380 (73);
COMM 315 (18), 494 (12);
JOUR 400 (30);
PSYC 351 (7);

General Education Graduation Requirements - See page 18.
Agriculture

**DEGREE**  A.S.— General Agriculture, Transfer

**CERTIFICATE**  General Agriculture

Agriculture is a vital component of our local, state, and national economies and offers many exciting employment opportunities. In addition to the production of a wide range of valuable agricultural commodities, the Sacramento region is home to numerous multi-national agricultural corporations and statewide governmental agencies. It is also a center for international agricultural trade and commerce.

As a General Agriculture major, you will:

- Study a general agriculture curriculum representing all of the departments of the Cosumnes River College agriculture program including: agriculture business, horticulture, welding, veterinary technology and plant science.
- Develop your leadership and communication skills.
- Identify the agricultural career you are most interested in and build a course of study to better qualify you for a profession.

**Career Options**

Management; Supervision; Finance; Insurance; Government; Marketing; Distribution; International Trade; Sales and Service Nursery Management and Operations; Park Maintenance; Landscape Design, Teaching, Communication; Contracting & Maintenance; Fertilizer & Insecticide Application; Research; Retail/Wholesale; Estimator; Consultant; Government Agency employee; Welding Technician; Inspection; Welding Engineering; Sculpting; Home/Handicraft & Hobby; Construction; Trucking & Automotives

Some positions, however, require a four-year degree for which CRC’s program is a good base for transfer.

**Highlights**

- As the only community college agriculture program in the Sacramento region, the CRC General Agriculture program provides an excellent opportunity for individuals who wish to pursue a career in agriculture, receive a General Agriculture Associate of Science degree, or transfer to CSU or UC.
- The faculty in this program works closely with the five California agricultural degree offering universities to provide a quality transfer program for students interested in agriculture business, management and economics.
- The Sacramento region is fortunate to have some of the best high school agriculture programs in California. The faculty in the CRC Ag program works closely with these feeder schools to articulate coursework and facilitate the successful transition of agriculture students from high school to the university.
- Internships in agriculture are available for students interested in work experience opportunities.

**Note to Transfer Students:**

If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.
DEGREE
A.S. - General Agriculture, Transfer
CODE #1483

This program is designed to prepare students to transfer to UC or CSU majoring in Agriculture while also allowing the student to select courses that fit his/her individual needs and desires.

REQUIRED PROGRAM .............................................................. Units
AGB 310 (2)  Agriculture Computer Applications ............... 3
AGB 320 (3)  Agriculture Accounting ............................... 3
AGB 321 (4)  Agriculture Economics ................................ 3
AMT 306 (67) Small Engine Repair ................................. 3
HORT 300 (1)  Introduction to Horticulture ...................... 3
PLTS 310 (2) HORT 302 (2) Soils and Plant Nutrition ........ 3
ANSC 300 (1)  Introduction to Animal Science ................. 3
PLTS 300 (1)  Introduction to Plant Science .................... 3
WELD 100 (51) Introduction to Welding ......................... 3
WEXP 498 (48) Work Experience ..................................... 2
Complete the three additional courses in one (1) of the following core areas: ............................................. 7-9
Agriculture Business:
AGB 300 (1)  Introduction to Agriculture Business (3)
AGB 330 (5)  Agriculture Sales and Communication (3)
AGB 331 (6)  Agriculture Marketing (3)
OR
Horticulture:
HORT 305 (51) Plant Materials I (3)
HORT 100 (55) Plant Diseases and Pests (3)
HORT 312 (70) Plant Propagation (3)
OR
Landscape:
HORT 320 (75) Landscape Construction (3)
HORT 324 (81) Landscape Maintenance (3)
HORT 326 (86) Landscape Design (3)
OR
Welding:
WELD 110 (52) Adv. SMAW & Semi-Automatic Process (3)
WELD 114 (55) Preparation for Welding Certificate (2)
WELD 290 (83) Advanced Student Projects (2)
TOTAL UNITS REQUIRED ..................................................... 36-38

General Education Graduation Requirements - See page 18.

CERTIFICATE
General Agriculture
CODE #1483

This program is designed to prepare students for entry level employment in Agriculture.

REQUIRED PROGRAM .............................................................. Units
AGB 300 (1)  Introduction to Agriculture Business ............. 3
AGB 310 (2)  Agriculture Computer Applications ............... 3
PLTS 310 (2) HORT 302 (2) Soils and Plant Nutrition ........ 3
ANSC 300 (1)  Introduction to Animal Science ................ 3
PLTS 300 (1)  Introduction to Plant Science .................... 3
TOTAL UNITS REQUIRED ..................................................... 15
Agriculture Business

DEGREE A.S.—Agriculture Business - Transfer
CERTIFICATE Agriculture Business

Agriculture is a vital component of our local, state, and national economies and offers many exciting employment opportunities. In addition to the production of a wide range of valuable agricultural commodities, the Sacramento region is home to numerous multi-national agricultural corporations and statewide governmental agencies. It is also a center for international agricultural trade and commerce.

The agriculture business program is designed to prepare students for transfer to a four-year college/university in agriculture business, or immediate employment in an entry-level ag business related career. Future employment options in agriculture include management and supervision, finance, insurance, government, marketing, distribution, international trade, and sales.

Career Options
- Management; Supervision; Finance; Insurance; Government; Marketing; Distribution; International Trade; Sales and Service

Positions, however, require a four year degree for which CRC’s program is a good base for transfer.

Highlights
As the only community college agriculture program in the Sacramento region, the CRC Ag Business program provides an excellent opportunity for individuals who wish to pursue a career in agriculture, receive an Agriculture Business Associate of Science degree, or transfer to CSU or UC.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

Highlights - continued
The faculty in this program works closely with the five California agricultural degree offering universities to provide a quality transfer program for students interested in agriculture business, management and economics.

The Sacramento region is fortunate to have some of the best high school agriculture programs in California. The faculty in the CRC Ag Business program works closely with these feeder schools to articulate coursework and facilitate the successful transition of agriculture students from high school to the university.

Internships in Ag Business are available for students interested in work experience opportunities.
Agriculture Business (AGB)

AGB 300
Introduction to Agriculture Business 3 Units

Formerly: AGB 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC

This course provides a survey to the business and economics of the agriculture industry; and, an introduction to the economic aspects of agriculture including the agricultural producer, consumer and food system. The management principles encountered in the day-to-day operation of an agricultural enterprise are stressed as they relate to the decision making process.

AGB 310
Agriculture Computer Applications 3 Units

Formerly: AGB 2
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC; 54 hours LAB

This course introduces computer use in the workplace with emphasis on agribusiness situations. Computer applications including wordprocessing, spreadsheets, databases, and presentation managers will be covered. Also included will be accessing information through the Internet and World Wide Web, telecommunications, an introduction to web page design and other software appropriate to agribusiness.

AGB 320
Agriculture Accounting 3 Units

Formerly: AGB 3
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC

This course introduces the principles of agriculture accounting systems and types of records, their use and how to compute and use measures of earnings and cost of production to improve agribusiness efficiency. Also included are farm income tax, Social Security, and employee payroll records.

AGB 321
Agriculture Economics 3 Units

Formerly: AGB 4
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC

This course introduces the analysis of economic principles of resource allocation, production, cost analysis, and market price equilibrium with primary application to the agricultural sector; supply and demand in commodity pricing under perfect and imperfect competition; and agricultural credit, marketing and policy issues.
### AGB 330
**Agriculture Sales and Communication**

3 Units

Formerly: AGB 5  
Prerequisite: None  
Advisory: COMM 301.  
Course Transferable to CSU  
Hours: 54 hours LEC

This course involves the study of principles and practices of the selling process: selling strategies and approaches, why and how people buy, prospecting, territory management, and customer service. Self-management, communication, and interpersonal skills necessary in developing managerial abilities, leadership qualities, and facilitating teamwork within the agribusiness sector will be explored. Students will gain experience through role-play, formal sales presentations, and job shadowing. The course content is organized to give students an in-depth understanding of the factors and influences that affect the agribusiness industry on a day-to-day basis. Communication, leadership, and management skills are basic tools necessary for future career development within the agribusiness sector, as well as other aspects of life.

### AGB 331
**Agriculture Marketing**

3 Units

Formerly: AGB 6  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC

This course is a survey of marketing aspects of the agriculture industry. Students will acquire an overview of the structure and institutional aspects of the marketing system including global agricultural markets. Student projects will include industry studies of the marketing of selected locally grown commodities.

### AGB 495
**Independent Studies in Agriculture Business**

1-3 Units

Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

### AGB 498
**Work Experience in Agriculture Business**

1-4 Units

Formerly: AGB 98  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 336)

### AGB 499
**Experimental Offering in Agriculture Business**

.5-4 Units

Formerly: AGB 49  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
CERTIFICATE
Allied Health, Phlebotomy
CODE # 1549

This one year certificate option is intended for students wishing to gain employment as a Phlebotomist.

REQUIRED PROGRAM ........................................ Units
Fall Semester
AH 108 Introduction to Allied Health ..................... 1
AH 110 (54) Medical Language for Health Care Providers .. 3
BUSTEC 302 (41) Computer Keyboarding ................ 2
Spring Semester
AH 126 Basic Phlebotomy ................................ 1.5
AH 128 Advanced Phlebotomy .............................. 1.5
AH 144 Phlebotomy Practicum ............................. 1
TOTAL UNITS REQUIRED .................................... 10

Allied Health

CERTIFICATE  Allied Health, Phlebotomy

This program offers core courses designed for students enrolled in the Health Information Technology or Medical Assisting and other Allied Health programs.

Career Options
See Career Options in Health Information Technology and Medical Assisting

Some career options may require more than two years of college study.

Highlights
Included in two degree programs and a variety of career certificates in health care

Courses taught by certified health care professionals

Allied Health (AH)

AH 108
Introduction to Allied Health 1 Unit
Prerequisite: None
Hours: 18 hours LEC
This course provides an introduction to the medical field. Topics include the history of medicine; law and ethics as they pertain to the medical field; confidentiality and reportable incidents; usage of reference materials; and various types of health care delivery systems and allied health careers, including scope of practice. This course is open to all students wishing to explore the healthcare industry.

AH 110
Medical Language for Health-Care Providers 3 Units
Formerly: AH 54
Prerequisite: None
Hours: 54 hours LEC
This course is an orientation to medical language: basic structure of medical terms and their components: prefixes, suffixes, roots, and combining forms with emphasis on analyzation, meaning, spelling, and pronunciation. The course builds a medical vocabulary applicable to the specialties of medicine, the systems of the body, names of major diseases, and terms used in physical examination, diagnosis, and treatment.
AH 120
Human Disease 3 Units
Formerly: AH 63
Prerequisite: None
Corequisite: AH 110 and BIOL 102. (Corequisites may be taken previously. BIOL 430 and 431 may be used in place of BIOL 102).
Grade of “C” or better required to meet corequisite.

Hours: 54 hours LEC
This course is a study of pathological processes imparting basic knowledge to paramedical personnel. The student will study the basic concepts, terminology, etiology and characteristics of pathological processes. Diseases are classified according to both causative agent and the body system to which they relate.

AH 124
Pharmacology for the Health Care Professional 2 Units
Formerly: MEDA 65B
Prerequisite: None
Hours: 36 hours LEC
This course introduces pharmacology, the knowledge of basic pharmacological terminology and concepts, administration, common generic and trade name medications, with an emphasis on the clinical application of pharmacology of the treatment of disease.

AH 126
Basic Phlebotomy and Laboratory Procedures 1.5 Units
Prerequisite: AH 110. Grade of “C” or better required to meet prerequisite.

Hours: 27 hours LEC ; 18 hours LAB
This course provides 45 hours of instruction and meets the minimum requirements in basic phlebotomy procedures as required by the California Department of Health Services phlebotomy regulations. Students learn to perform a skin puncture (the penetration of skin with a lancet to withdraw blood for therapeutic or clinical laboratory testing). Students also learn to perform common physician office lab tests such as dipstix urinalysis, pregnancy test, strep throat screen, and spun hematocrit. To pass the course students must perform at 75% level or higher on tests and 85% level or higher on skill competencies.

AH 128
Advanced Phlebotomy and Laboratory Procedures 1.5 Units
Prerequisite: AH 126; or 1040 hours of verifiable phlebotomy work experience (according to California Department of Health Services Phlebotomy Regulation AB 1557). Grade of “C” or better required to meet prerequisite.

Hours: 27 hours LEC ; 18 hours LAB
This course consists of instruction in advanced phlebotomy procedures as required by the California Department of Health Services Phlebotomy Regulation (AB1557/Migden Bill). Students learn to perform a venipuncture (the penetration of a vein with a needle to withdraw blood for therapeutic or clinical laboratory testing) using the three available systems: syringe, vacutainer and butterfly. Students with a 75% final grade or higher and 85% or higher on all competencies are eligible for the Phlebotomy Clinical Practicum where venipunctures are performed on real patients in a clinical setting. To pass the course, students must perform at 75% or higher on tests and 85% level or higher on skill competencies.

AH 129
Phlebotomy Practicum 1 Unit
Prerequisite: AH 128 with a grade of “C” or better.

Hours: 54 hours LAB
This course consists of supervised experience in a health care setting performing the tasks and responsibilities of a phlebotomy technician. Those duties include, but are not limited to, selecting correct anatomical sites and patient preparation for venipuncture in a variety of patient age groups; locating and palpating veins in the antecubital, hand and wrist areas; and demonstrating corrective actions to take with problems in test requisitions, specimen transport and processing.

AH 144
Independent Studies in Allied Health 1-3 Units
Formerly: AH 99I
Prerequisite: None
Hours: Variable
(See catalog page 21)

AH 145
Experimental Offering in Allied Health .5-4 Units
Formerly: AH 99
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Animal Science

This program offers courses designed for students in the Agriculture Business and Veterinary Technology programs.

Career Options
See Career Options in Agriculture Business and Veterinary Technology.

Highlights
Provides an introduction to the livestock industry.

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

Animal Science (ANSC)

ANSC 300
Introduction to Animal Science
Formerly: ANSC 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course provides a survey of the livestock industry, including the supply of animal products and their uses. A special emphasis is placed on the origin, characteristics, adaptation and contributions of farm animals to the agriculture industry. Students analyze the economic trends and career opportunities in animal agriculture.

ANSC 495
Independent Study in Animal Science
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

ANSC 499
Experimental Offering in Animal Science
Formerly: ANSC 49
Prerequisite: None
Course Transferable to CSU
Hours: 72 hours LEC
(See catalog page 21)
Anthropology

This program offers basic lower division courses in Anthropology. Anthropology serves as an excellent background to many other behavioral sciences. It also assists students in understanding people and the world around them.

Career Options
Anthropologist; Instructor; Museum Curator; Population Analyst; Urban Planner; Transcultural Nursing; Health Researcher; Environmental Impact Analyst; Forensic Science

Highlights
A friendly faculty with many cross-cultural experiences
An anthropology lab experience

Some career options may require more than two years of college study.

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

ANTH 300
Physical Anthropology 3 Units
Formerly: ANTH 1
Prerequisite: None
Course Transferable to UC/CSU
(CAN ANTH 2)
Hours: 54 hours LEC
This introductory course analyzes the human place in nature. The class focuses on how humans evolved and the unique role of culture in our evolution and how genetics and reproduction shape our lives. The course also covers the classification and distribution of living and extinct human populations, how we determine the geological age of our ancestors, and our relationship to non-human primates such as apes and monkeys.

ANTH 301
Physical Anthropology Laboratory 1 Unit
Formerly: ANTH 11
Prerequisite: None
Advisory: Concurrent or previous enrollment in ANTH 300 or other natural science course.
Course Transferable to UC/CSU
Hours: 54 hours LAB
This is an introductory laboratory course dealing with human evolution, human, ape and monkey bone identification (osteology). Identification and measurement of skeletons, determining age and sex from bones, examination of human fossils, forensics, monkey and ape behavior as well as human development will be covered.

ANTH 310
Cultural Anthropology 3 Units
Formerly: ANTH 2
Prerequisite: None
Course Transferable to UC/CSU
(CAN ANTH 4)
Hours: 54 hours LEC
This course is an introduction to the varieties of customs and forms of social life of human beings, in both western and non-western peoples, with the aim of understanding the structure and functioning of societies. Also analyzed are multicultural customs and their usefulness in the societies in which they occur and how culture is flexible and adaptive in a variety of settings.
ANTH 319
Introduction to Ethnographic Film 3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course provides an introduction to the use of film by anthropologists as a research and educational tool. Students will view and evaluate a series of films depicting different cultures from around the world. Students will be expected to analyze a variety of peoples from various ethnic groups in differing cultural contexts as to their contributions to the world community without prejudice or ethnocentrism. Cultures include: Native American, Pacific Islander, Latin American, African, Australian aborigine and others. Analysis will focus on examining various attributes of each ethnographic film and their treatment by a number of anthropological filmmakers.

ANTH 320
Introduction to Archaeology and World Prehistory 3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introduction to Archaeology and World Prehistory. It is a study of the prehistoric, cultural and social record of Africa, Europe, Asia, and the Americas and island societies. The course introduces students to the theory, concept, and methods employed in the study of human prehistory in the social sciences. It stresses how archaeology addresses questions about the development and diverse evolution of social and cultural systems. The course conveys an understanding of how the questions, methods and techniques of archaeology are directed by anthropological theory, and surveys the history of archaeology / prehistory and its modern concerns. Prehistory explores the problems and achievements of non-literate and traditional cultures, diverse communities, and classes over time based on a comparison of a wide range of archaeological examples from all over the world.

ANTH 330
Magic, Witchcraft and Religion 3 Units
Formerly: ANTH 12
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This is a cross-cultural study of the forms and functions of supernatural beliefs and associated rituals in various societies of Africa, Asia, aboriginal Australia, Oceania, South America, native North America and elsewhere. The emphasis of the course is on understanding beliefs and rituals within their social contexts, and on broad comparisons to derive insight into the general functions of beliefs and rituals in human life. A field trip may be included in the course activities.

ANTH 332
Native Peoples of California 3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course provides a study of the many cultures of the different native inhabitants of California from the prehistoric period to the present time. In addition it will cover an introduction to the diversity and complexity of aboriginal California. It includes the environmental adaptation, material culture, social structure, ideology, and response to change. In addition to gaining perspectives on the great diversity of aboriginal cultures in California, the student will examine the impact of the other Native, European, Asian and African groups on those cultures as well as the contributions of Native Californians to the cultures of the Americas.

ANTH 333
Native Peoples of North America 3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introductory survey of traditional Native American societies. The course will describe our understanding of the peoples and cultures of North America and emphasize native ecological adaptations, languages, social organizations, religion, mythologies and world view, and artistic representations. The student will critically examine the impact of tribal nations on each other as well as the interactions between Native Americans and Europeans, Africans, Asians, Pacific Islanders and others. Perspectives on changes in traditional life and Native American's current position in American society will be included as well as contributions of Native Americans to the cultures of the Americas. A field trip will be optional.

ANTH 341
Introduction to Linguistics 3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course will involve the student in the exploration of the role of language in social interaction and world view, minority languages and dialects, bilingualism, literacy, the social motivation of language change. The student will also be introduced to the analytical techniques of linguistics and the demonstration of their relevance to language in sociocultural issues.

ANTH 495
Independent Studies in Anthropology 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

ANTH 499
Experimental Offering in Anthropology .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Architectural Design Technology
(Formerly Drafting Technology)

DEGREE A.S.—Architectural Design Technology
CERTIFICATE Architectural Design Technology

See also ARCHITECTURE TRANSFER PROGRAM

This program provides students with a background in Architectural Drafting. Students who successfully complete the suggested program will be capable of doing detail and layout work normally expected of the drafting aide or technician.

The program is designed to provide transfer opportunities in the Environmental Design and/or Construction Management disciplines as well as opportunities for students to qualify for employment in a variety of positions within related industries.

NOTE: It is highly recommended that each student keep a complete record of work to present for evaluation by university program advisors and/or employers.

Career Options
Architectural Draftspersons
Designer/Technicians
Planning Assistants
CADD Operators
Facilities/Space Planner

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights
State-of-the-art computer aided drafting laboratory

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.
# Architectural Design Technology (ADT)

## A.S.—Architectural Design Technology
(Formerly Drafting Technology, Design Drafting)

**CODE #1086**

This degree program utilizes CADD to prepare students for careers or transfer in the area of Design Drafting with an emphasis in Architectural Drafting.

<table>
<thead>
<tr>
<th>REQUIRED PROGRAM</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADT 300 (51) Basic Technical Drafting</td>
<td>3</td>
</tr>
<tr>
<td>ADT 310 (66) Introductory Computer-Aided Design Drafting</td>
<td>3</td>
</tr>
<tr>
<td>ADT 312 (67) Intermediate Computer-Aided Design Drafting</td>
<td>3</td>
</tr>
<tr>
<td>ADT 314 (74) Advanced Three Dimensional Computer-Aided Design Drafting</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 320 (3) Architectural Design and Communication I</td>
<td>3.5</td>
</tr>
<tr>
<td>ARCH 330 (5) Design Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 321 (6) Architectural Design and Communication II</td>
<td>3.5</td>
</tr>
<tr>
<td>ARCH 322 (10) Architectural Design and Communication III</td>
<td>3.5</td>
</tr>
<tr>
<td>ARCH 332 (12) Design Awareness</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 329 (16) Architectural Working Drawings</td>
<td>4</td>
</tr>
<tr>
<td>BIT 100 (57) Introduction to the Uniform Building Code</td>
<td>3</td>
</tr>
<tr>
<td>CMT 310 (51) Materials of Construction</td>
<td>3</td>
</tr>
<tr>
<td>CMT 112 (52) Construction Estimating</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL UNITS REQUIRED</strong></td>
<td><strong>41.5</strong></td>
</tr>
</tbody>
</table>

General Education Graduation Requirements - See page 18.

## CERTIFICATE
Architectural Design Technology
(Formerly Design Drafting)

**CODE #1086**

This certificate program utilizes CADD to prepare students for careers in the area of Design Drafting with an emphasis in Architectural Drafting.

<table>
<thead>
<tr>
<th>REQUIRED PROGRAM</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ADT 300 (51) Basic Technical Drafting</td>
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<td>ADT 310 (66) Introductory Computer-Aided Design Drafting</td>
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<td>ARCH 329 (16) Architectural Working Drawings</td>
<td>4</td>
</tr>
<tr>
<td>CMT 310 (51) Materials of Construction</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL UNITS REQUIRED</strong></td>
<td><strong>32.5</strong></td>
</tr>
</tbody>
</table>

### ADT 300
**Basic Technical Drafting**

Formerly: DRAFT 300

**Prerequisite:** None

**Course Transferable to CSU**

**Hours:** 36 hours LEC; 54 hours LAB

This is a fundamental drafting course designed for students of the built environment with an emphasis on architectural drafting. Course subject areas include proper use of instruments, geometric constructions, lettering, sketching, dimensioning, orthographic and auxiliary views, paraline drawings, sectioning, detail and assembly drawings, development drawings, graphic reproduction, architectural drawings, symbols and topographic drawings. The course will also include a discussion of career choices.

### ADT 310
**Introductory Computer-Aided Design Drafting**

Formerly: DRAFT 310

**Prerequisite:** None

**Advisory:** ADT 300 (may be taken concurrently).

**Course Transferable to CSU**

**Hours:** 36 hours LEC; 54 hours LAB

This course provides students with an introduction to the study of 2-D Architectural Computer Aided Drawing. The course content will include, but not be limited to developing student comprehension of CADD software and their ability to operate the software in a professional manner in the production of Architectural related drawings experienced within the industry sector.

### ADT 312
**Intermediate Computer-Aided Design Drafting**

Formerly: DRAFT 312

**Prerequisite:** None

**Advisory:** ADT 310.

**Course Transferable to UC/CSU; UC - See Counselor**

**Hours:** 36 hours LEC; 54 hours LAB

Mechanical and architectural computer-aided design drafting with emphasis on intermediate and advanced dimensioning, drawing and documentation. Students will develop floor plans using advanced dimensioning and tolerancing techniques, create reference Blocks/wBlocks, Symbols, Library, Isometric drawing and dimensioning, assigning attributes, generating bill of materials, external referencing, multiple view-ports and introductory three-dimensional creation.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADT 314</td>
<td>Advanced Three Dimensional Computer-Aided Design Drafting</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Formerly: DRAFT 314</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prerequisite: None</td>
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<tr>
<td></td>
<td>Advisory: ADT 312</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Course Transferable to UC/CSU; UC - See Counselor</td>
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</tr>
<tr>
<td></td>
<td>Hours: 36 hours LEC ; 54 hours LAB</td>
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<tr>
<td></td>
<td>This course covers the basic and advanced 3-dimensional study in computer-aided design drafting with emphasis in the architectural and mechanical fields. Course subject areas will include 3-D studies in dimensioning, blocking, surface modeling, and viewing in 3-D space through model/drawing development.</td>
<td></td>
</tr>
<tr>
<td>ADT 495</td>
<td>Independent Studies in Architectural Design Technology</td>
<td>1-3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: None</td>
<td></td>
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<tr>
<td></td>
<td>Course Transferable to CSU</td>
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</tr>
<tr>
<td></td>
<td>Hours: 18 hours LEC ; 54 hours LAB</td>
<td></td>
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<td></td>
<td>(See catalog page 21)</td>
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</tr>
<tr>
<td>ADT 498</td>
<td>Work Experience in Architectural Design Technology</td>
<td>1-4</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: None</td>
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<tr>
<td></td>
<td>Course Transferable to CSU</td>
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<tr>
<td></td>
<td>Hours: 18 hours LEC ; 54 hours LAB</td>
<td></td>
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<tr>
<td></td>
<td>(See catalog page 336)</td>
<td></td>
</tr>
<tr>
<td>ADT 499</td>
<td>Experimental Offering in Architectural Design Technology</td>
<td>.5-4</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: None</td>
<td></td>
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<tr>
<td></td>
<td>Course Transferable to CSU</td>
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<tr>
<td></td>
<td>Hours: 18 hours LEC ; 54 hours LAB</td>
<td></td>
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<tr>
<td></td>
<td>(See catalog page 21)</td>
<td></td>
</tr>
</tbody>
</table>
Architecture

**DEGREE**  A.S.—Architecture

**CERTIFICATE**  Architectural Technology

This program offers students study and job-related experience in architectural drafting, construction techniques, design, rendering, and energy systems as well as opportunities to develop skills necessary for employment in the professional field of architecture. Transfer programs are articulated with California State Polytechnic University at San Luis Obispo and the University of California at Berkeley.

### Career Options
- Architecture; Drafting; Inspection;
- Planning; Construction Administration

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

### Highlights
- Participation in architecturally-related events such as the Design Village Competition at Cal Poly San Luis Obispo
- Field trips to a variety of architectural sites for study and appreciation of the built environment
- Special studies in environmental sustainability and energy conscious design. Participation in the Leading Edge Energy Design Competition
- Liaison with professional organizations such as the American Institute of Architects (AIA) and the Construction Specification Institute (CSI)

### TRANSFER

The Architectural Transfer Program attempts to satisfy the academic background and skills necessary for a student to transfer with an advanced standing to an accredited four- or five-year program. Because programs vary considerably, a student should consult a counselor.

The course work may include the required transfer general education courses and the core courses listed below:

- Architecture 300 (1), 310 (40), 320 (3), 321 (6), 322 (10), 329 (16), 330 (5), 332 (12), 334 (24),
- Construction Management Technology 310 (51)
- Architectural Design Technology 310 (66)
- Mathematics 400 (9A), 401 (9B)
- Physics 411 (4A) (UC Berkeley)
- Physics 350, 360 (CSU)

A student needs to acknowledge that selection for admission to accredited Schools of Architecture is highly competitive. It is recommended that students keep a portfolio of all architectural coursework completed at CRC to present for evaluation by university program advisors. Some universities require portfolios prior to granting transfer credit or gaining admission.

**Note to Transfer Students:**
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.

### REQUlRED PROqRAM ................................................................. Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 300 (1)</td>
<td>Introduction to Design Professions</td>
<td>2</td>
</tr>
<tr>
<td>ARCH 310 (40)</td>
<td>History of Architecture</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 320 (3)</td>
<td>Architectural Design &amp; Communication I</td>
<td>3.5</td>
</tr>
<tr>
<td>ARCH 321 (6)</td>
<td>Architectural Design &amp; Communication II</td>
<td>3.5</td>
</tr>
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<td>Architectural Design &amp; Communication III</td>
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</tr>
<tr>
<td>ARCH 329 (16)</td>
<td>Architectural Working Drawings</td>
<td>4</td>
</tr>
<tr>
<td>ARCH 330 (5)</td>
<td>Design Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 332 (12)</td>
<td>Design Awareness</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 334 (24)</td>
<td>Advanced Design in Three Dimensions</td>
<td>3</td>
</tr>
<tr>
<td>CMT 310 (51)</td>
<td>Materials of Construction</td>
<td>3</td>
</tr>
<tr>
<td>ADT 310 (66)</td>
<td>Introductory Computer-Aided Design Drafting</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED ................................................................. 34.5**

### General Education Graduation Requirements - See page 18.
CERTIFICATE
Architectural Technology
CODE #1116

REQUIRED PROGRAM ............................................................... Units
ARCH 320 (3) Architectural Design and Communication I .... 3.5
ARCH 330 (5) Design Fundamentals ................................. 3
ARCH 321 (6) Architectural Design and Communication II .... 3.5
ARCH 322 (10) Architectural Design and Communication III .... 3.5
ARCH 332 (12) Design Awareness .............................................. 3
ARCH 329 (16) Architectural Working Drawings ...................... 4
ARCH 34 (24) Advanced Design in Three Dimensions ............... 3
ARCH 310 (40) History of Architecture ................................. 3
CMT 310 (51) Materials of Construction ............................. 3
ADT 310 (66) Introductory Computer-Aided Design Drafting ..... 3
TOTAL UNITS REQUIRED .......................................................... 32.5

Architecture (ARCH)

ARCH 300
Introduction to Design Professions 2 Units
Formerly: ARCH 1
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 36 hours LEC
Comprehensive study of the design professions and occupations. Each student will evaluate his/her interest and potential of success in the areas of his/her choice. This course is required of all beginning architectural students.

ARCH 310
History of Architecture 3 Units
Formerly: ARCH 40
Prerequisite: None
Advisory: Eligibility for ENGWR 101.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
Architecture design theories and practices of the late 19th and 20th century to the present including the Beaux Arts, Art Nouveau, Expressionism, De Stijl international style, Fascist Ideologies, Regionism, Post World War II Amalgamations of Twentieth Century idioms and recent reactions to contemporary standardization.

ARCH 320
Architectural Design and Communication I 3.5 Units
Formerly: ARCH 3
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC; 27 hours LAB
This course includes the principles, concepts, methods and skills pertaining to the freehand and drafted construction of drawings employing orthographic, axonometric, oblique, and lineal perspective drawing systems to represent ideas, objects and environments. The principles and concepts of two and three-dimensional visual and architectural design are included. This course is required of all beginning architectural students.

ARCH 321
Architectural Design and Communication II 3.5 Units
Formerly: ARCH 6
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC; 27 hours LAB
This course is a continuation and development of the content and issues introduced in ARCH 320 plus the principles, concepts, methods and skills pertaining to the freehand and drafted construction of shadows, physical model building, entourage and color theory.

ARCH 322
Architectural Design and Communication III 3.5 Units
Formerly: ARCH 10
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC; 27 hours LAB
This course is a continuation and extension of the content and issues introduced in ARCH 320 and ARCH 321, plus the principles, concepts, methods and skills pertaining to the freehand and drafted visualization and communication of quantitative and qualitative information to support analysis and conceptualization.

ARCH 325
Architectural Digital Design and Communication I 2 Units
Formerly: ARCH 3A
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
This is a studio course to explore principles, concepts, methods and skills pertaining to the digital construction of drawings employing orthographic, axonometric, oblique, and lineal perspective drawing systems to represent ideas, objects and environments.
ARCH 326  
Architectural Digital Design and Communication II 2 Units  
Formerly: ARCH 6A  
Prerequisite: None  
Corequisite: ARCH 321. Grade of “C” or better required to meet corequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
This course is a continuation and development of the content and issues introduced in ARCH 325, plus the principles, concepts, methods and skills pertaining to the digital construction of shadows, digital and physical model building, entourage and color theory.

ARCH 327  
Architectural Digital Design and Communication III 2 Units  
Formerly: ARCH 10A  
Prerequisite: None  
Corequisite: ARCH 322. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
This course is a continuation and extension of the content and issues introduced in ARCH 325 and ARCH 326, plus the principles, concepts, methods and skills pertaining to the digital visualization and communication of quantitative and qualitative information to support analysis and conceptualization.

ARCH 329  
Architectural Working Drawings 4 Units  
Formerly: ARCH 16  
Prerequisite: None  
Advisory: ARCH 321 or ADT 300.  
Course Transferable to CSU  
Hours: 54 hours LEC ; 54 hours LAB  
Introduction to residential design and construction documents. Students will design a residence and produce a complete set of architectural working drawings.

ARCH 330  
Design Fundamentals 3 Units  
Formerly: ARCH 5  
Prerequisite: None  
Course Transferable to UC/CSU; UC - See Counselor  
Hours: 45 hours LEC ; 27 hours LAB  
Design fundamentals; study of creative problem solving techniques, two-dimensional design and graphic communication skills.

ARCH 332  
Design Awareness 3 Units  
Formerly: ARCH 12  
Prerequisite: None  
Advisory: ARCH 320 and 330.  
Course Transferable to UC/CSU; UC - See Counselor  
Hours: 54 hours LEC ; 18 hours LAB  
Design problems in three dimensions. Study of space, form, structure, color, materials, and their impact on our visual environment.

ARCH 334  
Advanced Design in Three Dimensions 3 Units  
Formerly: ARCH 24  
Prerequisite: None  
Advisory: ARCH 332.  
Course Transferable to CSU  
Hours: 54 hours LEC ; 18 hours LAB  
Problems in three dimensional design. Beginning studies in space, form, function, and other criteria. Continuation of ARCH 332 with an introduction to functional and environmental issues.

ARCH 495  
Independent Studies in Architecture 1-3 Units  
Formerly: ARCH 49I  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

ARCH 498  
Work Experience in Architecture 1-4 Units  
Formerly: ARCH 48  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 336)

ARCH 499  
Experimental Offering in Architecture .5-4 Units  
Formerly: ARCH 49  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
Art

**DEGREES**

A.A. — Art, Studio Art  
A.A. — Art, Design  
A.A. — Art, Art History

CRC’s art curriculum offers introductory and intermediate level courses in painting, watercolor, computer art, drawing, sculpture, ceramics, printmaking and design, as well as courses in art appreciation and art history. Through the program’s art theory and art practice classes, students develop an awareness and understanding of the materials, tools, rationale and significance of art in society. The art curriculum’s critical thinking and technical skills components encourage students to utilize independent thought processes and problem solving. This program provides transfer and employment opportunities as well as personal enrichment for students.

The art faculty is composed of professional artists with diverse specializations encompassing the spectrum of the classes offered.

**Career Options**

Painter; Sculptor; Ceramist; Art Instructor; Illustrator; Printmaker; Computer Publishing Specialist; Graphic Designer; Gallery Director; Graphic Artist; Computer Artist

Some career options may require more than two years of college study.

**Highlights**

Art faculty who have exhibited regionally, nationally and internationally  
Opportunities to explore artistic pursuits in two- and three-dimensional media using a wide variety of materials and techniques  
Regularly scheduled trips to major museums  
Guest lectures and demonstrations  
New state-of-the-art facility

**Note to Transfer Students:**

If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

**DEGREE**

A.A. — Art, Studio Art

**CODE #1267**

**REQUIRED PROGRAM** ................................................................................................ Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 300 (11A)</td>
<td>Elementary Drawing and Composition</td>
<td>3</td>
</tr>
<tr>
<td>ART 304 (12A)</td>
<td>Figure Drawing and Composition</td>
<td>3</td>
</tr>
<tr>
<td>ART 320 (14)</td>
<td>Design: Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>ART 370 (16)</td>
<td>Three-Dimensional Design</td>
<td>3.5</td>
</tr>
<tr>
<td>ARCH 320 (3)</td>
<td>Architectural Design and Communication I</td>
<td>3.5</td>
</tr>
</tbody>
</table>

**Plus two (2) art history courses selected from:** ........................................ 6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 303 (ART 3)</td>
<td></td>
</tr>
<tr>
<td>309 (ART 4)</td>
<td></td>
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<tr>
<td>311 (ART 5)</td>
<td></td>
</tr>
<tr>
<td>312 (ART 35)</td>
<td></td>
</tr>
<tr>
<td>332 (ART 9)</td>
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</tbody>
</table>

**Plus three (3) courses from chosen area** (i.e., painting, drawing, sculpture): .................................................. 9

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 302 (11B)</td>
<td>305 (12B)</td>
<td>327 (17A)</td>
</tr>
</tbody>
</table>

**Special Projects:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 494 (42)</td>
<td>499 (49)</td>
<td>2</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED** ........................................................................................................ 32.5

**General Education Graduation Requirements** - See page 18.
ART 300  
Elementary Drawing and Composition  
3 Units  
Formerly: ART 11A  
Prerequisite: None  
Course Transferable to UC/CSU  
(CAN ART 8)  
Hours: 36 hours LEC ; 54 hours LAB  
This course covers the fundamentals of drawing emphasizing the use of line, shape, value, perspective, space, and composition. It introduces and uses various mediums and techniques for drawing. This is a foundation requirement for all art students. This course may be taken two times for credit.

ART 302  
Elementary Drawing and Composition  
3 Units  
Formerly: ART 11B  
Prerequisite: ART 300. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 54 hours LAB  
This studio course utilizes the skills acquired in ART 300 to pursue more complex problems. The student will initiate and execute a series of related works. This course may be taken two times for credit.

ART 304  
Figure Drawing and Composition  
3 Units  
Formerly: ART 12A  
Prerequisite: ART 300. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 54 hours LAB  
This studio class offers drawing from the human figure. There will be lectures and discussion on proportion, anatomy, and the relationship of the figure to space and composition. This course may be taken two times for credit. Student may wish to challenge the prerequisite by presenting a portfolio of their work to the instructor.

ART 305  
Figure Drawing and Composition  
3 Units  
Formerly: ART 12B  
Prerequisite: ART 304. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 54 hours LAB  
This studio course offers drawing from the human figure. There will be lectures and discussion on proportion, anatomy, and the relationship of the figure to space and composition. This course may be taken two times for credit. Student may wish to challenge the prerequisite by presenting a portfolio of their work to the instructor.

ART 307  
Rendering  
3 Units  
Formerly: ART 13  
Prerequisite: ART 300. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 54 hours LAB  
This course covers problems in linear and tonal drawing techniques resulting in the accurate representation of objects and environments. Student may wish to challenge the prerequisite by presenting a portfolio of their work to the instructor.

ART 312  
Portrait Drawing  
3 Units  
Formerly: ART 36  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 54 hours LAB  
This course is an introduction to and exploration of the human face as a subject in art. Focus will be placed on the development of skills needed to portray specific individuals rather than a generalized image. This is primarily a practice course including elements of the history and traditions of portraiture as well as anatomy. The course may be taken two times for credit.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Formerly</th>
<th>Prerequisite</th>
<th>Course Transferable to</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 316</td>
<td>Cartooning</td>
<td>3</td>
<td>ART 22</td>
<td>ART 300. Grade of “C” or better required to meet prerequisite.</td>
<td>CSU</td>
<td>36 LEC 54 LAB</td>
<td>This course is an introduction to cartoon drawing, styles, and content development as used for comic strips, commercial art, graphic design, periodicals, political cartoons, and animation. This course may be taken two times for credit.</td>
</tr>
<tr>
<td>ART 320</td>
<td>Design: Fundamentals</td>
<td>3</td>
<td>ART 14</td>
<td>None</td>
<td>UC/CSU</td>
<td>36 LEC 54 LAB</td>
<td>This course is comprised of lectures and projects concentrating on the elements of design (line, shape, color, texture, form, space) and the principles of organization (such as unity, variety, contrast, balance, emphasis, etc.) as applicable to both the fine and applied arts.</td>
</tr>
<tr>
<td>ART 323</td>
<td>Design: Color Theory</td>
<td>3</td>
<td>ART 15B</td>
<td>None</td>
<td>UC/CSU</td>
<td>36 LEC 54 LAB</td>
<td>This course covers studio problems in the use and understanding of color and its application to works of art, interior design, and graphics, basics of color theory, and color interchange. It also includes image and composition as related to the use of color both functionally and creatively.</td>
</tr>
<tr>
<td>ART 325</td>
<td>Introduction to Graphic Design</td>
<td>3</td>
<td>ART 30A</td>
<td>ART 320. Grade of “C” or better required to meet prerequisite.</td>
<td>CSU</td>
<td>36 LEC 54 LAB</td>
<td>This is an introduction to the visual communication arts. The course will cover a series of creative problems designed to analyze letterform and image and demonstrate impact on visual perception. The student will be introduced to the terminology and visual language of graphic design. Students may wish to challenge the prerequisite on the basis of equivalent experience.</td>
</tr>
<tr>
<td>ART 327</td>
<td>Painting</td>
<td>3</td>
<td>ART 17A</td>
<td>ART 300. Grade of “C” or better required to meet prerequisite.</td>
<td>UC/CSU</td>
<td>36 LEC 54 LAB</td>
<td>This is an introduction to the tools, materials, and techniques of painting. Coursework includes exercises in light and color theory, description of form, color and spatial development, and composition. This course may be taken two times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.</td>
</tr>
<tr>
<td>ART 328</td>
<td>Painting</td>
<td>3</td>
<td>ART 17B</td>
<td>ART 327. Grade of “C” or better required to meet prerequisite.</td>
<td>UC/CSU</td>
<td>36 LEC 54 LAB</td>
<td>This is an intermediate studio course for the student who wishes to develop greater technical skills and problem-solving ability in a more independent framework. The student will initiate and execute progressively complex problems and assignments. This course may be taken two times for credit.</td>
</tr>
<tr>
<td>ART 330</td>
<td>Mural Painting</td>
<td>3</td>
<td>ART 17D</td>
<td>ART 300. Grade of “C” or better required to meet prerequisite.</td>
<td>UC/CSU</td>
<td>36 LEC 54 LAB</td>
<td>This course is a comparative survey of the use of mural painting as an interactive, public art form used throughout the world and across time from ancient Egypt to contemporary US graffiti. The class will examine a site, research a project, do plans and execute a public mural. This course may be taken two times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.</td>
</tr>
<tr>
<td>ART 336</td>
<td>Watercolor Painting</td>
<td>3</td>
<td>ART 20A</td>
<td>ART 300. Grade of “C” or better required to meet prerequisite.</td>
<td>UC/CSU</td>
<td>36 LEC 54 LAB</td>
<td>This is an introduction to transparent watercolor painting. The class covers media, methods of brush painting, representational and non-representational composition, color relationships, and creative resolutions to watercolor problems. This course may be taken two times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.</td>
</tr>
<tr>
<td>ART 337</td>
<td>Intermediate Watercolor Painting</td>
<td>3</td>
<td>ART 20B</td>
<td>ART 336. Grade of “C” or better required to meet prerequisite.</td>
<td>UC/CSU</td>
<td>36 LEC 54 LAB</td>
<td>This class builds on skills developed in ART 336. It includes an in-depth study of contemporary methods and concepts in transparent watercolor. Emphasis is given to different approaches in watercolor, composition, technical problems and solutions, and individual style development. This course may be taken two times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.</td>
</tr>
</tbody>
</table>
ART 361
Printmaking: Survey 3 Units
Formerly: ART 39A
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This is a printmaking survey course which may include relief (wood and linoleum), Intaglio (etching and drypoint), stencil (silkscreening) and monoprint processes. This course may be taken two times for credit. This course has an additional lab fee.

ART 362
Printmaking: Intaglio 3 Units
Formerly: ART 39B
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course studies the techniques of Intaglio process including etching, aquatint, drypoint, engraving and mezzotint. This course may be taken three times for credit. This course has an additional lab fee.

ART 364
Printmaking: Relief 3 Units
Formerly: ART 39D
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course presents the techniques of wood and linoleum cutting and printing by hand and by press. This course may be taken three times for credit. This course has an additional lab fee.

ART 370
Three Dimensional Design 3 Units
Formerly: ART 16
Prerequisite: None
Course Transferable to UC/CSU
(CAN ART 16)
Hours: 36 hours LEC ; 54 hours LAB
This is a studio course covering the analysis of historical and contemporary designs and the resolution of technical and conceptual problems (using a variety of media such as: wood, fabric, glass, etc.) by the creation of 3-dimensional forms. Form, color, space, composition, and other formal values will be considered.

ART 372
Sculpture 3 Units
Formerly: ART 21A
Prerequisite: None
Course Transferable to UC/CSU
(CAN ART 12)
Hours: 36 hours LEC ; 54 hours LAB
This is a basic practice class in the expressive use of form and color in space. The student will use a variety of media, including plaster, wood, glass, clay, or stone. Creative effort, development of individual expression, new ideas, and knowledge of technical processes will be stressed. Content will be developed by using both historical and contemporary approaches. This course may be taken two times for credit.

ART 373
Sculpture 3 Units
Formerly: ART 21B
Prerequisite: ART 21B. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course further develops concepts and techniques acquired in ART 372 in the expressive use of form and color in space. The student will concentrate on given aspects of spatial relationships and the concept of a series, related grouping, or progression of sculpture. This course may be taken two times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.

ART 374
Wheel Thrown Ceramics, Beginning 3 Units
Formerly: ART 37
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is an introductory class in wheel-thrown ceramics. The course will provide students with a broad understanding of the ceramics process, from clay composition to fired-glazed wares. Alternative firing processes are explored, such as Raku, pit firing, and sawdust firing. Students at all skill levels may enroll in the class. The class may be taken two times for credit.

ART 375
Wheel Thrown Ceramics, Intermediate 3 Units
Formerly: ART 37B
Prerequisite: ART 374. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is an intermediate class in wheel thrown ceramics. The course will provide students with opportunities to further explore the technical and creative processes of ceramic pottery-making, such as, Raku and primitive firing processes and experimentation of different surface treatments. The class may be taken two times for credit.

ART 376
Wheel Thrown Ceramics, Advanced 3 Units
Formerly: ART 37C
Prerequisite: ART 375. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is an advanced class in wheel thrown ceramics. The class will provide students with individual approaches to create their own unique pottery forms. Emphasis will be placed on more aesthetic approaches to pottery-making. Students will be able to express individual artistic concepts and ideas through pottery forms using various advanced ceramic techniques, which include glazing, firing, and surface treatment. The class may be taken two times for credit.
ART 402
Beginning Clay Sculpture 3 Units
Formerly: ART 34A
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is an introduction to the basic hand-building techniques and methods. The class includes glazing and firing processes used in clay sculpture. Lectures and group discussions will be conducted in connection with the course. This class may be taken two times for credit.

ART 404
Intermediate Clay Sculpture 3 Units
Formerly: ART 34B
Prerequisite: ART 402. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is an intermediate class in ceramic sculpture techniques and methods. The class will include glazing, surface treatment and various firing processes used in clay sculpture. Focus will be placed on in-depth examination of contemporary ceramic sculpture. This class may be taken two times for credit.

ART 410
Beginning Photography 3 Units
Formerly: ART 40
Prerequisite: None
Corequisite: PHOTO 300 (may be taken concurrently). Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
A course combining lectures and hands-on experience in black and white photography. Instruction includes camera function, exposure control, film processing, enlarging prints, low-light photography, and print finishing. Creative control and elements of composition will also be stressed. The format of the class includes lectures, slide presentations, lab time, written tests, and a portfolio. A lab fee is charged for all studio classes. This course is the same as PHOTO 301. This course, under either name, may be taken only one time for credit. See “Cross-Listed Courses” in the catalog.

ART 430
Art and Children 3 Units
Formerly: ART 26
Prerequisite: None
Course Transferable to CSU
Hours: 45 hours LEC ; 27 hours LAB
This is an exploratory course in children’s art, dealing with the three aspects of art: seeing and feeling visual relationships, producing works of art, and knowing and understanding art objects. At each age and grade level, art will be selected as it relates to the child’s growth and development. Suggested for recreational leadership, preschool or elementary teachers, and caregivers.

ART 494
Topics in Art .5-4 Units
Formerly: ART 42
Prerequisite: None
Advisory: ART 300 and 320.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
Designed to give students an opportunity to study topics not included in current course offerings. May be taken four times for credit, providing there is no duplication of topics.

ART 495
Independent Studies in Art 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

ART 499
Experimental Offering in Art .5-4 Units
Formerly: ART 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

Art History (ARTH)

ARTH 300
Introduction to Art 3 Units
Formerly: ART 10
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This is an overview of the visual arts including: drawing, sculpture, artifacts, architecture, painting, and printmaking. We will examine the materials, methods, and design principles of creating. This course is recommended as a basis for the understanding of art.

ARTH 303
Art Survey: Ancient to 14th Century 3 Units
Formerly: ART 3
Prerequisite: None
Course Transferable to UC/CSU
(CAN ART 2)
Hours: 54 hours LEC
This course traces the developments in art from pre-historic times through the 14th Century. Emphasis will be given to artifacts, architecture, painting, and sculpture.
ARTH 309
Art Survey: Renaissance to 19th Century 3 Units
Formerly: ART 4
Prerequisite: None
Course Transferable to UC/CSU
(CAN ART 4)
Hours: 54 hours LEC
This course covers the architecture, graphic art, artifacts, painting and sculpture of world cultures from Renaissance period through the 19th Century.

ARTH 311
Art Survey: Modern Art 3 Units
Formerly: ART 5
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course presents the study and evaluation of diverse art forms from late 19th Century through the 21st Century.

ARTH 312
Women in Art 3 Units
Formerly: ART 35
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This is a survey course of women’s art from the Middle Ages to the present; including the art of both European and non-European cultures. This course is presented through slide lecture and discussion which will include historical and cultural context, limitations imposed by society, and the differences and similarities of other artists in each period.

ARTH 326
Traditional Native American Art 3 Units
Formerly: ART 47
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
Traditional Native American cultures exemplified their religious philosophy and reverence for nature in the utilitarian and art objects they created with clay, stone, fiber and wood. This class introduces the history, culture, mythology and art of the Southwest, Nevada and California Native Americans.

ARTH 332
Asian Art 3 Units
Formerly: ART 9
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introduction to and comparative survey of the major forms and trends in the arts, architecture and artifacts of Asia from the Neolithic to the contemporary. The role of secular and religious ideas and ideals are examined, the similarities and differences among the cultures are assessed and the contributions to world culture will be appraised to create understanding, appreciation and tolerance.

ARTH 499
Experimental Offering in Art History .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

Art New Media (ARTNM)

ARTNM 324
Digital Design 3 Units
Formerly: ARTNM 20
Prerequisite: None
Advisory: ART 300, 320; CISC 302 or JOUR 330.
Course Transferable to UC/CSU
Hours: 36 hours LEC; 54 hours LAB
This course is an introduction to computer-based design using the basic operating principles of Adobe Illustrator. Design skills and the tools of the software application will be applied to produce an individual portfolio of projects. This course may be taken four times for credit on new versions of software.

ARTNM 326
Digital Painting 3 Units
Formerly: ARTNM 22
Prerequisite: None
Advisory: CISC 302 or JOUR 330; and ART 300.
Course Transferable to CSU
Hours: 36 hours LEC; 54 hours LAB
This course introduces the basic operating principles of painter software to create and manipulate images. The fundamental skills of drawing and painting will be applied to individual portfolio quality projects. This course may be taken four times for credit.

ARTNM 495
Independent Studies in Art New Media 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

ARTNM 499
Experimental Offering in Art New Media .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)
Automotive Mechanics Technology

**DEGREE**
A.A.—Automotive Mechanics Technology

**CERTIFICATES**
- Automatic Transmissions/Transaxles
- Automotive Mechanics Technology
- Automotive Brakes
- Automotive Electrical Systems
- Automotive Engine Repair
- Automotive Heating & Air Conditioning
- Automotive Engine Performance
- Automotive Suspension & Steering
- Automotive Emission Control
- Small Engine Repair
- Welding Certificate (see welding)

The Automotive Mechanics Technology program emphasizes developing skills required for efficient diagnosis, maintenance, and repair of the automobile and its components. This program and its instructors are Automotive Service Excellence (ASE) certified.

The college offers both theoretical and practical training relating to all phases of the automobile. Upon successful completion of the program, students are qualified for placement as technicians in the auto industry. Students may apply units earned by successful completion of Automotive Mechanics Technology courses to one or more of the specialized certificates and/or the Associate Degree in Automotive Mechanics Technology.

The Automotive Student Service Education Training Program (ASSET), offered in conjunction with Ford Motor/Mazda Company, is incorporated into this degree program. Contact the ASSET Coordinator at 691-7391 for specific program information. To enroll in ASSET automotive courses, interested students must first submit an application and be accepted in the ASSET program.

**Career Options**
- Auto Technician; Auto/Truck Specialist; Automotive Microcomputer Programmer & Operator;
- Field Service/Sales Representative;
- Inventory Controls Manager;
- Tune-up & Electrical Specialist

**Highlights**
- Weekend courses in Smog Certification and other automotive topics
- 9-week courses to allow completion of certificate in only one year
- One of the best equipped shops in Northern California for hands-on training
- Graduates routinely pass ASE and State Smog Certification exams
- A facility chosen as part of the GM, Ford and Chrysler Technical Training Network
- ASE Certified Instructors, Programs and Certificates
- Class sizes with an excellent teacher/student ratio
- Ford ASSET Program
Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.

**DEGREE**

**A.A.— Automotive Mechanics Technology**

**CODE #1028**

**REQUIRED PROGRAM** .......................................................... Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMT 301 (51)</td>
<td>Automotive Service Management</td>
<td>3</td>
</tr>
<tr>
<td>AMT 304 (52)</td>
<td>Automotive Manual Drive Train and Axles</td>
<td>3</td>
</tr>
<tr>
<td>AMT 302 (53)</td>
<td>Automotive Electrical/Electronic Systems</td>
<td>3</td>
</tr>
<tr>
<td>AMT 306 (67)</td>
<td>Small Engine Repair or</td>
<td>3</td>
</tr>
<tr>
<td>AMT 314 (73)</td>
<td>Wheel Alignment</td>
<td>3</td>
</tr>
<tr>
<td>AMT 316 (62)</td>
<td>Automotive Brakes</td>
<td>3</td>
</tr>
<tr>
<td>AMT 320 (63)</td>
<td>Automotive Ignition Systems</td>
<td>3</td>
</tr>
<tr>
<td>AMT 322 (77)</td>
<td>Engine Repair</td>
<td>3</td>
</tr>
<tr>
<td>AMT 324 (81)</td>
<td>Electronic Fuel Injection</td>
<td>3</td>
</tr>
<tr>
<td>AMT 330 (82)</td>
<td>Automatic Transmissions/Transaxles</td>
<td>3</td>
</tr>
<tr>
<td>AMT 332 (85)</td>
<td>Automotive Computerized Controls or</td>
<td>3</td>
</tr>
<tr>
<td>AMT 334 (86)</td>
<td>Ford Electronic Engine Control</td>
<td>3-5</td>
</tr>
<tr>
<td>AMT 340 (93)</td>
<td>Basic/Enhanced Area Clean Air Car Course</td>
<td>7</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED ............................................................. 40-42**

Suggested Electives: AMT 300 (57), 310 (72), 312 (74), 326 (83), 498 (98); BUS 105 (60); ADT 300 (51).

**NOTE:** Students completing the FORD ASSET program must also complete AMT 300 (57), 312 (74), 326 (83) and Welding 294 (93). In addition, 5 units of Work Experience and a total of 1000 sponsored work hours must be completed. AMT 301 (51), 306 (67), and 332 (85) are not required in ASSET.

**General Education Graduation Requirements** - See page18.

**General Focus:** Courses in the general program are designed to emphasize skills development in efficient diagnosis, maintenance, and repair of the automobile. A wide variety of makes and models of vehicles are used in laboratory practice. Students can enter the General Program in Automotive Mechanics Technology at any semester, Summer, Fall, or Spring. Certificate programs as well as an A.A. degree in Automotive Mechanics Technology are available.

**ASSET Focus:** Courses in the Ford/Mazda ASSET program are part of a 2-year sequence of classes designed to prepare people to enter Ford dealerships as automotive technicians. Only Ford/Mazda products are included in the laboratory portions of these courses. Entry into the program occurs once a year in the Fall semester and students must be sponsored by a Ford/Mazda or Lincoln Mercury dealership. Students spend 2 years full-time in the program in staggered classroom and work experience segments. The process of application to this program includes taking CRC assessment exams, assembling a job search portfolio, attending a counseling appointment and resume/interview workshops, interviewing with the ASSET instructor, and obtaining employment with a sponsoring dealership. All courses in the ASSET program are taken from the specific Ford perspective. For more program and application information, call 691-7391.

**CERTIFICATE**

**Automotive Brakes**

**CODE #1029**

This curriculum is designed for students interested in seeking employment in the repair and installation of automotive brakes systems.

**REQUIRED PROGRAM** .......................................................... Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMT 300 (57)</td>
<td>Automotive Fundamentals and Shop Procedures</td>
<td>4</td>
</tr>
<tr>
<td>AMT 302 (53)</td>
<td>Automotive Electrical/Electronic Systems</td>
<td>3</td>
</tr>
<tr>
<td>AMT 316 (62)</td>
<td>Automotive Brakes</td>
<td>3</td>
</tr>
<tr>
<td>AMT 332 (85)</td>
<td>Automotive Computerized Controls</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED ............................................................. 13**

**CERTIFICATE**

**Automotive Electrical Systems**

**CODE #1030**

This curriculum is designed for students interested in seeking employment in the diagnosis and repair of automotive electrical systems.

**REQUIRED PROGRAM** .......................................................... Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMT 300 (57)</td>
<td>Automotive Fundamentals and Shop Procedures</td>
<td>4</td>
</tr>
<tr>
<td>AMT 302 (53)</td>
<td>Automotive Electrical/Electronic Systems</td>
<td>3</td>
</tr>
<tr>
<td>AMT 320 (63)</td>
<td>Automotive Ignition Systems</td>
<td>3</td>
</tr>
<tr>
<td>AMT 332 (85)</td>
<td>Automotive Computerized Controls</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED ............................................................. 13**

**CERTIFICATE**

**Automotive Engine Repair**

**CODE #1031**

This curriculum is designed for students interested in seeking employment in the engine overhaul and engine repair field.

**REQUIRED PROGRAM** .......................................................... Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMT 300 (57)</td>
<td>Automotive Fundamentals and Shop Procedures</td>
<td>4</td>
</tr>
<tr>
<td>AMT 306 (67)</td>
<td>Small Engine Repair</td>
<td>3</td>
</tr>
<tr>
<td>AMT 322 (77)</td>
<td>Engine Repair</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED ............................................................. 13**

**CERTIFICATE**

**Automotive Heating and Air Conditioning**

**CODE #1032**

This curriculum is designed for students interested in seeking employment in the automotive heating and air conditioning repair/installation field.

**REQUIRED PROGRAM** .......................................................... Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMT 300 (57)</td>
<td>Automotive Fundamentals and Shop Procedures</td>
<td>4</td>
</tr>
<tr>
<td>AMT 302 (53)</td>
<td>Automotive Electrical/Electronic Systems</td>
<td>3</td>
</tr>
<tr>
<td>AMT 326 (83)</td>
<td>Automotive Heating &amp; Air Conditioning</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED ............................................................. 13**
CERTIFICATE
Small Engine Repair
CODE #1036
This curriculum is designed for students who are interested in obtaining skills necessary for the repair of small engines used in industry, home maintenance, landscape maintenance and recreation.

REQUIRED PROGRAM ............................................................ Units
AMT 302 (53) Automotive Electrical/Electronic Systems ............ 3
AMT 306 (67) Small Engine Repair ........................................... 3
AMT 324 (81) Electronic Fuel Injection .................................... 3
Plus three (3) units selected from:
Any other Automotive Mechanics Technology course
TOTAL UNITS REQUIRED ........................................................ 12

CERTIFICATE
Automatic Transmissions/Transaxles
CODE #1034
This curriculum is designed for students interested in seeking employment in the diagnosis and repair of automatic transmissions/transaxles.

REQUIRED PROGRAM ............................................................ Units
AMT 300 (57) Automotive Fundamentals and Shop Procedures ... 4
AMT 302 (53) Automotive Electrical/Electronic Systems ............ 3
AMT 304 (52) Automotive Manual Drive Train and Axles ........... 3
AMT 330 (82) Automatic Transmissions/Transaxles ................... 3
TOTAL UNITS REQUIRED .......................................................... 13

CERTIFICATE
Automotive Engine Performance
CODE #1035
This curriculum is designed for students who are interested in seeking employment in the tune-up and diagnosis field. Students may continue with another Automotive certificate or AA without repeating these courses.

REQUIRED PROGRAM ............................................................ Units
AMT 302 (53) Automotive Electrical/Electronic Systems ............ 3
AMT 320 (63) Automotive Ignition Systems ............................... 3
AMT 306 (67) Small Engine Repair or
AMT 322 (77) Engine Repair .................................................... 3
AMT 310 (72) Engine Performance ............................................. 3
AMT 324 (81) Electronic Fuel Injection ..................................... 3
AMT 332 (85) Automotive Computerized Controls (3) or
AMT 340 (93) Basic/Enhanced Area Clean Air Car Course (7) 3-7
TOTAL UNITS REQUIRED .......................................................... 18-22

CERTIFICATE
Automotive Mechanics Technology
CODE #1028
This one-year curriculum is designed for students who are seeking basic job entry skills for employment in the automotive field. Students may continue with another Automotive certificate or AA without repeating these courses.

REQUIRED PROGRAM ............................................................ Units
AMT 301 (51) Automotive Service Management ......................... 3
AMT 302 (53) Automotive Electrical/Electronic Systems ............ 3
AMT 304 (52) Automotive Manual Drive Train and Axles ........... 3
AMT 306 (67) Small Engine Repair ........................................... 3
AMT 314 (73) Wheel Alignment ............................................... 3
AMT 316 (62) Automotive Brakes ............................................. 3
AMT 320 (63) Automotive Ignition Systems ............................... 3
AMT 322 (77) Engine Repair .................................................... 3
AMT 324 (81) Electronic Fuel Injection .................................... 3
AMT 330 (82) Automatic Transmissions/Transaxles ................... 3
AMT 332 (85) Automotive Computerized Controls .................... 3
AMT 340 (93) Basic/Enhanced Area Clean Air Car Course .......... 7
TOTAL UNITS REQUIRED .......................................................... 40

CERTIFICATE
Automatic Suspension and Steering
CODE #1033
This curriculum is designed for students interested in seeking employment in the automotive suspension, steering or wheel alignment fields.

REQUIRED PROGRAM ............................................................ Units
AMT 300 (57) Automotive Fundamentals and Shop Procedures ... 4
AMT 302 (53) Automotive Electrical/Electronic Systems ............ 3
AMT 314 (73) Wheel Alignment ............................................... 3
AMT 332 (85) Automotive Computerized Controls .................... 3
TOTAL UNITS REQUIRED .......................................................... 13

CERTIFICATE
Automotive Emission Control
CODE #1365

REQUIRED PROGRAM ............................................................ Units
AMT 302 (53) Automotive Electrical/Electronic Systems ............ 3
AMT 310 (72) Engine Performance or
AMT 324 (81) Electronic Fuel Injection .................................... 3
AMT 332 (85) Automotive Computerized Controls .................... 3
AMT 340 (93) Basic/Enhanced Area Clean Air Car Course .......... 7
TOTAL UNITS REQUIRED .......................................................... 16

NOTE:
1. A current advanced emission control smog license will meet the requirement for AMT 340 (93).
2. ASE (Automotive Service Excellence) Certification in A6, A8, and L1 will meet requirements for AMT 302 (53), 310 (72), 332 (85).
3. No units will be earned for requirements met through licensing or certification exams. In these cases fewer total units are required.
Automotive Mechanics Technology (AMT)

AMT 140  
Automotive Service  1 Unit  
Formerly: AMT 92  
Prerequisite: None  
Advisory: AMT 300.  
Hours: 15 hours LEC ; 9 hours LAB  
A short-term course designed to enable students to gain skills in a specialized automotive area and to assist the student in preparation for state license requirements when applicable. Some of the service system topics that may be scheduled include: brakes, charging, ignition, alignment, disc brakes, automatic transmission, air conditioning and management. Students may receive one unit of credit for each topic area. Consult class schedule for specific topics being offered.

AMT 294  
Topics in Automotive Mechanics Technology  .5-4 Units  
Formerly: AMT 90  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
Course work designed to cover special topics not included in current automotive offerings in a timely manner. Topics may be offered in workshops or seminar presentations on timely subjects or targeted for specific audiences.

AMT 295  
Independent Studies in Automotive Mechanics Technology  1-3 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

AMT 299  
Experimental Offering in Automotive Mechanics Technology  .5-4 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

AMT 300  
Automotive Fundamentals and Shop Procedures  4 Units  
Formerly: AMT 57  
Prerequisite: None  
Course Transferable to CSU  
Hours: 72 hours LEC  
A basic study of the mechanical operations of the automobile directed toward the principles and operation of the automotive engine, engine support systems, the drive train, steering, suspension and brakes. Hand tools, shop equipment and shop procedures will be demonstrated to familiarize the students with the automotive industry.

AMT 301  
Automotive Service Management  3 Units  
Formerly: AMT 51  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
A survey of the economic importance and future opportunities in the automotive industry. Specialized areas of repair estimating and service management. A study of materials, use of hand tools, measuring tools and shop equipment.

AMT 302  
Automotive Electrical/Electronic Systems  3 Units  
Formerly: AMT 53  
Prerequisite: None  
Advisory: AMT 300.  
Course Transferable to CSU  
Hours: 36 hours LEC ; 54 hours LAB  
This course is a study of the fundamental principles of electricity as used by the auto technician. Construction and function of automotive electrical/ electronic components will be discussed, as will storage batteries, charging and cranking systems, lighting, and accessory systems.

AMT 304  
Automotive Manual Drive Train and Axles  3 Units  
Formerly: AMT 52  
Prerequisite: None  
Advisory: AMT 300.  
Course Transferable to CSU  
Hours: 36 hours LEC ; 54 hours LAB  
This course covers the principles of operations of automotive power trains, including diagnosis and overhaul techniques of clutches, manual transmission/ transaxles, transfer cases, drive lines and differentials.

AMT 306  
Small Engine Repair  3 Units  
Formerly: AMT 67  
Prerequisite: None  
Advisory: AMT 300.  
Course Transferable to CSU  
Hours: 36 hours LEC ; 54 hours LAB  
Operation and repair of two- and four-cycle engines. Emphasis on design and theory of various types of internal combustion engines.

AMT 308  
Late Model Car Care and Maintenance  3 Units  
Formerly: AMT 58  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is designed for the service technician and late model car owner wishing to perform or schedule car maintenance. This course will provide both men and women with basic automotive repair procedures and a fundamental understanding of how various automotive components and systems work. Use of the owner's manual, repair orders and other resources will be emphasized along with the development of a preventative maintenance schedule.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Advisory Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMT 310</td>
<td>Engine Performance</td>
<td>3</td>
<td>Formerly: AMT 72</td>
<td>None</td>
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<td></td>
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<td>Prerequisite: None</td>
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<td></td>
<td>Course Transferable to CSU</td>
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<td></td>
<td></td>
<td>Hours: 36 hours LEC ; 54 hours LAB</td>
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<td></td>
<td>Basic principles of the internal combustion engine and its related components. Emphasis on complete electrical and fuel systems. Use of advanced types of testing equipment.</td>
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<tr>
<td>AMT 312</td>
<td>Automotive Suspension and Steering</td>
<td>3</td>
<td>Formerly: AMT 74</td>
<td>None</td>
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<td></td>
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<td>Prerequisite: None</td>
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<td>Advisory: AMT 300</td>
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<td>Course Transferable to CSU</td>
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<td></td>
<td></td>
<td>Hours: 36 hours LEC ; 54 hours LAB</td>
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<td></td>
<td>Principles of operation of automotive steering, power steering, frames, springs, exhaust systems, acetylene welding, shock absorbers and tires.</td>
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<tr>
<td>AMT 314</td>
<td>Wheel Alignment</td>
<td>3</td>
<td>Formerly: AMT 73</td>
<td>None</td>
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<td>Prerequisite: None</td>
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<td>Course Transferable to CSU</td>
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<td>Hours: 36 hours LEC ; 54 hours LAB</td>
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<td>An in-depth examination of alignment equipment and different auto manufacturer’s alignment systems. Will cover wheel balancing and front end steering and wheel alignment, diagnosis and repair.</td>
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<tr>
<td>AMT 316</td>
<td>Automotive Brakes</td>
<td>3</td>
<td>Formerly: AMT 62</td>
<td>None</td>
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<td></td>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<td>Course Transferable to CSU</td>
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<td></td>
<td>Hours: 36 hours LEC ; 54 hours LAB</td>
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<td></td>
<td>Principles of operation of automotive brakes and anti-lock brake systems, including diagnosis and overhaul techniques of power brake system components.</td>
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<tr>
<td>AMT 320</td>
<td>Automotive Ignition Systems</td>
<td>3</td>
<td>Formerly: AMT 63</td>
<td>None</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<td></td>
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<td></td>
<td>Advisory: AMT 300 and 302.</td>
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<td>Course Transferable to CSU</td>
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<td></td>
<td>Hours: 36 hours LEC ; 54 hours LAB</td>
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<td>A thorough examination of the automotive ignition system, including its function, primary circuit, secondary circuit, diagnosis of electrical troubles, and assembly and repair of equipment including distributorless ignition systems.</td>
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<tr>
<td>AMT 322</td>
<td>Engine Repair</td>
<td>3</td>
<td>Formerly: AMT 77</td>
<td>None</td>
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<td></td>
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<td>Prerequisite: None</td>
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<td>Advisory: AMT 300 and 306.</td>
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<td>Course Transferable to CSU</td>
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<td></td>
<td></td>
<td>Hours: 36 hours LEC ; 54 hours LAB</td>
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<td></td>
<td>The theory of operation and repair of the automotive internal combustion engine. Major emphasis will be on diagnosis, measurement, repair and assembly of the automotive engine.</td>
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</tr>
<tr>
<td>AMT 324</td>
<td>Electronic Fuel Injection</td>
<td>3</td>
<td>Formerly: AMT 81</td>
<td>None</td>
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<td></td>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<td></td>
<td>Advisory: AMT 300, 302, or 310.</td>
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<td>Course Transferable to CSU</td>
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<td></td>
<td></td>
<td></td>
<td>Hours: 36 hours LEC ; 54 hours LAB</td>
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<td>Techniques and procedures for diagnosis, overhaul and service of electronic fuel injection. Accessories including different types of electronic fuel injection systems and test equipment. Principles of operation of special equipment such as super-charger and turbo-chargers.</td>
<td></td>
</tr>
<tr>
<td>AMT 326</td>
<td>Automotive Heating and Air Conditioning</td>
<td>3</td>
<td>Formerly: AMT 83</td>
<td>None</td>
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<td></td>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<td></td>
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<td></td>
<td>Advisory: AMT 302</td>
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<td>Course Transferable to CSU</td>
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<td></td>
<td>Hours: 36 hours LEC ; 54 hours LAB</td>
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<td></td>
<td>This course is a study of installation, operation and repair of automotive air conditioning systems, cooling systems, and heating systems. The course will include a study of the systems for proper functioning including heat transfer and air flow.</td>
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<tr>
<td>AMT 330</td>
<td>Automatic Transmissions/Transaxles</td>
<td>3</td>
<td>Formerly: AMT 82</td>
<td>None</td>
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<td></td>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<td>Advisory: AMT 300 and 304.</td>
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<td></td>
<td>Course Transferable to CSU</td>
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<td></td>
<td></td>
<td>Hours: 36 hours LEC ; 54 hours LAB</td>
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<td>This course is a study of the fundamentals and theory of automatic transmissions/ transaxles. The laboratory experience will include inspection, diagnosis and adjustments.</td>
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<tr>
<td>AMT 332</td>
<td>Automotive Computerized Controls</td>
<td>3</td>
<td>Formerly: AMT 85</td>
<td>None</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<td></td>
<td></td>
<td></td>
<td>Advisory: AMT 302</td>
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<td></td>
<td>Course Transferable to CSU</td>
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<td></td>
<td>Hours: 54 hours LEC</td>
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<td>The study of automotive computerized controls and their application to the engine, chassis and braking systems. Students will learn how the computer interacts with the functioning parts of the modern automobile.</td>
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</tr>
</tbody>
</table>
AMT 334  
Ford Electronic Engine Control  
(EEC IV and V) 5 Units  
Formerly: AMT 86  
Prerequisite: None  
Advisory: AMT 302 and 332, enrollment in the ASSET program.  
Course Transferable to CSU  
Hours: 90 hours LEC  
This is an advanced course specializing in Ford Electronic Engine Controls.

AMT 336  
Advanced Service Management 3 Units  
Formerly: AMT 61  
Prerequisite: None  
Advisory: AMT 300.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is a thorough examination of automotive service management. The course includes workflow process, dispatching, customer write-ups, warranties, customer handling, automotive law, hazardous waste, and employee hiring skills.

AMT 340  
Basic/Enhanced Area Clean Air Car Course 7 Units  
Formerly: AMT 93  
Prerequisite: None  
Advisory: AMT 310 or 324, and AMT 302 and 332.  
Course Transferable to CSU  
Hours: 126 hours LEC  
This course includes testing, diagnosis, and service of all automotive emission control systems. Included in the course are the eight hours of training required by the Bureau of Automotive Repair for technicians to perform Loaded Mode Emission testing in impacted areas of the state. The course is required for all students who plan to become licensed as test-only technicians, intern diagnostic technicians, basic or advanced test and repair technicians. Upon successful completion of this course, students are eligible for a BAR Intern License, Test-Only Technician License, and may be eligible for a Basic or Advanced Emission Test and Repair License. Course may be taken two times for credit. (Note: Eligibility for Clean Air Course Certification requires one of the following before entry into this course: 9 units in engine performance or 180 hours of documented engine performance education/training or 1 year of verifiable full time engine performance work (or combination).

AMT 495  
Independent Studies in Automotive Mechanics Technology 1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

AMT 498  
Work Experience in Automotive Mechanics Technology 1-4 Units  
Formerly: AMT 98  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 336)

AMT 499  
Experimental Offering in Automotive Mechanics Technology .5-4 Units  
Formerly: AMT 49  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
Biology

**DEGREE**  A. S.—Biology: Biological Sciences

CRC’s Biology program offers courses which satisfy general education requirements in Life Sciences, are prerequisites for a degree in Veterinary Technology, Medical Assisting, Health Information Technology, and Environmental Technology, and prepare students for transfer opportunities to four-year programs in biological sciences, nursing, physical therapy, and programs leading to careers in teaching, medicine, dentistry, veterinary medicine, etc.

Students planning to continue for a four-year degree should consult the lower division requirements of the transfer program of the university to which they plan to attend.

**Career Options**

Nursing/Physician’s Assistant/Physical Therapy; Teaching; Microbiology; Wildlife Biology; Marine Biology; Pharmacy; Medicine/Dentistry/Veterinary Medicine; Optometry; Research; Nutrition

Some career options require more than two years of college study. Classes beyond the associate degree may be required for some career options or to fully prepare students for transfer to a university program.

**Highlights**

Extensive laboratory experience

Day and evening sections of pre-nursing classes

Field Trips

A friendly faculty who have studied biology in South America, the Galapagos Islands, Africa and North America

A Mathematics, Engineering and Science Achievement (MESA) program

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**Note to Transfer Students:**

If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

**Field Study Classes at Cosumnes River College**

Nature is often the best classroom!

Come learn outside in Cosumnes River College’s field study courses. These classes consist of short classroom sessions followed by extended trips to some of the most unique and beautiful environments in California, including Big Sur, Monterey Bay, Mt. Lassen, Point Reyes, Yosemite and more!

These short-term classes are offered by several departments, including Biology, Geography, Geology, Photography, and Physical Education. For more information about specific classes, consult the class schedule or visit the Los Rios Field Study Consortium website at: www.losrios.edu/fieldstudy.

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**DEGREE**  A.S. Biology: Biological Sciences

**CODE #1451**

This degree is designed to meet common lower division requirements for a major in one of the biological sciences, nursing, or pre-professional health fields.

**REQUIRED PROGRAM ............................................................... Units**

**BIOLOGY CONCENTRATION OPTION**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 400 (1A)</td>
<td>Principles of Biology</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 410 (2)</td>
<td>Principles of Botany</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 420 (3)</td>
<td>Principles of Zoology</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 400 (1A)</td>
<td>General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 401 (1B)</td>
<td>General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>MATH 350 (16A)</td>
<td>Calculus for the Life and Social Sciences I (3) and MATH 351 (16B)</td>
<td>8-10</td>
</tr>
<tr>
<td>MATH 400 (9A)</td>
<td>Calculus I (5)</td>
<td>5</td>
</tr>
<tr>
<td>MATH 401 (9B)</td>
<td>Calculus II (5)</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 350 (5A)</td>
<td>General Physics (4) and PHYS 360 (5B)</td>
<td>8-12</td>
</tr>
<tr>
<td>PHYS 411 (4A)</td>
<td>Mechanics of Solids and Fluids</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 421 (4B)</td>
<td>Electricity and Magnetism</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 431 (4C)</td>
<td>Heat, Waves, Light &amp; Modern Physics</td>
<td>4</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED ........................................................ 39-47**

Degree continued on next page - - -
HEALTH SCIENCE / PRE-PROFESSIONAL OPTION

**BIOL 400 (1A) Principles of Biology** ............................................. 5
**BIOL 410 (2) Principles of Botany** .............................................. 5
**BIOL 420 (3) Principles of Zoology** ............................................ 5
**CHEM 400 (1A) General Chemistry** ................................................. 5
**CHEM 401 (1B) General Chemistry** ................................................. 5
**CHEM 420 (12A) Organic Chemistry** ................................................ 5
**CHEM 421 (12B) Organic Chemistry** ................................................ 5
**MATH 400 (9A) Calculus I** (5)
**MATH 401 (9B) Calculus II** (5) ......................................... 6-10
**PHYS 350 (5A) General Physics** (4)
**PHYS 360 (5B) General Physics** (4)
or
**PHYS 411 (4A) Mechanics of Solids and Fluids** (4)
**PHYS 421 (4B) Electricity and Magnetism** (4)
**PHYS 431 (4C) Heat, Waves, Light & Modern Physics** (4) .................. 8-12
**TOTAL UNITS REQUIRED** ........................................................49-57

**PRE-NURSING OPTION * **

**BIOL 440 (6) General Microbiology** ........................................... 4
**BIOL 430 (25) Anatomy and Physiology** ........................................ 5
**BIOL 431 (26) Anatomy and Physiology** ........................................ 5
**CHEM 305/307 (2A) Introduction to Chemistry** ........................... 4-5
**CHEM 306/308 (2B) Introduction to Chemistry** ........................... 4-5
**NUTRI 300 (10) Nutrition** ......................................................... 3
**FCS 324 (38) Human Development: A Life Span** ......................... 3
**PSYC 300 (1) General Principles** (3)
or
**PSYC 320 (3) Social Psychology** (3) ........................................ 3
**TOTAL UNITS REQUIRED** ..........................................................31-33

*Note: This degree is designed for students intending to transfer to a nursing program at a 4-year college or university. It does not prepare the student for immediate employment as a nurse. Students earning a nursing degree will need to complete several lower division nursing classes after transferring.

Associate of Science Degree (A.S.) may be obtained by completion of the Required Program, plus General Education requirements, plus sufficient electives to meet a 60-unit total.

**TOTAL UNITS REQUIRED :** .........................................................31-57
(depending on option selected)

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**Note:**
A locker deposit is required to participate in most biology courses. The deposit is payable at the Business Office prior to the third class meeting. This fee is refundable at the end of the semester; however, if chemical glassware is broken or missing, the charge will be deducted from the deposit.

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**Biology (BIOL)**

**BIOL 100**
**Introduction to Concepts of Human Anatomy and Physiology** 3 Units
Prerequisite: None
Hours: 54 hours LEC
This introductory course provides an overview of the basic anatomy and physiology of all body systems. It is designed as a non-transferable course for the Health Information Technology Program, and may be useful for other health-related technologies and for strengthening or developing a vocabulary in human anatomy and physiology.

**BIOL 102**
**Introduction to Concepts of Human Anatomy & Physiology** 4 Units
Formerly: BIOL 60
Prerequisite: None
Hours: 54 hours LEC; 54 hours LAB
This introductory course provides an overview of the basic anatomy and physiology of all body systems. It is designed as a non-transferable course and meets the minimum requirements for Medical Assisting, Health Information Technology, Dietetic Technician, Licensed Vocational Nursing, and other health-related technologies. It is also useful for strengthening or developing a vocabulary in human anatomy and physiology.

**BIOL 295**
**Independent Studies in Biology** 1-3 Units
Prerequisite: None
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

**BIOL 299**
**Experimental Offering in Biology** .5-4 Units
Prerequisite: None
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

**BIOL 300**
**The Foundations of Biology** 3 Units
Formerly: BIOL 12
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This course is a survey of major topics in the biological sciences for the non-science major with an emphasis on human biology. Units covered include the origin of life, cell structure and chemistry, metabolism, Mendelian and molecular genetics, genetic engineering, evolution, anatomy and physiology of humans, animal behavior and ecology.
BIOL 307
Biology of Organisms 4 Units
Formerly: BIOL 13
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC ; 54 hours LAB
This is a general biology course focusing on a survey of the plant and animal kingdoms. The course covers the general principles of biology including: methods of science, cell organization, genetics, evolution, ecology, biodiversity, and anatomy. These principles are explored in more depth through the examination of additional topics which may include: disease and epidemiology, physiological ecology, animal behavior, biotechnology, population growth and regulation, ecosystem ecology, and conservation biology. Evolution and biodiversity are continuing themes running throughout the course and are included in each major topic. The course is designed for non-science majors and is especially useful for liberal studies, elementary education, environmental studies, recreation, and similar majors.

BIOL 310
General Biology 4 Units
Formerly: BIOL 16
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC ; 54 hours LAB
This course is a survey of biological science with an emphasis on human biology. It is intended for the non-science major as well as environmental technology majors. Units covered include cell biology, metabolism, Mendelian and molecular genetics, evolution, anatomy and physiology, animal behavior, and ecology. The laboratory activities are designed to further investigate and illuminate each topic area.

BIOL 342
The New Plagues: New & Ancient Infectious Diseases Threatening World Health 3 Units
Formerly: BIOL 31
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course will cover general biological concepts and the epidemiology and pathology of selected pathogens such as prions, viruses, bacteria, protozoa, and helminthes threatening public health on a global scale. The course explores the influence of human behavior and activities on the emergence of new infectious agents and the re-emergence of ancient plagues.

BIOL 350
Environmental Biology 3 Units
Formerly: BIOL 14
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course provides an overview of ecosystems and natural resources. Major topics covered include ecological principles, ecosystem functioning, conservation biology, resource use and management, pollution and other human-caused environmental impacts. This course provides the background needed to understand major global and regional issues such as acid rain, global warming, hazardous waste disposal, deforestation and endangered species recovery. BIOL 350 is especially useful for Environmental Technology, Environmental Sciences, Ecology, Recreation, Education and Political Science majors. Field trips, attendance at public meetings and/or a semester project may be required. This course is the same as ENV 304, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

BIOL 366
Introduction to Toxicology: The Biology and Chemistry of Poisons 3 Units
Formerly: BIOL 32
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course provides an overview of the biology of natural and man-made toxic substances. It will provide an introduction to physiological and environmental processes and will cover a breadth of biological principles, from cell biochemistry to ecology. The course will employ case studies to analyze how the scientific method is used to discover how toxic substances affect individuals, populations, and ecosystems. This course is the same as ENV 306, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

BIOL 390
Natural History Field Study .5-4 Units
Formerly: BIOL 24
Prerequisite: None
Course Transferable to CSU
Hours: 6 hours LEC ; 36 hours LAB
This course will study the ecology and natural history covered in the field. Animals, plants and geology will be studied and their interrelationships investigated. The course(s) will be offered in the appropriate area (mountains, desert or seashore and ocean). Assignments, field notes and appropriate exams/quizzes will be an integral part of the course. Students will be responsible for providing their own lodging or camping equipment and meals. Campsites will be available. This course is ideal for future teachers, parents, resource management majors and those interested in the biological sciences.
BIOL 400
Principles of Biology 5 Units
Formerly: BIOL 1A
Prerequisite: CHEM 400 with a grade of “C” or better.
Course Transferable to UC/CSU
(CAN BIOL 2)
Hours: 54 hours LEC; 108 hours LAB
This course introduces universal biological principles, including biological molecules, enzymes, cell structure and function, biochemistry, Mendelian and molecular genetics, ecology and evolution. BIOL 400 is recommended for science majors and students in pre-professional programs.

BIOL 401
Principles of Biology for Veterinary Technicians 5 Units
Prerequisite: CHEM 305 or 307 with a grade of “C” or better.
Course Transferable to CSU
Hours: 54 hours LEC; 108 hours LAB
This course introduces universal biological principles, including biological molecules, enzymes, cell structure and function, biochemistry, Mendelian and molecular genetics, ecology and evolution. Applications and examples are chosen to reflect the needs of Veterinary Technology students. Science majors and students in pre-professional programs who are planning on transferring should not take this course; they should enroll in BIOL 400.

BIOL 410
Principles of Botany 5 Units
Formerly: BIOL 2
Prerequisite: BIOL 400. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
(CAN BIOL 6)
Hours: 54 hours LEC; 108 hours LAB
This course introduces the biology of plants, fungi, cyanobacteria, and algae. Topics covered include the anatomy and physiology, development, classification, evolution and ecology of botanical organisms. Some labs involve local field trips; a weekend field trip may be required (an alternative assignment will be available).

BIOL 420
Principles of Zoology 5 Units
Formerly: BIOL 3
Prerequisite: BIOL 400. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
(CAN BIOL 4)
Hours: 54 hours LEC; 108 hours LAB
This course is an introduction to zoology with particular emphasis on comparative anatomy and physiology of vertebrates and invertebrates. The basic principles of evolution, taxonomy, embryology, morphology, physiology, behavior and ecology will be covered.

BIOL 430
Anatomy and Physiology 5 Units
Formerly: BIOL 25
Prerequisite: CHEM 300 or 305 or 307 or 400 with a grade of “C” or better; or equivalent (Biology Dept will advise Counseling of equivalencies.)
Course Transferable to UC/CSU
Hours: 54 hours LEC; 108 hours LAB
This is an introductory course in which the basic principles of human anatomy and physiology are presented in an integrated fashion. This course covers anatomical terminology, basic organic chemistry, histology, and the integumentary, skeletal, muscular and nervous systems. Both BIOL 430 and BIOL 431 must be taken to study all of the major body systems.

BIOL 431
Anatomy and Physiology for Veterinary Technicians 5 Units
Prerequisite: BIOL 400. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC; 108 hours LAB
This is an introductory course in which the basic principles of human anatomy and physiology are presented in an integrated fashion. This course covers the circulatory, respiratory, digestive, urinary, endocrine and reproductive systems. Both BIOL 430 and BIOL 431 must be taken to study all of the major body systems.

BIOL 440
General Microbiology 4 Units
Prerequisite: CHEM 300 or 305 or 307 or 400 with a grade of “C” or better; or high school laboratory chemistry
Course Transferable to UC/CSU
(CAN BIOL 14)
Hours: 54 hours LEC; 72 hours LAB
This course introduces the concepts of microbiology with an emphasis on forms, modes of growth, cell specialization, mutual, commensal and parasitic relationships of bacteria, fungi, molds, protozoans and viruses. Topics will be correlated with medical and health applications to animals and human beings.

BIOL 462
Genetics in Contemporary Human Society 3 Units
Formerly: BIOL 39
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This course introduces students to the principles of modern genetics, especially as they apply to human health and society. Rapid advances in scientists’ knowledge of what genes are and how they work impact the daily life of people through genetically modified foods, DNA fingerprinting, therapies for human disease and a variety of reproductive technologies. This course includes the study of Mendelian inheritance, the roles of chromosomes and genes in human disease, how genes direct development, the relationship between genes, environment and behavior, and the contribution of genes to human diversity. Ethical, legal and social issues will be explored through class discussions and written reports. This course is primarily intended for non-biology majors; however, biology majors may enjoy the opportunity to explore human genetics in greater depth than is possible in BIOL 400.
BIOL 470  
Behavioral Biology 3 Units  
Formerly: BIOL 30  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC  
This course provides an overview of animal and human behavior in an evolutionary and ecological context. The course includes an introduction to patterns of animal and human behavior, cell and physiological processes, the structure and function of nervous systems, the genetics of behavior, the principles of evolution, and behavioral ecology. It is useful for both science and nonscience majors.

BIOL 481  
Honors Seminar in Biology 1 Unit  
Prerequisite: None  
Course Transferable to CSU  
Hours: 9 hours LEC ; 27 hours LAB  
Honors Seminars in Biology are special one-unit intensive courses for academically accomplished students or those with the potential for high academic achievement. In these seminars, students will study advanced topics from the area of biology. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as HONOR 383. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

BIOL 495  
Independent Studies in Biology 1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

BIOL 499  
Experimental Offering in Biology .5-4 Units  
Formerly: BIOL 49  
Prerequisite: None  
Course Transferable to UC/CSU - See Counselor  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
Broadcast Journalism

DEGREE A.A.—Communications Media, Broadcast Journalism

This CRC program introduces students to the field of broadcast journalism and prepares them for internships or transfer to a four-year institution.

Career Options
News Broadcaster; Sportscaster; Announcer; Newswriter, News Producer, Journalist

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights
Practical experience in the newly equipped and remodeled digital TV studio and campus radio station

Internship opportunities in local radio and TV stations

Practical experience creating news packages for college TV news shows

Practical experience as an on-camera TV reporter/anchor or for radio broadcast

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

Suggested Electives:
COMM 311 (3), 315 (18);
ECON 302 (1A);
POLS 301 (1), 302 (2), 310 (10);
PSYC 351 (7)

General Education Graduation Requirements—See page 18.

See Communications Media section for other programs and offerings.
Building Inspection Technology

DEGREE A.S.—Building Inspection Technology
CERTIFICATES Building Inspection Technology
Concrete Construction Inspection
Electrical Construction Inspection
H.V.A.C. Inspection
Masonry Construction Inspection
Plumbing Inspection
Soils & Asphalt Construction Inspection
Steel Construction Inspection
Wood Frame Construction Inspection

This CRC program has been developed to prepare individuals for employment in building inspection. Graduates may be employed by contractors, government agencies, architects, finance companies and developers. A wide variety of employment opportunities exist in the fast-growing construction industry in the Sacramento Valley.

Career Options
Building Inspector; Plan Checker; Construction Supervisor; Foreman; Construction Management; Government Building Official

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights
Field trips to a variety of construction sites to study inspection technologies and code interpretations (Instructor Option)
Association with instructors who are county and city building officials and inspectors

DEGREE
A.S.—Building Inspection Technology
CODE #1045

REQUIRED PROGRAM ............................................................... Units
BIT 100 (57) Introduction to Uniform Building Code ................... 3
BIT 102 (58) Reading and Non-Structural Plan Review or CMT 300 (50) Intro to Construction Plans/Specifications .......... 3
BIT 104 (59) Uniform Building Code - Fire and Life Safety ........... 3
BIT 112 (62) Building Inspection Principles for Disabled Access . 2
CMT 310 (51) Materials of Construction ......................................... 3
CISC 302 (CIS 1X) Computer Familiarization ............................... 2

Plus a minimum of twenty-one (21) units selected from: .............. 21
BIT 110 (60) Engng & Structural Principles for Bldg. Constr. (3)
BIT 120 (63) Mechanical I / Plumbing Code Requirements (3)
BIT 121 (64) Mechanical II / H.V.A.C. Code Requirements (3)
BIT 130 (65) Intro to Inspection of Wood Frame Construction (3)
BIT 132 (66) Steel Construction Principles and Inspection (3)
BIT 134 (67) Soils and Asphalt Principles and Inspection (3)
BIT 136 (68) Concrete Principles and Inspection (3)
BIT 138 (69) Masonry Principles and Inspection (3)
BIT 140 (70) Electrical I (3)
BIT 141 (71) Electrical II (3)

TOTAL UNITS REQUIRED ........................................................... 37

Suggested Electives: ADT 310 (66); CMT 120 (53); BUS 340 (18A)
General Education Graduation Requirements - See page 18.
CERTIFICATE
Building Inspection Technology
CODE #1045

REQUIRED PROGRAM ............................................................ Units
BIT 100 (57) Introduction to Uniform Building Code .................. 3
BIT 102 (58) Reading and Non-Structural Plan Review or
CMT 300 (50) Intro to Construction Plans/Specifications .......... 3
BIT 104 (59) Uniform Building Code - Fire and Life Safety .......... 3
CMT 310 (51) Materials of Construction .................................. 3
CISC 302 (CIS 1X) Computer Familiarization ......................... 2
MATH 106 (81) Mathematics for Technical Fields ..................... 3
ENGWR 103 (ENGL 60) Practical Communication ...................... 3
TOTAL UNITS REQUIRED .................................................... 17

Suggested Elective: ADT 310 (66)

CERTIFICATE
H.V.A.C. Inspection
CODE #1334

REQUIRED PROGRAM ............................................................ Units
BIT 100 (57) Introduction to Uniform Building Code .................. 3
BIT 102 (58) Reading and Non-Structural Plan Review ............... 3
CMT 310 (51) Materials of Construction .................................. 3
CISC 302 (CIS 1X) Computer Familiarization ......................... 2
BIT 121 (64) Mechanical II: H.V.A.C. Code Requirements .......... 3
TOTAL UNITS REQUIRED .................................................... 14

Suggested Elective: ADT 310 (66)

CERTIFICATE
Concrete Construction Inspection
CODE #1338

REQUIRED PROGRAM ............................................................ Units
BIT 100 (57) Introduction to Uniform Building Code .................. 3
BIT 102 (58) Reading and Non-Structural Plan Review ............... 3
CMT 310 (51) Materials of Construction .................................. 3
CISC 302 (CIS 1X) Computer Familiarization ......................... 2
BIT 136 (68) Concrete Principles and Inspection ..................... 3
TOTAL UNITS REQUIRED .................................................... 14

Suggested Elective: ADT 310 (66)

CERTIFICATE
Masonry Construction Inspection
CODE #1339

REQUIRED PROGRAM ............................................................ Units
BIT 100 (57) Introduction to Uniform Building Code .................. 3
BIT 102 (58) Reading and Non-Structural Plan Review ............... 3
CMT 310 (51) Materials of Construction .................................. 3
CISC 302 (CIS 1X) Computer Familiarization ......................... 2
BIT 138 (69) Masonry Construction Inspection ....................... 3
TOTAL UNITS REQUIRED .................................................... 14

Suggested Elective: ADT 310 (66)

CERTIFICATE
Electrical Construction Inspection
CODE #1340

REQUIRED PROGRAM ............................................................ Units
BIT 100 (57) Introduction to Uniform Building Code .................. 3
BIT 102 (58) Reading and Non-Structural Plan Review ............... 3
CMT 310 (51) Materials of Construction .................................. 3
CISC 302 (CIS 1X) Computer Familiarization ......................... 2
BIT 140 (70) Electrical I (3)
BIT 141 (71) Electrical II (3)
TOTAL UNITS REQUIRED .................................................... 17

Suggested Elective: ADT 310 (66)

CERTIFICATE
Plumbing Inspection
CODE #1333

REQUIRED PROGRAM ............................................................ Units
BIT 100 (57) Introduction to Uniform Building Code .................. 3
BIT 102 (58) Reading and Non-Structural Plan Review ............... 3
CMT 310 (51) Materials of Construction .................................. 3
CISC 302 (CIS 1X) Computer Familiarization ......................... 2
BIT 120 (63) Mechanical I: Plumbing Code Requirements ........ 3
TOTAL UNITS REQUIRED .................................................... 14

Suggested Elective: ADT 310 (66)

CERTIFICATE
Soils and Asphalt Construction Inspection
CODE #1337

REQUIRED PROGRAM ............................................................ Units
BIT 100 (57) Introduction to Uniform Building Code ................. 3
BIT 102 (58) Reading and Non-Structural Plan Review ............... 3
CMT 310 (51) Materials of Construction .................................. 3
CISC 302 (CIS 1X) Computer Familiarization ......................... 2
BIT 134 (67) Soils and Asphalt Principles and Inspection ........ 3
TOTAL UNITS REQUIRED .................................................... 14

Suggested Elective: ADT 310 (66)
CERTIFICATE
Steel Construction Inspection
CODE #1336

REQUIRED PROGRAM ............................................................... Units
BIT 100 (57) Introduction to Uniform Building Code ............... 3
BIT 102 (58) Reading and Non-Structural Plan Review ............... 3
CMT 310 (51) Materials of Construction ................................. 3
CISC 302 (CIS 1X) Computer Familiarization ......................... 2
BIT 132 (66) Steel Construction Principles and Inspection ........... 3
TOTAL UNITS REQUIRED ............................................................ 14

Suggested Elective: ADT 310 (66)

CERTIFICATE
Wood Frame Construction Inspection
CODE #1335

REQUIRED PROGRAM ............................................................... Units
BIT 100 (57) Introduction to Uniform Building Code ............... 3
BIT 102 (58) Reading and Non-Structural Plan Review ............... 3
CMT 310 (51) Materials of Construction ................................. 3
CISC 302 (CIS 1X) Computer Familiarization ......................... 2
BIT 130 (65) Introduction to Inspection of Wood Frame Construction .................................. 3
TOTAL UNITS REQUIRED ............................................................ 14

Suggested Elective: ADT 310 (66)

Building Inspection Technology (BIT)

BIT 100
Introduction to Uniform Building Code 3 Units
Formerly: BIT 57
Prerequisite: None
Hours: 54 hours LEC
This basic course is designed to provide background material on which the Uniform Building Code was founded and the legal basis for the code. Emphasis will be placed on the development and proper use of the code.

BIT 102
Reading and Non-Structural Plan Review 3 Units
Formerly: BIT 58
Prerequisite: None
Advisory: BIT 100 and ADT 300.
Hours: 54 hours LEC
This course provides a thorough understanding of the plan reading and non-structural plan review process undertaken by the building departments prior to plan approval.

BIT 104
Uniform Building Code - Fire & Life Safety 3 Units
Formerly: BIT 59
Prerequisite: None
Advisory: CMT 300 or BIT 100.
Hours: 54 hours LEC
The course covers the use and application of Uniform Building Code for construction supervision and inspection.

BIT 110
Engineering and Structural Principles for Building Construction 3 Units
Formerly: BIT 60
Prerequisite: None
Hours: 54 hours LEC
This course covers the basic engineering and structural principles used in the construction industry. This course includes civil engineering plan reading, site layout, mechanics or materials, soil fundamentals, and the construction and inspection of foundations.

BIT 112
Building Inspection Principles for Disabled Access 2 Units
Formerly: BIT 62
Prerequisite: None
Hours: 36 hours LEC
This course is designed to examine the state regulations that govern the design and construction of public buildings, publicly funded living accommodations, hotels and motels, and multi-family dwellings for individuals with mobility and sensory impairments. The course is designed specifically for building inspectors to develop knowledge and skills in disabled access inspections.

BIT 120
Mechanical I/Plumbing Code Requirements 3 Units
Formerly: BIT 63
Prerequisite: None
Advisory: CMT 300.
Hours: 54 hours LEC
This course covers the use and interpretation of the Uniform Plumbing Code, legal and administrative enforcement procedures, field inspection techniques and procedures, methods and techniques used in plumbing installations.

BIT 121
Mechanical II / H.V.A.C. Code Requirements 3 Units
Formerly: BIT 64
Prerequisite: None
Advisory: CMT 300.
Hours: 54 hours LEC
This course covers the use and interpretation of the Uniform Mechanical Code, and legal and administrative enforcement procedures used in heating, ventilating, air conditioning and related installations.
BIT 130  
Introduction to Inspection of Wood Frame Construction  3 Units  
Formerly: BIT 65  
Prerequisite: None  
Advisory: BIT 100.  
Hours: 54 hours LEC  
This is a basic course designed to provide a thorough understanding of wood frame construction requirements for building plan review and inspection. The course will cover inspections for floor, roof and wall framing, and wall bracing for seismic design. Simple beam calculations will be made.

BIT 132  
Steel Construction Principles & Inspection  3 Units  
Formerly: BIT 66  
Prerequisite: None  
Advisory: BIT 100 and CMT 310.  
Hours: 54 hours LEC  
This is a course in steel construction principles for building inspectors. The course will cover materials used in steel construction; quality control and testing; general construction practice and layout; welding principles and inspection; bolting principles and inspection; and Uniform Building Code standards relating to steel construction.

BIT 134  
Soils and Asphalt Principles and Inspection  3 Units  
Formerly: BIT 67  
Prerequisite: None  
Advisory: BIT 100.  
Hours: 54 hours LEC  
This course examines the use of asphalt and soils in building construction for inspectors. The course will cover soils testing and inspection; principles of soils for construction purposes, materials used in asphalt paving; asphalt materials and inspection, and Uniform Building Code standards relating to soils and asphalt.

BIT 136  
Concrete Principles & Inspection  3 Units  
Formerly: BIT 68  
Prerequisite: None  
Advisory: CMT 300.  
Hours: 54 hours LEC  
This course provides technical knowledge of concrete construction and inspection. This course also includes mix design, material testing, aggregate selection, reinforcing bars, handling field problems, crack control, and repairs and restoration.

BIT 138  
Masonry Principles & Inspection  3 Units  
Formerly: BIT 69  
Prerequisite: None  
Advisory: BIT 100 and CMT 310.  
Hours: 54 hours LEC  
This is a course in masonry principles for building inspectors. The course will cover materials used in masonry construction; quality control, sampling and testing; general construction practice and layout; reinforcing steel, grouting of concrete masonry walls; and Uniform Building Code standards relating to masonry.

BIT 140  
Electrical I 3 Units  
Formerly: BIT 70  
Prerequisite: None  
Advisory: CMT 300.  
Hours: 54 hours LEC  
This course covers a review of basic electricity for building inspection. In addition, the course covers the basic electrical code requirements for residential and commercial structures as required in the National Electrical Code and the California Utility Code.

BIT 141  
Electrical II 3 Units  
Formerly: BIT 71  
Prerequisite: None  
Advisory: BIT 140.  
Hours: 54 hours LEC  
This course is an in-depth study of the National Electrical Code (NEC) text adopted into the California Building Standards Code (Title 24). Study will include the most critical aspects of the NEC for electrical wiring systems found in residential, commercial and industrial premises.

BIT 295  
Independent Studies in Building Inspection Technology 1-3 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

BIT 298  
Work Experience in Building Inspection Technology 1-4 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 336)

BIT 299  
Experimental Offering in Building Inspection Technology .5-4 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
Business

See also: Accounting. . . page 46
Business, General . . . page 91
Business, General, Transfer. . . page 91
Computer Information Science. . . page 112
Economics. . page 161
Finance. . . page 196
Management. . . page 242
Marketing . . . page 248
Real Estate . . . page 303
Small Business Management/Entrepreneurship . . . page 93

These CRC program offerings are designed to prepare students for initial entry into careers or for career advancement in various areas of business, as well as for transfer to other colleges and universities.

Career Options
See the corresponding pages for the specific career options in each of the above fields of study.
Business

**DEGREES**
A.A.—Business, General Transfer
A.A.—Business, General
A.A.—Business, Small Business Management/Entrepreneurship
A.A.—Business, Administrative Assistant

**CERTIFICATES**
Business, E-Business and the Internet
Business, Office Assistant
Business, Office Technician
Business, Small Business Management/Entrepreneurship
Applications of Desktop G.I.S. (Business/Marketing emphasis)
(see Geography, page 202)

CRC's business programs are designed to provide an entrance into an exciting career. Many opportunities are available which can lead to immediate employment and/or career advancement.

CRC offers a variety of degrees and certificates to meet students' present and future needs. Whether it is one class or a step toward a degree, there are a variety of options. See the following career options for which CRC provides training and expertise.

**Career Options**
Account Executive; Analyst; Bank Employee; Buyer; Clerk; Data-Entry Clerk; Data-Entry Specialist; Entrepreneur; Financial Planner; Government Service; Insurance Representative; Investment Counselor; Manager; Marketing; Market Research; Office Assistant; Public Administration; Purchasing Agent; Real Estate; Retail/Industrial Sales; Stockbroker; Tax Consultant

There are some self-employment opportunities available in these fields. Some career options may require more than two years of college study.

**Highlights**
Additional training in courses acceptable as electives for civil service occupations
Hands-on experience in the use of computers for business purposes
Opportunities for work experience in local industry and business
Training for small business management/entrepreneurship
A lab with tutorial assistance

**Note to Transfer Students:**
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.
TRANSFER IN BUSINESS ADMINISTRATION

A student transferring with upper division standing to California State University, Sacramento, College of Business Administration, should have completed a minimum of 56, and a maximum of 70, transfer units. The Counseling Center has information regarding requirements, which may vary from the core listed below, at other four-year institutions. The course work may include all of the pre-major core courses and transfer general education requirements.

Each of the following core courses must be completed with a grade of "C" or better:

- Accounting 301 (1A), 311 (1B)
- Computer Information Science CISA 305 (11AX), CISC 320 (14A)
- Economics 302 (1A), 304 (1B)
- Mathematics 341 (43) or 343 (44)
- Statistics 300 (1)

Competency in a foreign language at the 412 (2B) level is required for an International Business major.

In addition to the above core, a student, in consultation with a counselor, should plan a program to meet the transfer general education requirements. See Transfer information on pages 23-29.

DEGREE

A.A.—Business, General, Transfer

CODE #1047

This program provides the courses necessary for a transfer to a four-year college in business while also allowing the student to select courses which fit his/her individual needs and desires.

REQUIRED PROGRAM

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 301 (1A)</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>ACCT 311 (1B)</td>
<td>Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUS 345 (16)/SOC 360 (55)</td>
<td>Law and Society or BUS 340 (18A)</td>
<td>3</td>
</tr>
<tr>
<td>BUS 350 (20)</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>CISA 305 (CIS 11AX)</td>
<td>Beginning Wordprocessing (2)</td>
<td>2</td>
</tr>
<tr>
<td>CISA 315 (CIS 12AX)</td>
<td>Intro to Electronic Spreadsheets (2)</td>
<td>2</td>
</tr>
<tr>
<td>CISC 320 (CIS 14A)</td>
<td>Operating Systems (1) or CISC 310 (CIS 3)</td>
<td>3</td>
</tr>
<tr>
<td>ECON 302 (1A)</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 304 (1B)</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 341 (43)</td>
<td>Calculus for Business and Economics or MATH 343 (44)</td>
<td>4</td>
</tr>
<tr>
<td>STAT 300 (1)</td>
<td>Introduction to Probability and Statistics</td>
<td>4</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED: 31-33

Suggested Electives:

- ACCT 341 (5); BUS 310 (8), 340 (18A), 345 (16); BUSTEC 302 (41), 303 (42); CISC 302 (CIS 1X); CISP 320 (36A); MGMT 362 (24), 372 (23); MKT 300 (20), 330 (21); RE 300 (19).

General Education Graduation Requirements - See page 18.

DEGREE

A.A.—Business, General

CODE #1046

This program provides the courses necessary for a transfer to a four-year college in business while also allowing the student to select courses which fit his/her individual needs and desires.

REQUIRED PROGRAM

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 301 (1A)</td>
<td>Financial Accounting or ACCT 101 (60) Fundamentals of College Accounting</td>
<td>3-4</td>
</tr>
<tr>
<td>BUS 310 (8)</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>BUS 330 (15)</td>
<td>Managing Diversity in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>BUS 345 (16)/SOC 360 (16)</td>
<td>Law and Society or BUS 340 (18A) Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUS 350 (20)</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 362 (24)</td>
<td>Techniques of Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 300 (20)</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>CISC 310 (CIS 3)</td>
<td>Intro to Computer Information Science (3) or Four (4) units to include:</td>
<td>3-4</td>
</tr>
<tr>
<td>CISC 302 (CIS 1X)</td>
<td>JOUR 330 (JOUR 1) Computer Familiariz. (2) and Any two (2) additional units selected from:</td>
<td></td>
</tr>
<tr>
<td>CISA 305 (CIS 11AX), 315 (12AX), 320 (CIS 13A), 330 (CIS 17A), 340 (CIS 15A), 350 (CIS 18A); CISC 320 (CIS 14A), 355 (CIS 16AX)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECON 302 (1A)</td>
<td>Principles of Macroeconomics or ECON 320 (14) Concepts of Personal Finance or ECON 100 (55) Introduction to Economics</td>
<td>3</td>
</tr>
<tr>
<td>General Option:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 498</td>
<td>Work Experience (3) or Three (3) units selected from:</td>
<td>3</td>
</tr>
<tr>
<td>HCD 333 (4A), 334 (4B), 340 (5), 342 (8), 344 (9); MGMT 240 (93A), 242 (93B), 244 (93C), 246 (93D), 248 (93E), 250 (93F), 252 (93G), 254 (93H), 256 (93I), 258 (93J), 260 (93K), 262 (93L), 264 (93M), 266 (93N), 268 (93O), 270 (93P), 272 (93Q), 274 (93R) (3 units from series)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plus six (6) units from one concentration selected from:</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Accounting, Business, Computer Information Science, Management, Marketing, or Real Estate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED: 36-38

Suggested Electives for concentration:

- ACCT 311 (1B), 121 (70), 341 (5); BUS 100 (50), 210 (71A), 212 (71B), 214 (71C), 216 (71D), 218 (71E), 220 (71F), 350 (25), 360 (24), 360.1 (24A), 360.2 (24B); CISA 306 (11BX), 316 (CIS 12BX), 321 (CIS 13B), 331 (CIS 17B); CISC 321 (14B), 356 (CIS 16BX); CISW 380 (CIS 24), 380.1 (CIS 24A), 380.2 (CIS 24B); MGMT 176 (81), 308 (22), 360 (21), 372 (23); MGT 120 (50), 122 (51), 310 (22), 312 (24), 314 (26), 330 (21); RE 110 (81), 120 (82), 130 (83), 300 (19).

General Education Graduation Requirements - see page 18.
CERTIFICATE
Business, Office Assistant
CODE #1492

This certificate is designed to provide students with the tools needed for entry-level office positions. The Office Assistant Certificate is appropriate for students who do not have any clerical work experience. Upon completion of the Office Assistant Certificate, the student would be prepared for an office position.

REQUIRED PROGRAM ........................................................... Units
Core Courses:
BU STEC 306 Computer Keyboarding and Formatting ...... 4
BU STEC 304 (BUS 43) Computer Keyboard Speed-and-Accuracy Building or
Keyboarding speed verification at 40 wpm or better .......... 0-2
BU STEC 101 (BUS 53) Computer Keyboarding: 10-Key .......... 1
CISC 302 (CIS 1X) Computer Familiarization ................. 2
CISA 305 (CIS 11AX) Beginning Word Processing .......... 2
CISA 315 (CIS 12AX) Introduction to Electronic Spreadsheets ..... 2
Office Assistant:
BU STEC 120 (BUS 82) Skills for Today’s Office .......... 1
HCD 362 (6) Work/Life Management ......................... 2
TOTAL UNITS REQUIRED ......................................................... 17-19
**DEGREE**
**A.A.— Business, Small Business Management/Entrepreneurship**

**CODE #1254**

**REQUIRED PROGRAM** ................................................................. Units

**ACCT 301 (1A) Financial Accounting (4)** or
**ACCT 101 (60) Fundamentals of College Accounting (3)** .... 3-4
**BUS 310 (8) Business Communication ....................................... 3
**BUS 330 (15) Managing Diversity in the Workplace .................. 3
**BUS 345 (16)/SOC 360 (16) Law and Society or
**BUS 340 (18A) Business Law ...................................................... 3
**BUS 300 (20) Introduction to Business ....................................... 3
**BUSTEC 302 (BUS 41) Computer Keyboarding or
**Keyboarding speed verification at 25 wpm or better ............... 0-2
**MKT 300 (20) Principles of Marketing ........................................ 3
**ECO N 302 (1A) Principles of Macroeconomics or
**ECON 320 (14)/BUS 320 (14) Concepts of
**Personal Finance or
**ECON 100 (55) Introduction to Economics ............................... 3
**CISC 310 (CIS 3) Intro to Computer Information Science (3) or
**Four (4) units to include: .............................................................. 3-4
**CISC 302 (CIS 1X)/JO 330 (JOUR 1) Computer
**Familiariz. (2) and
**Any two (2) additional units selected from:
**CISA 305 (CIS 11AX), 315 (CIS 12AX), 320 (CIS 13A),
**330 (CIS 17A), 340 (CIS 15A), 350 (CIS 18A); CISC 320
**(CIS 320), 355 (CIS 16AX).
**Small Business Management/Entrepreneurship Option:
**MKT 310 (22) Selling Professionally or
**MKT 314 (26)/CMED 376 (60) Advertising ................................. 3
**BUS 350 (25) Small Business Mgmt/Entrepreneurship (3) or
**Three (3) units selected from: ....................................................... 3
**BUS 210 (71A), 212 (71B), 214 (71C), 216 (71D),
**218 (71E), 220 (71F), 222 (71G), 224 (71H).
**Three (3) units selected from: ....................................................... 3
**BUS 498 (98); HCD 130 (61), 132 (51C), 310 (2), 320, 333 (44A),
**334 (4B), 340 (5), 342 (8), 344 (9), 350 (43), 362 (6).
**TOTAL UNITS REQUIRED ............................................................ 33-37

**Suggested Electives:**
**ACCT 125 (77), 341 (5); MGMT 300 (1), 372 (23), 362 (24);
**MKT 330 (21)

**General Education Graduation Requirements** - see page 18.

**CERTIFICATE:**
**Small Business Management/Entrepreneurship**

**CODE #1254**

**REQUIRED PROGRAM** ................................................................. Units

**BUS 310 (8) Business Communication ................................. 3
**BUS 300 (20) Introduction to Business ................................. 3
**BUSTEC 302 (BUS 41) Computer Keyboarding,
**Keyboarding speed verification at 25 wpm or better ............... 0-2
**MKT 300 (20) Principles of Marketing .................................. 3
**MKT 310 (22) Selling Professionally or
**MKT 330 (21) Internet Marketing ........................................ 3
**BUS 350 (25) Small Business Mgmt/Entrepreneurship (3) or
**Three (3) units selected from: ................................................... 3
**BUS 210 (71A), 212 (71B), 214 (71C), 216 (71D), 218 (71E),
**220 (71F), 222 (71G), 224 (71H).
**CISC 310 (3) Intro to Computer Information Science ............. 3
**TOTAL UNITS REQUIRED ............................................................. 18-20

**CERTIFICATE:**
**Business, E-Business and the Internet**
**CODE #1507**

E-Business is the buying and selling of products and services over the Internet. The Internet is a revolution in communications. In our program we want to provide students with the necessary skills to be able to operate an E-business in a successful manner. This certificate will allow students to gain the essential business knowledge and skills and to apply this knowledge through the use of these new technologies. This is an evolutionary extension of the business world’s history of combining new methods and opportunities into better service for our customers. The student should have a basic understanding of these new technological advances, and understand the importance of getting competent assistance in making the transition in incorporating these new tools into a successful business model for their firm’s needs.

**REQUIRED PROGRAM** ................................................................. Units

**MKT 330 (21) Internet Marketing ............................................. 3
**BUS 300 (20) Introduction to Business ................................... 3
**BUS 360.1 (24A) E-Business, Introduction & Environment or
**CISW 380.1 (24A) E-Business, Introduction & Environment .... 1.5
**Select three to four (3-4) units from
**the following Business courses: ............................................... 3-4
**MGMT 362 (24) Techniques of Management (3)
**BUS 340 (18A) Business Law (3)
**ACCT 301 (1A) Financial Accounting (4)
**BUS 320 (14) Concepts in Personal Finance (3)
**Select two to three (2-3) units from
**the following Technology courses: ......................................... 2-3
**BUS 360.2 (24B) E-Business, Tools & Techniques (1.5) or
**CISW 380.2 (24B) E-Business, Tools & Techniques (1.5)
**CISA 330 (17A) Desktop Publishing (2)
**CISA 331 (17B) Intermediate Desktop Publishing (2)
**CISC 305 (21A) Introduction to the Internet (1)
**CISC 306 (21B) Introduction to Web Page Creation (1)
**Select three (3) units from the following Business courses: ........ 3
**BUS 365 (21) Selecting Integrated Business Software (2)
**BUSTEC 110 (52) Administrative Procedures (3)
**BUS 320 (14) Concepts in Personal Finance (3)
**BUS 210 (71A) The Business Plan (1)
**BUS 212 (71B) Marketing for Small Business (1)
**BUS 214 (71C) Financing for Small Business (1)
**BUS 216 (71D) Essential Records for the Small Business (1)
**BUS 218 (71E) Management Skills for the Small Business (1)
**BUS 220 (71F) Retailing & Merchandising
**for the Small Business (1)
**BUS 350 (25) Small Business Management/Entrepreneurship (3)

**TOTAL UNITS REQUIRED ............................................................ 15.5-17.5**

CO SUM NES RIVER COLLEGE 2005 - 2006

Business 93
Business (BUS)

BUS 100
English for the Professional 3 Units
Formerly: BUS 100, Business English
Prerequisite: ENGW 51 and ENGRD 110 or ESLW 320 and ESLR 320 with a grade of “C” or better.
Advisory: BUSTEC 302 and 303.
Hours: 54 hours LEC
This course is designed to prepare the student for business communication. It presents principles of correct and effective English usage as applied in business. Included are skills and techniques of written communication, sentence structure, word usage, punctuation, spelling, business vocabulary, use of standard references, and business-document formatting. Emphasis is placed on critical thinking and effective writing techniques through analyzing written communication and composing and organizing paragraphs into effective business documents. Computer skills are needed to format business documents and search the Internet for information. Proofreading skills are stressed throughout the course. The course is recommended for all business majors during their first semester.

BUS 105
Business Mathematics 3 Units
Formerly: BUS 60
Prerequisite: None
Hours: 54 hours LEC
This course is a review of basic mathematical skills and introduces equations and formulas in solving for unknowns. Applications of mathematics in business include such areas as banking, commercial discounts, retail and wholesale markup-markdown, payroll computations, simple and compound interest, bank discount, present value, taxes, insurance, depreciation, and financial statements. Recommended for every major in business.

BUS 170
Introduction to Insurance: Life Agents 3 Units
Formerly: BUS 85A
Prerequisite: None
Hours: 54 hours LEC
This introductory course gives an overview of the insurance industry with specific coverage in risk and risk management, structure of the insurance industry, legal concerns, life, health disability, income, and ethics. Course content satisfies State of California Life Agent requirements.

BUS 171
Introduction to Insurance: Fire & Casualty 3 Units
Formerly: BUS 85B
Prerequisite: None
Hours: 54 hours LEC
This introductory course gives an overview of the insurance industry with specific coverage in risk and risk management, structure of the insurance industry, legal concerns, personal fire and casualty, commercial property and casualty, worker’s compensation, health insurance, and ethics. Course content satisfies State of California Fire and Casualty examination requirements.
BUS 220  
Retailing and Merchandising for the Small Business  
Formerly: BUS 71F  
Prerequisite: None  
Hours: 18 hours LEC  
This course will emphasize retailing concepts, such as inventory control and turnover rates, selecting merchandise sources, using trade and cash discounts, pricing, markup and markdown, and shrinkage control. Students will also learn how to develop a merchandising plan, inventory control system, and assess consumer behavior and demographics.

BUS 222  
Going International  
Formerly: BUS 71G  
Prerequisite: None  
Hours: 18 hours LEC  
This intensive course overviews the following topics for the small business entrepreneur who is considering going international: the international business environment, strategic considerations, and managing in a multinational environment.

BUS 224  
Customer Service  
Formerly: BUS 71I  
Prerequisite: None  
Hours: 18 hours LEC  
This course is a study of the principles involved in building an effective customer service team. Customer service activities in business, government, and other service industries will be examined in terms of the value added to the organization. Improved customer services will be emphasized.

BUS 230  
QuickBooks® for Small Business  
Formerly: BUS 71M  
Prerequisite: None  
Hours: 18 hours LEC  
This class will emphasize the use of QuickBooks® for Windows to aid the small business operator in creating financial statements and other financial reports. The system is computer based and presented in a user friendly method.

BUS 295  
Independent Studies in Business  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

BUS 299  
Experimental Offering in Business  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

BUS 300  
Introduction to Business  
Formerly: BUS 20  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC  
This course provides a survey of all business areas, including Accounting, Law, Computer Information Science, Management, Marketing, Economics and Finance. The course is designed to be taken by all beginning students interested in business. It is a core requirement for business majors. This course provides an overview often very helpful in assisting students’ selection of a specific career in the field of business.

BUS 310  
Business Communications  
Formerly: BUS 100  
Prerequisite: BUS 100. Grade of “C” or better required to meet prerequisite.  
Advisory: Ability to key 30 or more words a minute and use a current office-level word processing program.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is designed to emphasize the use of communication theory in planning and composing various types of effective business letters and reports. The course stresses style, appearance, grammar, punctuation, tone, vocabulary and reader appeal. Interpersonal communication and listening, cross-cultural communication, electronic communication technology, and ethical and legal guidelines are included. A formal report with graphics is required.

BUS 320  
Concepts in Personal Finance  
Formerly: BUS 14  
Prerequisite: None  
Advisory: BUS 105  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is designed to assist individuals in analyzing their financial affairs. Elements and conceptual basis of financial planning, analysis, and decision making in areas of budgeting, taxes, borrowing, money management, insurance, investments, and retirement will be examined with an emphasis on principles to develop students’ economic decision making. Students will be using mathematical concepts as well as reading and interpreting written and oral instructions. The course provides a solid base for a career in financial planning services. This course is the same as ECON 320, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

BUS 330  
Managing Diversity in the Workplace  
Formerly: BUS 15  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course examines the leadership skills and abilities needed to manage a multicultural workforce. A primary focus is placed upon the workplace impact of various historical, social, and cultural experiences/perspectives related to gender, age, ethnicity, and disability. Workforce issues related to the diversity of the American consumer and global consumer impact on the United States are analyzed.
BUS 340
Business Law 3 Units
Formerly: BUS 18A
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
(CAN BUS 8)
Hours: 54 hours LEC
This course is an introductory coverage of the law in its relationship
to the environment of business. The course covers the American legal
system as an instrument of economic, social, and political control. It
stresses basic business torts, crime and business, contracts and sales
transactions, agency, legal structures of business, government
regulation and property rights. For more detailed coverage of some
of these topics, see BUS 341.

BUS 341
Business Law 3 Units
Formerly: BUS 18B
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
General introduction to the legal concepts and principles of real
property and landlord/tenant; bankruptcy, consumer law, corpora-
tions, securities law and corporate social-ethical responsibility; labor
employment law, environmental law, antitrust law and business-
related constitutional law.

BUS 345
Law and Society 3 Units
Formerly: BUS 16
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introduction to the American legal system
emphasizing the nature, purpose, sources and functioning of
American law but including some comparative analysis of other
historical and contemporary legal systems. Emphasis is placed on
the evolution of legal concepts as a reflection of the social environ-
ment and the role of the judiciary. A theoretical rather than practical
viewpoint is used through analysis of selected cases and legislation
in the areas of individualism, socioeconomic groups, the family, the
economy, crime, criminal procedure and punishment, church and
state separation, the environment, and torts. This course should not
be taken in place of BUS 340 when required. This course is the same
as SOCSC 360, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

BUS 350
Small Business Management/
Entrepreneurship 3 Units
Formerly: BUS 25
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This class provides an overview of the various elements involved in
starting and operating a small business. It introduces such topics as
developing a business plan, finding financial resources, developing
personal and business goals, meeting legal requirements, understand-
ing marketing concepts, and other topics of interest to the entrepre-
neur.
BUS 365  
Selecting Integrated Business Software  
Formerly: BUS 21  
Prerequisite: BUS 300. Grade of “C” or better required to meet prerequisite.  
Advisory: CISC 310.  
Course Transferable to CSU  
Hours: 36 hours LEC  
This course introduces students to Enterprise Resource Planning (ERP) software systems. It helps decision makers select the appropriate software to improve business processes in diverse organizations, and it addresses hardware and network requirements for implementing ERP systems. This course provides managers with the ability to better manage change within their organizations while providing an overview of best practices integrated into ERP systems. It is designed to help business decision makers integrate ERP technology with a minimal technical background.

BUS 480  
Honors Seminar in Business  
Formerly: BUS 47D  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
Honors Seminars in Business are special one-unit intensive courses for academically accomplished students or those with the potential for high academic achievement. In these seminars, students will study topics in the movements, trends and philosophies found in the business. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as HONOR 320. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

BUS 490  
Individualized Projects in Business  
Formerly: BUS 47  
Prerequisite: None  
Advisory: At least two semesters of successful work leading to an Associate Degree or Certificate in Accounting, Business, Computer Information Science, Finance, Management, Marketing, Office Administration or other related field.  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
This course is designed to help the student focus skills previously learned in an area of business. The student, with the help of the instructor, will produce a project that utilizes a variety of skills. The student will describe a problem, plan a process to arrive at a solution, work with the instructor to secure those resources necessary to complete the project, submit progress reports on a regular basis, and present a finished product. This class may be required for some degrees or certificates.

BUS 495  
Independent Studies in Business  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

BUS 498  
Work Experience in Business  
Formerly: BUS 98  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

BUS 499  
Experimental Offering in Business  
Formerly: BUS 49  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

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**Business Technology (BUSTEC)**

BUSTEC 101  
Computer Keyboarding: 10-Key  
Formerly: BUS 53  
Prerequisite: None  
Hours: 18 hours LEC  
This course introduces the numeric keypad and develops the ability to key information into a computer with speed and accuracy.

BUSTEC 110  
Administrative Procedures  
Formerly: BUS 47  
Prerequisite: None  
Advisory: BUSTEC 302 or equivalent, BUSTEC 303, and BUS 100.  
Hours: 54 hours LEC  
This course develops skills associated with the business professional, including specialized procedures in electronic workplaces. Students learn critical thinking, problem solving, teamwork, supervision skills, administrative procedures, and information-processing technologies. Specific areas include the 21st century workplace; business technology; business communication; records management; meetings, travel, and financial documents; and the business professional’s career. The course emphasizes developing a work-site team through effective communications, dependability, interpreting various management responsibilities, and motivational techniques. Recommended for all management information science and business students.
BUSTEC 120
Skills for Today’s Office  1 Unit
Formerly: BUS 82
Prerequisite: None
Advisory: BUSTEC 302 or keyboarding speed verification at 25 wpm or better, and CISA 305 and CISA 315.
Hours: 18 hours LEC; 18 hours LAB
This is a course designed to build upon previous word processing and spreadsheet training in the computer science/business area and to complete the training necessary to perform effectively and become a skilled employee in a computerized office. The course includes preparing and processing information: word processing, spreadsheet, and database documents; communicating via fax, e-mail, voicemail, Internet, and telephone; and using copiers and other office equipment. Students will simulate office situations. This course emphasizes activities and techniques that enhance competencies needed in today’s office.

BUSTEC 299
Experimental Offering in Business Technology  .5-4 Units
Prerequisite: None
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

BUSTEC 302
Computer Keyboarding  2 Units
Formerly: BUS 41
Prerequisite: None
Advisory: ENGRD 16 or ESLR 320.
Course Transferable to CSU
Hours: 36 hours LEC
This intensive introductory computer-keyboard course emphasizes operating alphabetic, numeric, and symbol keys by touch. It includes computer-keyboard techniques, speed-and-accuracy development, proofreading proficiency, communication skills, essential computer-keyboard information, and use of the features of a current office-level word processing program. Workplace etiquette and business protocol are introduced and reinforced throughout the course. This course is not open to students who have received credit for BUSTEC 306. See “Cross-Listed Courses” in the catalog.

BUSTEC 303
Computer-Keyboard Formatting  2 Units
Formerly: BUS 42
Prerequisite: BUSTEC 302. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC
This intensive computer-keyboard formatting course emphasizes application of the following formatting concepts: horizontal and vertical centering, business-letter styles, memorandums, tables, and reports. The course includes developing proofreading proficiency, reinforcing communication skills, developing speed and accuracy, and using the features of a current office-level word processing program. Workplace etiquette and business protocol are reinforced throughout the course. Students who feel that they have skills equivalent to the prerequisite are encouraged to apply for credit by examination for BUSTEC 302. This course is not open to students who have received credit for BUSTEC 306. See “Cross-Listed Courses” in the catalog.

BUSTEC 304
Computer Keyboard Speed-and-Accuracy Building  2 Units
Formerly: BUS 43
Prerequisite: BUSTEC 302. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC
This course builds upon previous computer-keyboard skills and stresses speed-and-accuracy techniques. It includes skills assessment and individually prescribed improvement plans. The student will be reading and interpreting written and oral instructions. Students who feel that they have skills equivalent to the prerequisite are encouraged to apply for credit by examination for BUSTEC 302. This course may be taken two times for credit.

BUSTEC 306
Computer Keyboarding and Formatting  4 Units
Prerequisite: None
Advisory: ENGRD 16 or ESLR 320.
Course Transferable to CSU
Hours: 72 hours LEC
This introductory computer keyboarding/formatting course emphasizes operating alphabetic, numeric, and symbol keys by touch. It includes computer-keyboard techniques, speed-and-accuracy development, proofreading proficiency, communication skills, essential computer-keyboard information, and use of the features of a current office-level word processing program. The formatting portion of the course emphasizes applications of the following formatting concepts: horizontal and vertical centering, business-letter styles, memorandums, tables and reports. Workplace etiquette and business protocol are introduced and reinforced throughout the course. This course is not open to students who have received credit for BUSTEC 303. See “Cross-Listed Courses” in the catalog.

BUSTEC 499
Experimental Offering in Business Technology  .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)
Chemistry

DEGREE A.S.—Chemistry

The Chemistry Program at CRC consists of:

- A series of chemistry courses designed to meet transfer requirements for chemical, physical and biological science majors
- A series of courses intended for students majoring in fields other than chemistry, biology, or physical science
- A course designed specifically for students who require preparation or review of the more basic chemical concepts

All chemistry courses at CRC include a practical component where students conduct hands-on chemical experimentation in a modern, well-equipped laboratory.

Career Options
Biochemist; Chemist; Pharmacist; Chemical Engineer; Chemical Technology; Physician; Dentist; Veterinarian; Allied Health Professional; Biologist; Physicist; Geologist; Geochemist; Oceanographer

Some career options require more than two years of college study. Classes beyond the associate degree may be required to fully prepare students for transfer to a university program.

Highlights
An outstanding chemistry faculty striving to maintain an excellent and well-respected chemistry program
Ample contact with the instructor and the relaxed atmosphere that only a limited class size can offer
A Mathematics, Engineering and Science Achievement (MESA) program

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

A locker deposit is required to participate in all chemistry classes that include laboratory. The deposit is payable at the Business Office prior to the first laboratory class meeting. The deposit is refundable if there is no breakage and the locker is checked in at the end of the semester. If chemical glassware is broken or missing, the charge will be deducted from the deposit.

DEGREE A.S.—Chemistry
CODE #1402

This degree is designed to meet common lower division requirements for a major in chemistry.

REQUIRED PROGRAM ............................................................... Units
CHEM 400 (1A) General Chemistry ............................................. 5
CHEM 401 (1B) General Chemistry ............................................. 5
CHEM 420 (12A) Organic Chemistry ............................................. 5
CHEM 421 (12B) Organic Chemistry ............................................. 5
MATH 400 (9A) Calculus I ....................................................... 5
MATH 401 (9B) Calculus II ..................................................... 5
MATH 402 (9C) Calculus III ................................................... 5
PHYS 411 (4A) Mechanics of Solids and Fluids ......................... 4
PHYS 421 (4B) Electricity and Magnetism ................................. 4
PHYS 431 (4C) Heat, Waves, Light and Modern Physics .......... 4
TOTAL UNITS REQUIRED ............................................................. 47

Associate of Science Degree (A.S.) may be obtained by completion of the Required Program, plus General Education Requirements, plus sufficient electives to meet a 60-unit total.

General Education Graduation Requirements - See page 18.
Chemistry (CHEM)

CHEM 300
Beginning Chemistry 4 Units
Formerly: CHEM 51
Prerequisite: MATH 100 or MATH 102 or equivalent. Grade of “C” or better required to meet prerequisite.
Advisory: Completion of or concurrent enrollment in MATH 120.
Course Transferable to CSU
Hours: 54 hours LEC ; 54 hours LAB
This course covers an introduction to fundamental chemical concepts, problem-solving and laboratory skills. It is designed for students needing a comprehensive review of or intensive preparation in chemistry. This course is primarily intended to prepare students for CHEM 400.

CHEM 305
Introduction to Chemistry 5 Units
Prerequisite: MATH 100 or 102 with a grade of “C” or better.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 72 hours LEC ; 54 hours LAB
This is a general chemistry course intended for students majoring in the allied health fields, such as nursing, physical therapy, dental hygiene, veterinary technology, and environmental technology. This course emphasizes the fundamental principles of chemistry: types of matter, physical and chemical processes, atomic and molecular structure, stoichiometry, properties and theories of gases, properties of solutions, acids and bases, equilibria, and an introduction to organic functional groups as they pertain to medicine or biological systems.

CHEM 306
Introduction to Chemistry 5 Units
Prerequisite: CHEM 305 with a grade of “C” or better.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 72 hours LEC ; 54 hours LAB
The organic chemistry portion of this course emphasizes the major classes of organic compounds: their structure, physical and chemical properties related to biological systems, and nomenclature. Some clinical and pharmacological aspects are also discussed. The biochemical portion of this course emphasizes the structure and function of carbohydrates, proteins, lipids, and nucleic acids in chemical systems. Special topics include enzymes and enzyme regulation, drugs their bioavailability and metabolism.

CHEM 307
Introduction to Chemistry 4 Units
Formerly: CHEM 2A
Prerequisite: MATH 100 or MATH 102 or equivalent. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU; UC - See Counselor
(CAN CHEM 6)
(chem 307 + 308 = CAN CHEM SEQ B)
Hours: 54 hours LEC ; 54 hours LAB
This is a general chemistry course intended for students majoring in the allied health fields, such as nursing, physical therapy, dental hygiene, veterinary technology, and environmental technology. This course emphasizes the fundamental principles of chemistry: types of matter, physical and chemical processes, atomic and molecular structure, stoichiometry, properties and theories of gases, properties of solutions, acids and bases, equilibria, and an introduction to organic functional groups as they pertain to medicine or biological systems.

CHEM 308
Introduction to Chemistry 4 Units
Formerly: CHEM 2B
Prerequisite: CHEM 307. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU; UC - See Counselor
(CAN CHEM 8)
(cheM 307 + 308 = CAN CHEM SEQ B)
Hours: 54 hours LEC ; 54 hours LAB
The organic chemistry portion of this course emphasizes the major classes of organic compounds: their structure, physical and chemical properties related to biological systems, and nomenclature. Some clinical and pharmacological aspects are also discussed. The biochemistry portion of this course emphasizes the structure and function of carbohydrates, proteins, lipids and nucleic acids in biological systems. Special topics include enzymes and enzyme regulation, drugs their bioavailability and metabolism.

CHEM 321
Environmental Chemistry 3 Units
Formerly: CHEM 7
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course explores the interrelationship of human beings and the surrounding environment with regard to the chemical substances that are encountered in everyday life. The role of chemistry in both creating environmental problems as well as providing solutions to environmental problems will be examined. Students will learn how chemicals released to the environment can have adverse effects on ecosystems and human health. Chemical and physical methods of controlling and remediating air, water, and soil pollutants will be covered. The role of environmental regulations in preventing and mitigating environmental degradation will also be covered. By the completion of this course, students will have acquired skills and techniques that can be utilized to examine environmental problems and their proposed solutions.

CHEM 322
Environmental Chemistry Laboratory 1 Unit
Formerly: CHEM 7L
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LAB
This course provides “hands-on” opportunities for students to collect and analyze data about chemicals found in the environment. Students will learn how to collect and analyze soil, water and air samples for environmental quality parameters and the presence of pollutants. Analysis of samples will involve the use of readily available field test equipment. Field trips for sample collection will take place during laboratory periods or at arranged times. There may also be field trips to environmental analytical laboratories.
CHEM 332  
The Chemistry of Natural Products  
4 Units  
Formerly: CHEM 11  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC ; 54 hours LAB  
This course covers an examination of economically important chemicals obtained from natural sources, with special emphasis on the essential oils of aromatic plants. Topics include the basic principles of organic chemistry; the structural classification of natural products; the stereochemical perception of aroma and flavor; the extraction, chemistry, and quality control of botanical essential oils; and the active-component phytochemicals of selected medicinal plants. Practical laboratory exercises (including essential oil distillation, phytochemical extraction and preparation of herbal balms, creams, soaps, and personal fragrances) will support the lecture portion of the course.

CHEM 400  
General Chemistry  
5 Units  
Formerly: CHEM 1A  
Prerequisite: MATH 120 and CHEM 300 (or one year of high school chemistry). Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU; UC - See Counselor  
(CAN CHEM 2)  
(HOURS: 54 hours LEC ; 108 hours LAB)  
This is a general college chemistry course intended for students majoring in the scientific disciplines including chemistry, biology, physics, geology and engineering. This course emphasizes the fundamental principles of chemistry. Topics include chemical measurement, physical and chemical processes, nomenclature, atomic structure, quantum theory, stoichiometry, molecular structure, bonding theory, physical properties of gases, thermochemistry, modern materials, and properties of solutions.

CHEM 401  
General Chemistry  
5 Units  
Formerly: CHEM 1B  
Prerequisite: CHEM 400. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU; UC - See Counselor  
(CAN CHEM 4)  
(HOURS: 54 hours LEC ; 108 hours LAB)  
This course is a continuation of the two-semester series in general college chemistry. Topics presented in the course include kinetics, equilibrium, acid/base chemistry, thermodynamics, electrochemistry, radiochemistry, coordination chemistry, and an introduction to organic chemistry. Laboratory exercises include qualitative and quantitative analysis techniques.

CHEM 410  
Quantitative Analysis  
5 Units  
Formerly: CHEM 5  
Prerequisite: CHEM 401. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
(CAN CHEM 12)  
Hours: 54 hours LEC ; 108 hours LAB  
This course focuses on the principles and techniques involved in fundamental gravimetric and volumetric analyses and separation techniques including methods of data analysis, precipitation, acid/base neutralization, complex formation, oxidation-reduction, spectroscopy and chromatography. Also included is an introduction to modern instrumental analytical procedures with emphasis on optical, electrochemical and chromatographic techniques. Emphasis throughout the course will be on sampling, calibration and method validation procedures.

CHEM 420  
Organic Chemistry  
5 Units  
Formerly: CHEM 12A  
Prerequisite: CHEM 401. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 54 hours LEC ; 108 hours LAB  
This course surveys the principles of organic chemistry intended for chemistry and biological science majors or those students interested in the medical and related professions. Units covered include an in-depth study of the physical and chemical properties of organic compounds with emphasis on molecular structure, reactivity, and organic synthesis.

CHEM 421  
Organic Chemistry  
5 Units  
Formerly: CHEM 12B  
Prerequisite: CHEM 420. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 54 hours LEC ; 108 hours LAB  
This course is a continuation of CHEM 420. Units covered include an in-depth study of the physical and chemical properties of aromatic compounds, aldehydes, ketones, amines, carboxylic acids and its derivatives. A special emphasis is placed on structural analysis/elucidation of these compounds by the various spectroscopic techniques. In addition, an introduction to pericyclic reactions and biomolecules is presented.

CHEM 495  
Independent Studies in Chemistry  
1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

CHEM 499  
Experimental Offering in Chemistry  
.5-4 Units  
Formerly: CHEM 49  
Prerequisite: None  
Course Transferable to UC/CSU; UC - See Counselor  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
Communication Studies

DEGREE  A.A.—Communication, Organizational Communication

CERTIFICATE  Applied Communication Skills

The role of communication in the workplace today has grown in importance, and workplace communication competencies are increasingly in demand. The number one skill identified by employers is the ability to communicate clearly in both oral and written form. The number two skill identified by employers as necessary is the ability to work effectively as a member of a team. A competitive workplace requires employees to exercise competence in interview skills, professional presentations, written communication, group problem solving, intercultural interactions, conflict management, and analytical reasoning. This transferable degree gives students a foundation that can be used in any career path, increasing one's preparation for employment and transferability to a university.

Career Options
Public Information; Human Resources Development; Corporate Training; Motivational Speaking; Political Speech Writing; Radio & Television; Advertising; Public Relations; College & University Instruction; Organizational Administration; Negotiation & Mediation Services; Writing for Publication; Personnel Management; Customer Service; Social Science Research; Corporate Imaging; Campaign Management; Marketing; Community Relations; Grant Writing

Highlights
Degree and Certificate program
Transfer requirements simultaneously met while pursuing degree

For additional program information, contact any of our full time faculty:
Colette (Cole) Harris  (916) 691-7202
Dan DuBray  (916) 691-7493
Georgine Hodgkinson  (916) 691-7172
Chris Wagner  (916) 691-7336

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.

Many of the courses required for this degree can also be used to fulfill transfer general education requirements for the CSU system.

In the Communication Studies program, our courses are multidisciplinary in nature. Communication Studies offers students an opportunity to explore coursework in oral communication, critical thinking, social sciences, multicultural studies, and living skills.
DEGREE
A.A.— Communication, Organizational Communication
CODE #1348

The role of effective communication in the workplace today has grown in importance, and workplace communication competencies are increasingly demanded by all economic sectors including small businesses, large organizations, international corporations, and government agencies. The number one skill identified by employers is the ability to communicate clearly in both oral and written form. The number two necessary skill identified by employers is the ability to work effectively as a member of a team. A competitive workplace requires employees to exercise competencies in professional presentations, written communication, group problem solving, intercultural interactions, conflict management, interview skills, and analytical reasoning. This transferable degree gives students a foundation that can be used in any career path, increasing an individual’s preparation for employment, and transferability to a university.

REQUIRED PROGRAM ............................................................... Units
Core Courses:
COMM 301 (1) Introduction to Public Speaking ....................... 3
COMM 311 (3) Argumentation and Debate ............................... 3
COMM 321 (10) Interpersonal Communication ......................... 3
CMED 300 (5) JOUR 310 (10) Mass Media and Society ............. 3

Communication in Organizations ............................................. 6
COMM 341 (13) Organizational Communication (3)
And one (1) of the following:
COMM 315 (18) Persuasion (3)
BUS 330 (15) Managing Diversity in the Workplace (3)
MGMT 360 (21) Management Communication (3)

Written Communication ............................................................. 6
ENWR 300 (ENGL 1A) College Composition (3)
And one (1) of the following:
ENWR 302 (ENGL 1C) Adv Composition & Critical Thinking* (3)
(* 2nd semester writing requirement for CSU)
BUS 310 (8) Business Communication (3)
PHIL 328 (2) Critical Reasoning and Composition (3)

Communication for a Diverse World .......................................... 6-7
COMM 325 (14) Intercultural Communication (3)
And one transfer level course of foreign language or
American Sign Language (3-4)

Communication in Groups and Teams ...................................... 6
COMM 331 (15) Group Discussion (3)
And one (1) of the following:
COMM 373 (4) Forensics Laboratory (3)
TA 476 (44) Fundamentals of Repertory Production (3)
JOUR 300 (20A) Newswriting and Reporting (3)
JOUR 301 (20B) Advanced Newswriting and Reporting (3)
Or any department approved internship
TOTAL UNITS REQUIRED ............................................................ 36-37

General Education Graduation Requirements - See page 18.

CERTIFICATE
Applied Communication Skills
CODE #1356

This certificate program provides the communication skills necessary for entry-level positions in business, and helps improve managerial attributes with an emphasis on abilities to communicate effectively, efficiently and appropriately in organizational settings. Students with this certificate are prepared to design messages based on analysis of the intended audience and cultural context, apply effective listening skills, analyze persuasive messages, and demonstrate effective oral presentation skills. The certificate prepares students with the skills necessary to demonstrate proficiency in different communication settings by identifying and appraising factors that affect organizational communication structures in small group, interpersonal and intercultural settings.

REQUIRED PROGRAM ...................................................................... Units
COMM 301 (1) Introduction to Public Speaking ....................... 3
COMM 341 (13) Organizational Communication ...................... 3
COMM 325 (14) Intercultural Communication ......................... 3
COMM 331 (15) Group Discussion ............................................ 3
Plus one (1) additional course selected from: ......................... 3
COMM 315 (18) Persuasion (3)
COMM 311 (3) Argumentation and Debate (3)
COMM 361 (9) The Communication Experience (3)
COMM 321 (10) Interpersonal Communication (3)
TOTAL UNITS REQUIRED .......................................................... 15

Communication Studies (COMM)

COMM 301
Introduction to Public Speaking 3 Units
Formerly: COMM 1
Prerequisite: ENWR 51 with a grade of “C” or better.
Course Transferable to UC/CSU
(CAN SPCH 4)
Hours: 54 hours LEC

This course prepares students to speak in a variety of rhetorical situations: as college students, as employees, as opinion leaders in the community. The course is designed to assist students in developing effective delivery, ethical research methodology, analytical thinking and listening skills, organization and outlining skills, and appropriate presentation skills. Emphasis is on researching, preparing, organizing, and presenting a variety of speeches for different audiences. Video taping equipment may be used as an aid to the student’s self-analysis and improvement. Access to a computer with online capabilities may be required and computer access is available on campus.
COMM 311
Argumentation and Debate 3 Units
Formerly: COMM 3
Prerequisite: ENGWR 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
(CAN SPCH 6)
Hours: 54 hours LEC
This course introduces students to argumentation, critical evaluation of evidence, and reasoning in the context of debate. Intended as a practical course, the fundamentals of proposition analysis, case building and dissent are discussed and applied.

COMM 315
Persuasion 3 Units
Formerly: COMM 18
Prerequisite: ENGWR 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course presents fundamental theories and techniques of persuasion as they occur in various communication contexts. Students develop critical thinking skills by examining message production, analyzing messages and exploring the social impact of persuasion.

COMM 321
Interpersonal Communication 3 Units
Formerly: COMM 10
Prerequisite: ENGWR 51. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
(CAN SPCH 8)
Hours: 54 hours LEC
Explore communication skills associated with satisfying relationships. Using simulations and structured exercises, students experiment with various approaches to successful communication in person-to-person situations. This course strives to increase an individual’s personal communication effectiveness through heightened awareness and greater skill as both a sender and receiver of shared messages.

COMM 325
Intercultural Communication 3 Units
Formerly: COMM 14
Prerequisite: ENGWR 51 or the equivalent. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This course introduces students to the challenges and promises of intercultural communications in the United States. Variations and commonalities in communication patterns across cultures are examined as well as processes and outcomes among persons of different group-based experiential backgrounds. Practical application of factors which influence communication among individuals of different cultures is emphasized.

COMM 331
Group Discussion 3 Units
Formerly: COMM 15
Prerequisite: ENGWR 51 with a grade of “C” or better.
Course Transferable to UC/CSU; UC - See Counselor
(CAN SPCH 10)
Hours: 54 hours LEC
This course is designed to increase students’ understanding of group communication and to prepare students to function more effectively in various types of groups, as college students, employees, as members in the community. The course is designed to assist students in developing an understanding of how group communication is uniquely different from other communication. Oral communication techniques within group settings will be analyzed in depth and assignments will include oral presentations (individual and group). The course will enhance students’ effectiveness in the small group dynamics of roles, functions, leadership and norms. Problem-solving and decision-making skills are emphasized through simulations and discussion. Video taping equipment may be used as an aid to the student’s self-analysis and improvement. Access to a computer with online capabilities may be required and computer access is available on campus.

COMM 341
Organizational Communication 3 Units
Formerly: COMM 13
Prerequisite: ENGWR 101. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 54 hours LEC
This course is designed to allow students to examine both theoretical and pragmatic essentials of effective organizational messages from preparation and presentation to effective observation and analysis. Students will explore the dynamics of organizational communications in various situations including focus groups, quality control groups, ad hoc committees, conflict negotiation teams and problem solving/decision making groups. The roles of internal and external messages on the communication process and organizational effectiveness will be examined and analyzed.

COMM 361
The Communication Experience 3 Units
Formerly: COMM 9
Prerequisite: ENGWR 51 with a grade of “C” or better.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This course introduces students to the fundamental concepts necessary for effective communication in a variety of settings with a variety of audiences. Special emphasis is placed on practical experiences within groups, facilitation of interpersonal relationships, and methods of conflict management. As part of this course, students are required to actively participate in groups and deliver oral presentations, both individually and in groups. Video taping equipment may be used as an aid to the student’s self-analysis and improvement. Access to a computer with online capabilities may be required and computer access is available on campus.
COMM 363
Introduction to Communication Theory  3 Units
Formerly: COMM 8
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course will introduce the student to the symbolic process of human communication through the study of basic communication models, fundamental theory, and relevant research findings. Emphasis will be placed on achieving an understanding of the communication process, and the process through which researchers in the field add to their existing body of knowledge.

COMM 373
Forensics Laboratory  2 Units
Formerly: COMM 4
Prerequisite: None
Course Transferable to CSU
Hours: 108 hours LAB
A laboratory class for students who wish to participate in intercollegiate forensics competition. Areas of interest include debate, persuasion, oral interpretation, expository speech, impromptu speaking and readers’ theatre. May be taken four times for credit.

COMM 480
Honors Seminar:
Political Campaign Communication  3 Units
Formerly: COMM 20H
Prerequisite: ENGWR 300 with a grade of “C” or better.
Course Transferable to UC/CSU
Hours: 54 hours LEC
What do pundits, politicians and the public have in common? The ability to impact political campaign communication. This seminar-style course will introduce students to the effects of political campaign communication on public opinion and election results. Using timely data, students will evaluate news media, debate presidential debates, and analyze campaign messages using qualitative and quantitative approaches. This course is intended for the honor student interested in learning about political communication, rhetorical criticism, and techniques for writing for academic audiences. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as HONOR 340, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

COMM 494
Topics in Communication Studies .5-4 Units
Formerly: COMM 12
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
A survey of contemporary communication topics that allows students to choose a particular option from several. Possible options may include, but are not limited to: extemporaneous speaking, intercultural communication in the workplace, communication in the classroom, conflict, principles of visual communication, readers’ theatre, parliamentary procedure and decision making techniques. Students may receive one unit of credit in each topic area. Consult class schedule for specific topics offered.

COMM 495
Independent Studies in Communication Studies  1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

COMM 499
Experimental Offering in Communication Studies .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Communications Media

AREAS OF STUDY

<table>
<thead>
<tr>
<th>Field</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising / Public Relations</td>
<td>50</td>
</tr>
<tr>
<td>Broadcast Journalism</td>
<td>84</td>
</tr>
<tr>
<td>Digital Media</td>
<td>150</td>
</tr>
<tr>
<td>Film and Media Studies</td>
<td>194</td>
</tr>
<tr>
<td>Journalism</td>
<td>238</td>
</tr>
<tr>
<td>Radio Production</td>
<td>302</td>
</tr>
<tr>
<td>Television Production</td>
<td>319</td>
</tr>
</tbody>
</table>

This instructional program is designed to train students for skills needed in jobs requiring basic knowledge of communications media. Training includes classes in radio, television and film, broadcasting, cinematography, broadcast and print journalism, multimedia/DVD production and design. Students will be prepared for entry-level jobs in education, government, broadcasting, advertising and public relations, as well as having a base for transfer to a four-year institution.

The Communications Media program consists of a core curriculum with options in specific areas of interest. A knowledge of keyboarding is recommended.

The Associate of Arts Degree can be obtained upon completion of a total of 60 units, including units in the major, general education requirements and electives as needed.

Career Options

See the corresponding pages for the specific career options in each of the above fields of study.

Note:

Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

Communications Media (CMED)

CMED 110
Automated Radio 3 Units
Formerly: CMED 86
Prerequisite: None
Advisory: CMED 312; COMM 301 or CMED 315.
Hours: 18 hours LEC; 108 hours LAB
This course examines background and techniques used in modern automated radio systems for radio broadcasting, including announcing, music formats, traffic, sales, and management in relation to an automated facility. Students will study the operation of equipment and corrections of its malfunctions.

CMED 148
Introduction to Teleconferencing 3 Units
Formerly: CMED 87
Prerequisite: None
Hours: 36 hours LEC; 54 hours LAB
This course examines the basics of satellite conference planning including program design and development, marketing and promotion, budgeting, site selection, audio/visual technology, public relations and program evaluation. Students will design, promote, and execute a video teleconference for cable television. Major uses will be explored and future trends examined. Students will learn how government, corporate and educational groups reach larger audiences with minimum cost through satellite technology.
CMED 295
Independent Studies in Communications Media 1-3 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

CMED 299
Experimental Offering in Communications Media .5-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

CMED 300
Mass Media and Society 3 Units
Formerly: CMED 5
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
(CAN JOUR 4)
Hours: 54 hours LEC
Survey of the mass media: history, philosophy, structure and trends, as well as theories which help to explain effects and the importance as a social institution. Exploration of economics, technology, law, ethics, and social issues, including cultural and ethnic diversity. This course is the same as JOUR 310, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

CMED 301
Introduction to Telecommunications 3 Units
Formerly: CMED 62
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This is a beginning course in the telecommunication technology program. Origin, development and functions of radio, television and merging technologies in modern society are presented. Terminology, concepts, and telecommunication services are covered. Required of communication majors.

CMED 302
Introduction to Digital Media 3 Units
Formerly: CMED 61
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course examines the artistic and instructional possibilities of multimedia. Instruction will include an introduction to the forms and aesthetics of media (text, graphic, audio and video), delivery systems (Internet, CD-ROM, kiosks, DVD, LAN, etc.), production processes, and roles (content, writing, graphics, authoring, and project management). Specialized topics will include operating systems, file formats, sampling, compression, and authoring software.

CMED 304
Introduction to Multimedia 3 Units
Formerly: CMED 70
Prerequisite: None
Advisory: CISC 302 or JOUR 330.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
A course to familiarize students with the ways of designing and producing multimedia presentations. Personal computers and audio-video technology are merged in order to take advantage of the special features of each. The course presents a description and history of computer-interactive multimedia. Students explore current uses of these technologies and receive instruction in practical application. Each student conceives, writes, and designs a high-level multimedia program, using a user-friendly system. Some applications for multimedia include: professional presentations, specialized instruction research, Internet web pages, job training, interactive newsletters, computer games and point-of-purchase marketing. This course may be taken two times for credit.

CMED 305
Film History 3 Units
Formerly: CMED 14
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introduction to the art of motion pictures, using both lectures and films. Students will briefly study the history of motion pictures and will view, evaluate, and critique films which are landmarks in the art of movie making. This course is the same as FMS 305, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

CMED 310
History of American Radio 1920-1950 1 Unit
Formerly: CMED 26
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
An introductory study of radio as a cultural medium in American society from the 1920’s to the 1950’s. Examples from popular programs in comedy, news, sports, mystery and adventure, serials, music and drama are included.

CMED 312
Radio Studio Operations 3 Units
Formerly: CMED 56
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
Theory and operation of audio broadcast equipment and control room. Must be taken prior to Radio Workshop.

CMED 314
Radio Drama 1 Unit
Formerly: CMED 95C
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LAB
An introductory course in equipment and talent techniques required to properly produce dramatic radio programs. Instruction is designed for persons interested in producing video programs for local radio cablecast.
CMED 315
Voice and Diction for Broadcasting 3 Units
Formerly: COMM 371, Voice and Diction
Prerequisite: None
Course Transferable to UC/CSU
(CAN DRAM 6)
Hours: 54 hours LEC
This course is intended for all majors relating to broadcasting including radio production, communications media and television production. This course focuses on individual voice improvement through the study and practice of voice control and manipulation, proper breathing, and diction. Emphasis is placed on achieving correct pronunciation, enunciation, and voice production. Students will build on basic theories and practice of the interpretation of various oral selections chosen by the instructor and by the student.

CMED 316
Introduction to Radio Workshop 3 Units
Formerly: CMED 66
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 108 hours LAB
Advanced radio production. Planning, producing and participating in original radio programs for broadcast over local or campus stations, using both the college and the community as subject matter. Practice in the techniques of live broadcasting. May be taken two times for credit.

CMED 317
Radio Workshop 2 Units
Formerly: CMED 76
Prerequisite: None
Course Transferable to CSU
Hours: 108 hours LAB
Advanced radio production. Planning, producing and participating in original radio programs for broadcast over local or campus stations, using both the college and the community as subject matter. Practice in the techniques of live broadcasting. May be taken two times for credit.

CMED 318
Community Radio Production 1 Unit
Formerly: CMED 95A
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LAB
A short-term course designed to enable students to understand community radio production as well as the operation and use of video and audio equipment and techniques. Basics of audio production for cablecasting are included.

CMED 330
Basic Film/Video Camera Techniques 3 Units
Formerly: CMED 54
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC; 54 hours LAB
This course teaches techniques of single camera shooting with film and videotape for business, cable or broadcast uses. Students learn basic information regarding cameras, lighting, graphics, composition, editing, and single and two-channel audio systems.

CMED 331
Television Production 3 Units
Formerly: CMED 64
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC; 54 hours LAB
The theory and operation of a television control room. An introduction to the use of studio equipment - a switcher, character generator, audio mixer, videotape recorders, microphones and studio lighting.
Real time camera movements. Special effects including chroma-key, mattes and wipes.

CMED 332
Advanced Television Production 2 Units
Formerly: CMED 74
Prerequisite: CMED 331. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 108 hours LAB
Students planning the total operational process for actual television programs (on air or closed-circuit), participate in and take responsibility for various aspects of the finished program, such as audio, switching, lighting, sets, graphics and film. May be taken two times for credit.

CMED 333
Video Workshop 2 Units
Formerly: CMED 84
Prerequisite: CMED 332. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 108 hours LAB
Production of new types of programming for cable, business, industry and special groups - religious, ethnic, minorities, children, women. May be taken two times for credit.

CMED 334
Producing Your Cable TV Program 1 Unit
Formerly: CMED 91
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LAB
A short-term course designed to enable students to understand the operation and use of video and audio equipment and techniques. Techniques of scriptwriting for a five-minute production.

CMED 335
Videotape Editing for Cable TV 1 Unit
Formerly: CMED 93
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LAB
A short-term course designed to enable students to understand editing and how it relates to the operation and use of video and audio equipment and techniques. Simple editing and technical principles and techniques are taught.
CMED 336  
Single Camera TV Production  1 Unit  
Formerly: CMED 92A  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LAB  
A short-term course designed to enable students to understand the operation and use of video and audio equipment and techniques. Students will learn basic skills in lighting, audio, camera operation and shooting techniques.

CMED 337  
Multiple Camera Studio Production  1 Unit  
Formerly: CMED 94A  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LAB  
A short-term course designed to enable students to gain skills in the operation and use of video and audio equipment and techniques for multiple camera studio production.

CMED 344  
Video Engineering  1 Unit  
Formerly: CMED 94D  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LAB  
A short-term course designed to enable students to understand the operation and use of video and audio engineering for cable television. Electrical theory and its applications to video technology and equipment safety and proper maintenance are taught.

CMED 345  
Television Graphics  1 Unit  
Formerly: CMED 96  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LAB  
An introductory course in the elements of graphic design for television, such as ratio, color, safe area, and materials.

CMED 346  
Video and Audio Techniques  1 Unit  
Formerly: CMED 90  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LAB  
A short-term course designed to enable students to gain skills in operation and use of video and audio equipment and techniques. Course is useful for broadcast and cable television. Some of the topics that may be scheduled include: Video Performance Techniques, Audio Performance Techniques, Video Single Camera Shooting, Television Studio Use and Terminology, Audio Recording and Editing and Writing for Video.

CMED 347  
Lighting for Video  1 Unit  
Formerly: CMED 92B  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LAB  
A short-term course designed to enable students to understand how lighting enhances the operation and use of video and audio equipment and techniques. Students will learn basic skills in proper lighting and usage of lighting equipment.

CMED 348  
Audio for Video  1 Unit  
Formerly: CMED 95B  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LAB  
An introductory course in audio recording techniques as required for video projects. Instruction designed for persons interested in producing video programs for local cablecast.

CMED 360  
Introduction to Motion Graphics: Adobe After Effects  3 Units  
Formerly: CMED 80  
Prerequisite: None  
Course Transferable to CSU  
Hours: 36 hours LEC; 54 hours LAB  
This is an introductory course for students interested in multimedia, computer animation, motion graphics and emerging technologies for broadcasting, the Internet and DVD. Students will gain hands-on experience with picture, image and video animation, and paint/draw applications. Primary software applications include Adobe After Effects, Adobe Photoshop and Adobe Illustrator. This course may be taken two times for credit.

CMED 361  
Intermediate Motion Graphics: Adobe After Effects/Newtec Lightwave 3-D  3 Units  
Formerly: CMED 161  
Prerequisite: CMED 360 or the equivalent. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC; 108 hours LAB  
The course presents an intermediate level exploration of the theory and practice of animation for video, film and the Internet. Students study the contemporary uses of the techniques of computer animation. Intermediate level skills are developed in Adobe After Effects and Newtek Lightwave including advanced techniques of additional computer applications outside the lab may include Discreet Combustion or Flint, Avid Media Composer, Avid Symphony or Media 100. This course may be taken two times for credit.
CMED 362
Digital Non-Linear Video Editing: Final Cut Pro 3 Units
Formerly: CMED 162
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
The last decade has ushered in a phenomenal convergence of capabilities among traditional audio/video production technology and personal computers. Multimedia, non-linear editing, computer graphics, computer animation and digital video are but a few of the applications developed as a result of these joint technologies. This course will trace the development of the computer audio/visual applications. Major uses will be explored and future trends examined. In addition, students will receive hands-on production education with Apple’s Final Cut Pro with limited exposure to a variety of other digital video software. This course may be taken two times for credit.

CMED 363
Introduction to DVD Production: iDVD & DVD Studio Pro 3 Units
Prerequisite: CMED 362 or the equivalent. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course examines the history and future of the DVD video format after the most successful launch ever of a consumer electronics format. Students learn how to design, produce and burn a DVD on a personal computer. Students explore the methods of integrating video, audio, text, graphics and user interactivity through the use of iDVD and DVD Studio Pro software. Students explore DVD’s ability to integrate with the Internet. Students use a professional approach to real world DVD production processes. Students are expected to already have exposure to Adobe Photoshop and Apple Final Cut Pro. This course may be taken two times using different software or software versions.

CMED 370
Broadcast Writing & Announcing 3 Units
Formerly: CMED 65
Prerequisite: None
Advisory: COMM 301 or CMED 315.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
Emphasis upon speaking and writing practice in fundamental techniques of broadcasting. Practice with specified formats in television studio and radio workshop.

CMED 371
Hollywood TV & Film Studies: A Behind the Scenes Experience 1 Unit
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
This course provides an overview and introduction to video and film production techniques utilized by professionals in and around Hollywood, CA. Students will learn about the operation of motion picture and television studios from behind the scenes. A variety of topics including preproduction, production and post-production techniques, set design and lighting, and the history of Hollywood-style production will be included. Guest speakers will provide a professional perspective on entry-level job skills and analysis of current workforce development. This course may be taken two times for credit.

CMED 372
Sports Broadcasting 3 Units
Formerly: CMED 65
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 108 hours LAB
Introduction to sports broadcasting. Special effects for sporting events, sports announcing, and technical production problems will each be examined and utilized in pre-recorded and live television broadcast. This course may be taken two times for credit.

CMED 374
Multiple Camera Remote TV Production (TRUCK) 1 Unit
Formerly: CMED 94C
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LAB
A short-term course designed to enable students to gain skills in the operation and use of multiple camera television production equipment and techniques. Remote preproduction planning skills and truck set-up and use are included.

CMED 376
Advertising 3 Units
Formerly: CMED 60
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
Introduction to the field of advertising, its purposes, institutions and functions. Studies are made of the various methods, techniques and media used in general advertising. This course is the same as MKT 314, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

CMED 377
Corporate Video 3 Units
Formerly: CMED 85
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
Students will learn how to produce an effective corporate documentary, marketing or training presentation. The roles and relationships of the many players in the telecommunications industry are explored. Students gain experience in organizing, planning, allocating and directing resources. Instruction includes targeting an audience to get a desired response, designing the message, writing the script, shooting, editing and distribution. Students learn about managing complex interrelationships, managing technology in an environment which mix and match vendors, standards, applications and unique customer requirements.
CMED 378
Acting for the Camera  3 Units
Formerly: CMED 83
Prerequisite: TA 350 or CMED 370. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
Introductory course in the theory and techniques of acting for film and video, comparing the differences between stage acting and acting for the camera. Scenes and commercials enacted and played back on videotape for class critiquing. This course is the same as TA 356, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

CMED 379
Television Performance Techniques  1 Unit
Formerly: CMED 94B
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LAB
A short-term course designed to enable students to understand television performance and how it relates to the operational use of video and audio equipment and techniques. Performance in front of a TV camera, guidelines for appropriate dress and make-up are included.

CMED 380
Broadcast Journalism  3 Units
Formerly: CMED 73
Prerequisite: None
Advisory: CMED 370; JOUR 300; and ability to type.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
The student will gain a general knowledge of the field of radio/television newswriting and production. Through theoretical and practical application, the student will understand writing, filming, editing, and broadcasting radio and television news.

CMED 495
Independent Studies in Communications Media  1-3 Units
Formerly: CMED 49I
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

CMED 498
Work Experience in Communications Media  1-4 Units
Formerly: CMED 98
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

CMED 499
Experimental Offering in Communications Media  .5-4 Units
Formerly: CMED 49
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Computer Information Science

**DEGREES**

A.S.— Computer Programming, Transfer
A.S.— Computer Information Science, Programming
A.S.— Computer Information Science, Information Systems Security
A.S.— Network Systems Administrator
A.S.— Network Systems Engineer
A.S.— Management Information Systems

**CERTIFICATES**

C.I.S. ~ Database Analyst - SQL
C.I.S. ~ Computer Programmer - SQL
C.I.S. ~ Database Design
C.I.S. ~ Relational Database Administration
C.I.S. ~ Software Development Using Visual BASIC.NET
C.I.S. ~ Software Development with JAVA
C.I.S. ~ Web Publishing
C.I.S. ~ Web Programming
C.I.S. ~ Network Helpdesk Technician
C.I.S. ~ Network Systems Administrator
C.I.S. ~ Network Systems Engineer
C.I.S. ~ Programming Pascal
C.I.S. ~ Programming FORTRAN
C.I.S. ~ Programming C/C++
C.I.S. ~ Internet Programming
C.I.S. ~ Information Systems Security
Desktop Publishing
M.I.S. ~ Application Data Entry
M.I.S. ~ Information Processing
M.I.S. ~ Application Technician
M.I.S. ~ Application Analyst
M.I.S. ~ Application Manager
M.I.S. ~ E-Business Infrastructure
M.I.S. ~ Programming COBOL

Applications of Desktop GIS (Computer Science emphasis) - (see page 202)

This CRC program includes study in computer programming, information systems security, computer networking, management information systems, and computer applications. A wide range of degree and certificate programs are available to meet the needs of transfer students who plan to complete a four-year degree as well as career/technical students who plan to enter the work force. Several of the programs are designed to promote a career ladder from certificate to associate degree to university transfer. Other programs are designed to upgrade the skill set of working IT professionals. All program options are designed with advice from business and industry representatives and conform to industry standards. For more information, refer to specific information about each program in the pages that follow. Transfer students should see a counselor to develop an educational plan based upon the specific requirements of the transfer institution.
Career Options
Computer Operator; Applications Software Specialist; Systems Analyst; Programmer; Data Entry Specialist; Computer Systems Specialist; Computer Technician; Network Administrator; Network Systems Engineer—Windows; Internet Technician

Highlights
Hands-on experience in a state-of-the-art computer center
Opportunities to work on specialized projects relating to computer information science, business and computer programming
Study in a field that has great employment opportunities and encompasses many careers

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE
A.S.—Computer Information Science:
Computer Programming (Transfer)
CODE #1066
This program is recommended for students planning to transfer to a CSU campus.

REQUIRED PROGRAM .......................................................... Units
BUSTEC 302 (BUS 41) Computer Keyboarding or
Keyboarding speed verification at 25 wpm or better ........... 0-2
MATH 400 (9A) Calculus I .................................................. 5
MATH 401 (9B) Calculus II ................................................. 5
MATH 420 (11) Differential Equations ............................... 4
PHYS 411 (4A) Mechanics of Solids and Fluids ................. 4
PHYS 421 (4B) Electricity and Magnetism ....................... 4
CISC 310 (CIS 3) Intro to Computer Information Science .... 3
CISP 300 (CIS 41) Algorithm Design/Problem Solving .......... 3
CISP 360 (CIS 32A) Intro to Structured Programming .......... 4
CISP 400 (CIS 32B) Object Oriented Programming with C++ .... 4
CISP 405 Object Oriented Programming Using C# on Visual Studio .NET ......................................... 4
CISP 310 (CIS 35A) Assembly Language Programming on Microcomputers ......................................... 4
CISP 430 (CIS 40) Data Structures ..................................... 4
Plus four (4) units selected from the following: .................... 4
CISP 365 (CIS 31) Structured Programming in Pascal (4)
CISP 340 (CIS 33) Fortran Programming (3)
CISP 320 (CIS 36A) COBOL Programming (4)
CISP 321 (CIS 36B) Advanced COBOL Programming (4)
CISP 370 (CIS 38) Beginning Visual BASIC (4)
CISP 409 (CIS 39) Object Oriented Programming (4)
TOTAL UNITS REQUIRED ......................................................... 52-54

General Education Graduation Requirements—See page 18.

CERTIFICATE
Computer Information Science ~ Programming Pascal
CODE #1072
REQUIRED PROGRAM .......................................................... Units
Core Courses
BUS 310 (8) Business Communication ................................ 3
BUSTEC 302 (BUS 41) Computer Keyboarding or
Keyboarding speed verification at 25 wpm or better ........... 0-2
CISC 310 (CIS 3) Intro. to Computer Information Science ..... 3
MATH 100 (51) Elementary Algebra (5) or
MATH 102 (51B) Elementary Algebra Part II (3) ............... 3-5
CISC 320 (CIS 14A) Operating Systems (Windows) .......... 1
CISC 321 (CIS 14B) Intermed. Operating Systems (Windows) ... 1
CISP 300 (CIS 41) Algorithm Design/Problem Solving .......... 3
Specialization in Pascal
CISP 365 (CIS 31) Structured Programming with Pascal ...... 4
CISP 409 (CIS 39) Object Oriented Programming (Delphi) ... 4
CISP 430 (CIS 40) Data Structures .................................... 4
TOTAL UNITS REQUIRED ......................................................... 26-30

CERTIFICATE
Computer Information Science ~ Programming FORTRAN
CODE #1071
REQUIRED PROGRAM .......................................................... Units
Core Courses
BUS 310 (8) Business Communication ................................ 3
BUSTEC 302 (BUS 41) Computer Keyboarding or
Keyboarding speed verification at 25 wpm or better ........... 0-2
CISC 310 (CIS 3) Intro. to Computer Information Science ..... 3
MATH 100 (51) Elementary Algebra (5) or
MATH 102 (51B) Elementary Algebra Part II (3) ............... 3-5
CISC 320 (CIS 14A) Operating Systems (Windows) .......... 1
CISC 321 (CIS 14B) Intermed. Operating Systems (Windows) ... 1
CISP 300 (CIS 41) Algorithm Design/Problem Solving .......... 3
Specialization in FORTRAN
MATH 120 (53) Intermediate Algebra ................................ 5
CISP 340 (CIS 33) Fortran Programming ......................... 3
TOTAL UNITS REQUIRED ......................................................... 22-26

CERTIFICATE
Computer Information Science ~ Programming C/C++
CODE #1070
REQUIRED PROGRAM .......................................................... Units
Core Courses
BUS 310 (8) Business Communication ................................ 3
BUSTEC 302 (BUS 41) Computer Keyboarding (2) or
Keyboarding speed verification at 25 wpm or better ........... 0-2
CISC 310 (CIS 3) Intro to Computer Information Science ..... 3
CISC 320 (CIS 14A) Operating Systems (Windows) .......... 1
CISC 321 (CIS 14B) Intermed. Operating Systems (Windows) ... 1
CISP 300 (CIS 41) Algorithm Design/Problem Solving .......... 3
MATH 100 (51) Elementary Algebra (5) or
MATH 102 (51B) Elementary Algebra Part II (3) ............... 3-5
Specialization in C/C++
CISC 320 (CIS 14A) Operating Systems (UNIX) ............... 1
CISC 321 (CIS 14B) Intermediate Operating Systems (UNIX) ... 1
CISP 360 (CIS 32A) Intro to Structured Programming .......... 4
CISP 400 (CIS 32B) Object Oriented Programming with C++ .... 4
CISP 405 Object Oriented Programming Using C# on Visual Studio .NET ......................................... 4
CISP 430 (40) Data Structures ........................................... 4
TOTAL UNITS REQUIRED ......................................................... 32-36
CERTIFICATE

Computer Information Science ~

Internet Programming
CODE #1942
REQUIRED PROGRAM .............................................................. Units
BUS 310 (BUS 8) Business Communication ................................ 3
BU STEC 302 (BUS 41) Computer Keyboarding or Keyboarding speed verification at 25 wpm or better ............. 0-2
CISC 310 (CIS 3) Intro to Computer Information Science ............ 3
MATH 100 (51) Elementary Algebra (5) or MATH 102 (51B) Elementary Algebra - Part II (3) ................. 3-5
CISC 320 (CIS 14A) Operating Systems (Windows) ...................... 1
CISC 321 (CIS 14B) Intermed Operating Systems (Windows) ......... 1
CISP 300 (CIS 3) Algorithm Design/Problem Solving ................. 3

Specialization in Internet Programming
CISP 355 (CIS 16AX) Intro to Data Communications ................... 1.5
CISC 356 (CIS 16BX) Intro to Local Area Networks ...................... 1.5
CISC 305 (CIS 21A) Intro to the Internet .................................. 1
CISC 306 (CIS 21B) Intro to Web Page Creation (1) or CIEWS 350 (CIS 21G) Imaging for the Web ...................... 1-3
CISP 400 (CIS 22) Web Publishing (3) ................. 1-3
CISP 409 (CIS 39) Object Oriented Programming (Java) .............. 4
TOTAL UNITS REQUIRED .......................................................... 28-34

DEGREE

A.S.— Computer Information Science: Programming (Workforce Entry)
CODE #1326
This program is recommended for students wishing to enter the workforce upon graduation. Some transfer opportunities are available to designated universities.

REQUIRED PROGRAM .............................................................. Units
Semester 1
BUS 310 (8) Business Communication or ENGWR 300 (1A) College Composition ....................... 3
CISC 310 (3) Intro to Computer Information Science ................. 3
CISC 320 (14A) Operating Systems (Windows) ......................... 1
CISP 300 (41) Algorithm Design/Problem Solving ..................... 3
BU STEC 302 (41) Computer Keyboarding or Keyboarding speed verification at 25 wpm or better ............. 0-2
Any U.S. History course: .......................................................... 3
HIST 312 (17), 313 (18), 314 (21), 320 (14), 321 (15), 331 (35), 371 (9).
Semester 2
CISA 320 (13A) Intro to Database Management (Access) .......... 1
CISP 360 (32A) Intro to Structured Programming ....................... 4
CISP 370 (38) Beginning Visual Basic ................................. 4
CISC 320 (14A) Operating Systems (UNIX) .......................... 1
CISC 321 (14B) Intermediate Operating Systems (UNIX) ............ 1
MATH 100 (51) Elementary Algebra (5) or MATH 102 (51B) Elementary Algebra (Part II) or higher level math course .................. 3-5
Semester 3
CISP 456 (51) Data Processing System Analysis & Design ........... 4
CISP 350 (37) Database Programming - Oracle ......................... 3
CISP 400 (32B) Object Oriented Programming with C++ .............. 4
BUS 330 (15) Managing Diversity in the Workplace ................. 3
PHYS 310 (10) Conceptual Physics (3) or PS 302 (3) Intro to Physical Science (4) .................. 3-4
Physical Education course ....................................................... 1-1.5
continued in next column - - -

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Plus five to six (5-6) units selected from the following: ............ 5-6

General:
CISC 290 (CIS 94) Exploring CIS Careers (1)
CISC 310 (CIS 3) Intro to Computer Information Science (3)
CISC 498 (CIS 98) Work Experience in Computer Info Sci. (1-3)

Applications:
CISA 308 Exploring Word Processing and Presentation Software (1)
CISA 315 (CIS 12AX) Introduction to Electronic Spreadsheets (2)
CISA 320 (CIS 13A) Introduction to Database Management (1)
CISA 330 (CIS 17A) Desktop Publishing (2)
CISA 340 (CIS 15A) Presentation Graphics (2)
CISC 306 (CIS 21B) Introduction to Web Page Creation (1)
CISW 300 (CIS 22) Web Publishing (3)

Operating Systems:
CISC 323 Linux Operating System (1)
CISC 324 Intermediate Linux Operating System (1)
CISC 355 (CIS 16AX) Intro. to Data Communications (1.5)
CISC 360 (CIS 29) Microcomputer Support & Maintenance (4)

Security:
CISS 310 Network Security Fundamentals (3)

TOTAL UNITS REQUIRED ..................................................16.5-17.5

DEGREE
A.S.— Computer Information Science:

Network Systems Administrator

CODE #1371

This degree is designed for networking professionals who want to manage the components of a network system, based on the Microsoft Windows platform and Microsoft server software, on an ongoing basis; monitor and optimize the components of a network system; and diagnose and resolve problems regarding the components of a network system.

REQUIRED PROGRAM .......................................................... Units
BUS 310 (8) Business Communication (3) or
ENGWR 300 (ENGL 1A) College Composition (3) ............... 3
COMM 301 (1) Introduction to Public Speaking (3) or
COMM 361 (9) The Communication Experience (3) or
COMM 321 (10) Interpersonal Communication (3) or
COMM 325 (14) Intercultural Communication (3) or
COMM 331 (15) Group Discussion (3) ............................... 3
MATH 120 (53) Intermediate Algebra (5) or
MATH 125 (54) Inter Algebra with Applications (4) ....... 4-5
CISC 323 Linux Operating System ........................................... 1
CISC 324 Intermediate Linux Operating System ................. 1
CISC 356 (CIS 16BX) Introduction to Local Area Networks ....... 1.5
CISN 330 (CIS 79A) Data Comm. and Network Fundamentals .... 3
CISP 300 Algorithm Design/Problem Solving ....................... 3
CISA 405 Scripting for Applications (3) or
CISP 370 (CIS 38) Beginning Visual BASIC (4)
CIS 300 Introduction to Information Systems Security .......... 1

Microsoft MCSA Core Exams: Networking System
CISN 300 (CIS 80) Network Systems Admin. (Windows) .......... 3
CISN 302 (CIS 81) Inter Network Systems Admin.(W.indows) ...... 3

Microsoft MCSA Core Exams: Client Operating System
CISN 301 Network Client Systems Administration ................. 3

Electives:
Plus three to four (3-4) units selected from the following:
CISC 498 (CIS 98) Work Experience in CIS (1-4)
CISN 499 Experimental Offering in CIS - Networking (.5-4)

continued in next column - - -
DEGREE
A.S.—Computer Information Science: Network Systems Engineer

CODE #1370

This degree is designed for networking professionals who want to analyze the business requirements for a network system; design a network system solution that meets business requirements; deploy, install, and configure the components of a network system based on the Microsoft Windows platform and Microsoft server software; manage the components of a network system on an ongoing basis; monitor and optimize the components of a network system; and diagnose and resolve problems regarding the components of a network system.

REQUIRED PROGRAM ............................................................... Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 310 (8)</td>
<td>8</td>
</tr>
<tr>
<td>ENGW R 300 (ENGL 1A)</td>
<td>3</td>
</tr>
<tr>
<td>COMM 301 (1)</td>
<td>3</td>
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<tr>
<td>COMM 361 (9)</td>
<td>3</td>
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<tr>
<td>COMM 321 (10)</td>
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<td>COMM 325 (14)</td>
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<td>COMM 331 (15)</td>
<td>15</td>
</tr>
<tr>
<td>MATH 120 (53)</td>
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</tr>
<tr>
<td>MATH 125 (54)</td>
<td>54</td>
</tr>
<tr>
<td>CISC 323</td>
<td>3</td>
</tr>
<tr>
<td>CISC 324</td>
<td>3</td>
</tr>
<tr>
<td>CISC 356 (CIS 16BX)</td>
<td>1.5</td>
</tr>
<tr>
<td>CISC 330</td>
<td>3</td>
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<tr>
<td>CISP 300</td>
<td>3</td>
</tr>
<tr>
<td>CISP 370</td>
<td>3</td>
</tr>
<tr>
<td>CISS 300</td>
<td>3</td>
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</table>

Microsoft MCSE Core Exams: Networking System

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CISP 300 (CIS 80)</td>
<td>3</td>
</tr>
<tr>
<td>CISP 302 (CIS 81)</td>
<td>3</td>
</tr>
<tr>
<td>CISP 306 (CIS 82)</td>
<td>3</td>
</tr>
<tr>
<td>CISP 308 (CIS 84)</td>
<td>3</td>
</tr>
</tbody>
</table>

Microsoft MCSE Core Exams: Client Operating System

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISP 301</td>
<td>3</td>
</tr>
</tbody>
</table>

Microsoft MCSE Core Exams: Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CISP 320</td>
<td>3</td>
</tr>
<tr>
<td>CISP 322</td>
<td>3</td>
</tr>
<tr>
<td>CISP 324</td>
<td>3</td>
</tr>
</tbody>
</table>

Microsoft MCSE Elective Exams

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISP 309</td>
<td>9</td>
</tr>
<tr>
<td>CISP 370 (CIS 86)</td>
<td>3</td>
</tr>
<tr>
<td>CISP 374 (CIS 87)</td>
<td>3</td>
</tr>
<tr>
<td>CISP 378 (CIS 58)</td>
<td>3</td>
</tr>
<tr>
<td>CISP 380 (CIS 59)</td>
<td>3</td>
</tr>
<tr>
<td>CISS 310</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED .......................................................... 44.5-46.5

Guideline to Students: Microsoft Certified Systems Engineer (MCSE) candidates on the Microsoft Windows Server™ 2003 track are required to satisfy four networking system exams, one client operating system exam, one design exam and one general elective exam. It is recommended that students use the following Matrix to guide them in their selection of the appropriate course(s) for their personal and/or professional needs.

General Education Graduation Requirements - See page 18.
CERTIFICATE
Computer Information Science ~
Network Systems Administrator
CODE #1371

This certificate is designed for Network Helpdesk Technicians, who want to gain additional skill-sets to become a Network Administrator. Some of the skill-sets that are necessary for this job include the ability to deploy, install, and configure the components of a network system based on the Microsoft Windows platform and Microsoft server software; manage the components of a network system on an ongoing basis; monitor and optimize the components of a network system; and diagnose and resolve problems regarding the components of a network system.

REQUwED PROGRAM .......................................................... Units
CISC 323 Linux Operating System ................................. 1
CISC 324 Inter Linux Operating System ...................... 1
CISC 356 (CIS 16BX) Intro to Local Area Networks .......... 1.5
CISN 330 Data Communication and Network Fund. ... 3
CISS 300 Intro to Information Systems Security .......... 1
Microsoft MCSE Core Exams: Networking System
CISN 300 (CIS 80) Network Systems Admin (Windows) ....... 3
CISN 302 (CIS 81) Intern. Network Systems Admin (Windows)... 3
Microsoft MCSE Core Exams: Client Operating System
CISN 301 Network Client Systems Administration .......... 3
ELECTIVES:
Plus three to four (3-4) units selected from the following:...... 3-4
CISC 498 Work Experience in CIS (3)
CISC 499 Experimental Offering in CIS - Networking (.5-4)
Microsoft MCSE Elective Exams: ................................. 3-4
CISC 360 Microcomputer Support & Maintenance (4)
CISN 309 Network Systems Admin.-Update (1-3)
CISN 370 (CIS 86) Web Server Administration (3)
CISN 374 (CIS 87) Messaging Server Administration (3)
CISN 378 (CIS 58) Database Admin for Microsoft SQL Server (3)
CISN 380 (CIS 59) Microsoft Systems Management Server (3)
CISN 310 Network Security Fundamentals (3)
TOTAL UNITS REQUIRED ........................................... 19.5-20.5

Guideline to Students: Microsoft Certified Systems Administrator (MCSA) candidates on the Microsoft Windows Server™ 2003 track are required to satisfy two networking system exams, one client operating system exam, and one elective exam. It is recommended that students use the following matrix to guide them in their selection of the appropriate course(s) for their personal and/or professional needs.

General Education Graduation Requirements - See page 18.

Take these courses: If you need these skill sets:

<table>
<thead>
<tr>
<th>Core Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISN 300</td>
</tr>
<tr>
<td>CISN 301</td>
</tr>
<tr>
<td>CISN 302</td>
</tr>
</tbody>
</table>

continued in next column - - -

CERTIFICATE
Computer Information Science ~
Network Systems Engineer
CODE #1370

This certificate is designed for Network Administrators, who want to gain additional skill-sets to become a Network Engineer. Some of the skill-sets that are necessary for this job include the ability to analyze the business requirements for a network system; design a network system solution that meets business requirements; deploy, install, and configure the components of a network system based on the Microsoft Windows platform and Microsoft server software; manage the components of a network system on an ongoing basis; monitor and optimize the components of a network system; and diagnose and resolve problems regarding the components of a network system.

REQUwED PROGRAM .......................................................... Units
CISC 323 Linux Operating System ................................. 1
CISC 324 Intermediate Linux Operating System .............. 1
CISC 356 (CIS 16BX) Intro to Local Area Networks .......... 1.5
CISN 330 Data Communication and Networking Fundamentals .......... 3
CISN 300 Introduction to Information Systems Security .... 1
Microsoft MCSE Core Exams: Networking System
CISN 300 (CIS 80) Network Systems Admin (Windows) ....... 3
CISN 302 (CIS 81) Intern. Network Systems Admin (Windows)... 3
Microsoft MCSE Core Exams: Client Operating System
CISN 301 Network Client Systems Administration .......... 3
DESIGN ELECTIVE: Microsoft MCSE Core Exams: Design
Choose three (3) units from the following:.................. 3
CISC 320 (CIS 55) Design Windows Directory Services (3)
CISC 322 (CIS 56) Design a Secure Windows Network (3)
CISC 324 (CIS 57) Design Windows Networking Services (3)

continued on next page - - -
Guideline to students: Microsoft Certified Systems Engineer (MCSE) candidates on the Microsoft Windows Server™ 2003 track are required to satisfy four networking system exams, one client operating system exam, one design exam and one general elective exam. It is recommended that students use the following Matrix to guide them in their selection of the appropriate course(s) for their personal and/or professional needs.

Take these courses: If you need these skill sets:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISP 300</td>
<td>Exam 70-290: Managing and Maintaining a Microsoft Windows Server 2003 Environment</td>
</tr>
<tr>
<td>CISP 301</td>
<td>Exam 70-270: Installing, Configuring, and Administering Microsoft Windows XP Professional</td>
</tr>
<tr>
<td>CISP 302</td>
<td>Exam 70-291: Implementing, Managing and Maintaining a Microsoft Windows Server 2003 Network Infrastructure</td>
</tr>
<tr>
<td>CISP 306</td>
<td>Exam 70-294: Planning, Implementing and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure</td>
</tr>
<tr>
<td>CISP 308</td>
<td>Exam 70-293: Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED ........................................................ 28.5

CERTIFICATE
Computer Information Science ~
Relational Database Administration

This certificate is designed for students who have completed the Database Analyst - SQL Certificate and aspire to become technical database administrators. The Relational Database Administration Certificate is the second in a series of three certificate programs designed for the entry-level student and business user.

Take these courses: If you need these skill sets:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISP 309</td>
<td>Exam 70-292: Managing and Maintaining a Microsoft Windows Server 2003 Environment for an MCSA Certified on Windows 2000</td>
</tr>
<tr>
<td>CISP 320</td>
<td>Exam 70-217: Implementing, Managing and Maintaining a Microsoft Windows 2000 Directory Services Infrastructure</td>
</tr>
<tr>
<td>CISP 322</td>
<td>Exam 70-298: Designing Security for a Microsoft Windows Server 2003 Network</td>
</tr>
<tr>
<td>CISP 324</td>
<td>Exam 70-297: Designing a Microsoft Windows Server 2003 Active Directory and Network Infrastructure</td>
</tr>
<tr>
<td>CISP 374</td>
<td>Exam 70-284: Implementing and Managing Microsoft Exchange Server 2003</td>
</tr>
<tr>
<td>CISP 378</td>
<td>Exam 70-228: Installing, Configuring, and Administering Microsoft SQL Server™ 2000 Enterprise Edition</td>
</tr>
<tr>
<td>CISP 380</td>
<td>Exam 70-086: Implementing and Supporting Microsoft Systems Management Server 2.0</td>
</tr>
<tr>
<td>CISS 310</td>
<td>CompTIA Security+ exam</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED ........................................................ 19-21

CERTIFICATE
Computer Information Science ~
Database Analyst - SQL

This certificate is designed for beginning students as well as technical professionals who aspire to design, create, or administer relational databases and database administrators. Successful students will be prepared to apply for entry-level positions in industry such as database analyst. The Database Analyst Certificate is the first in a series of three certificate programs designed for the entry-level student and business user.

Take these courses: If you need these skill sets:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISP 310</td>
<td>Exam 70-290: Managing and Maintaining a Microsoft Windows Server 2003 Environment</td>
</tr>
<tr>
<td>CISP 309</td>
<td>Exam 70-270: Installing, Configuring, and Administering Microsoft Windows XP Professional</td>
</tr>
<tr>
<td>CISP 302</td>
<td>Exam 70-291: Implementing, Managing and Maintaining a Microsoft Windows Server 2003 Network Infrastructure</td>
</tr>
<tr>
<td>CISP 306</td>
<td>Exam 70-294: Planning, Implementing and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure</td>
</tr>
<tr>
<td>CISP 308</td>
<td>Exam 70-293: Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED ........................................................ 14

CERTIFICATE
Computer Information Science ~
System Administrator - Linux

This certificate is designed for beginning students as well as technical professionals who aspire to design, create, or administer relational databases and database administrators. Successful students will be prepared to apply for entry-level positions in industry such as database analyst. The Database Analyst Certificate is the first in a series of three certificate programs designed for the entry-level student and business user.

Take these courses: If you need these skill sets:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISP 309</td>
<td>Exam 70-292: Managing and Maintaining a Microsoft Windows Server 2003 Environment for an MCSA Certified on Windows 2000</td>
</tr>
<tr>
<td>CISP 320</td>
<td>Exam 70-217: Implementing, Managing and Maintaining a Microsoft Windows 2000 Directory Services Infrastructure</td>
</tr>
<tr>
<td>CISP 322</td>
<td>Exam 70-298: Designing Security for a Microsoft Windows Server 2003 Network</td>
</tr>
<tr>
<td>CISP 324</td>
<td>Exam 70-297: Designing a Microsoft Windows Server 2003 Active Directory and Network Infrastructure</td>
</tr>
<tr>
<td>CISP 374</td>
<td>Exam 70-284: Implementing and Managing Microsoft Exchange Server 2003</td>
</tr>
<tr>
<td>CISP 378</td>
<td>Exam 70-228: Installing, Configuring, and Administering Microsoft SQL Server™ 2000 Enterprise Edition</td>
</tr>
<tr>
<td>CISP 380</td>
<td>Exam 70-086: Implementing and Supporting Microsoft Systems Management Server 2.0</td>
</tr>
<tr>
<td>CISS 310</td>
<td>CompTIA Security+ exam</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED ........................................................ 20

CERTIFICATE
Computer Information Science ~
Computer Programmer - SQL

This certificate is designed for students who have completed the Database Analyst - SQL Certificate and aspire to be entry level programmers using the Structured Query Language (SQL). This is the second in a series of three certificate programs in Relational Database Management Systems.

Take these courses: If you need these skill sets:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISP 310</td>
<td>Intro to Computer Information Science</td>
</tr>
<tr>
<td>CISP 320</td>
<td>Operating Systems (Unix/Linux)</td>
</tr>
<tr>
<td>CISP 321</td>
<td>Intermed O perating Systems (Unix/Linux)</td>
</tr>
<tr>
<td>CISP 300</td>
<td>Algorithm Design/Problem Solving</td>
</tr>
<tr>
<td>CISP 351</td>
<td>Intro to Relational Database Design &amp; SQL</td>
</tr>
<tr>
<td>CISP 352</td>
<td>Intermediate SQL</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED ........................................................ 14
CERTIFICATE
Computer Information Science ~
Software Development with JAVA
CODE #1556
This certification will enhance students' proficiency in the fundamentals of the Java programming language using the Java 2 Platform, Standard Edition (J2SE technology). After this certification, the student should be able to take Sun's certification exam to become a SUN CERTIFIED PROGR A M M E R FOR THE JAVA 2 PLATFORM, and will have a better marketability.

REQUIRED PROGRAM ...............................................................Units
CISP 401 Object Oriented Programming with Java ................. 4
CISP 402 Java - Data Handling ................................................. 4
CISP 403 Java - Smart Device Applications ........................ 4
CISP 404 Java - Enterprise Applications .............................. 4
TOTAL UNITS REQUIRED ............................................................. 16

CERTIFICATE
Computer Information Science ~
Database Design
CODE #1545
This certificate aims at preparing the students to understand entire database design, programming methodology and lifecycle. This certificate is designed for the student who requires programming skills in Relational Database Management Systems (RDBMS) and Structured Query Language (SQL) techniques using ORACLE and Microsoft Access.

REQUIRED PROGRAM ...............................................................Units
CISP 300 (CIS 41) Algorithm Design/Problem Solving ........... 3
CISP 350 (CIS 37) Database Programming ........................... 3
Capstone Core:
CISP 356 Relational Database Design & Info. Retrieval ... 3
Programming Cluster:
Choose four (4) units from the following:............................... 4
CISP 369 (CIS 32A) Introduction to Structured Programming (4)
CISP 400 (CIS 32B) Object Oriented Programming with C++ (4)
CISP 370 (CIS 38) Beginning Visual BASIC (4)
CISP 371.1 O O P with Visual BASIC .NET (2)
CISP 371.2 Database & Web Programming with Visual BASIC.NET (2)
CISP 300 (CIS 41) Algorithm Design/Problem Solving (3)
CISP 499 (CIS 49) Experimental Offering in CISP
Web Cluster:
Choose four (4) units from the following:............................... 4
CISC 305 (CIS 21A) Introduction to the Internet (1)
CISC 306 (CIS 21B) Introduction to Web Page Creation (1)
CISW 300 Web Publishing (3)
CISW 400 Client-side Web Scripting (4)
CISW 410 Middleware Web Scripting (4)
CISW 420 Server-side Web Scripting (4)
CISW 499 (CIS 49) Experimental Offering in CISW
TOTAL UNITS REQUIRED ............................................................. 16

CERTIFICATE
Computer Information Science ~
Software Development Using BASIC.NET
CODE #1544
Visual BASIC.NET combines Windows, web programming, and database connectivity within a single object-oriented programming language. Our certificate teaches a student to create custom Windows applications that can execute on a single local computer, a single web server, or a combination of a local computer and servers. These applications may use ADO.NET, ASP.NET, and Windows security technologies.

REQUIRED PROGRAM ...............................................................Units
CISP 370 (CIS 38) Beginning Visual BASIC ......................... 4
CISP 371 Intermediate Visual BASIC or
CISP 371.1 O O P Using Visual BASIC .NET (2) and
CISP 371.2 Database and Web Programming with Visual BASIC.NET (2) ........................................ 4
Choose any nine (9) units from the following courses: ................. 9
CISA 320 (CIS 13A) Introduction to Database Management (1)
CISA 405 (CIS 26) Scripting for Applications (3)
CISP 300 (CIS 41) Algorithm Design/Problem Solving (3)
CISP 350 (CIS 37) Database Programming (SQL Server or Oracle) (3)
CISW 400 Client-side Web Scripting (4)
CISW 410 Middleware Scripting for the Internet (ASP) (4)
CISW 440 XML: Intro to Extensible Markup Language (2)
TOTAL UNITS REQUIRED ............................................................. 17

CERTIFICATE
Computer Information Science ~
Web Publishing
CODE #1494
This certificate is designed to give students the benefits of hands-on training in Web Page Design and Publication, Internet usage, and proficiency with web-related media applications. Upon completion of this certificate, students may complete a second certificate in Advanced Web Publishing, towards the fulfillment of a Web Publishing degree.

REQUIRED PROGRAM ...............................................................Units
BUS 310 (8) Business Communication (3) or
ENGWR 300 (ENG 1A) College Composition (3) ............ 3
CISC 320 (CIS 14A) Operating Systems (Win) or
CISC 320 (CIS 14A) Operating Systems (Unix) ................... 1
CISW 350 (CIS 21G) Imaging for the Web ......................... 1
CISW 300 (CIS 22) Web Publishing ................................. 3
Design Elective:
Choose three (3) units from the following: .............................. 3
CMED 304 (70) Introduction to Multimedia (3)
PHOTO 400 (57) Digital Imaging (3)
ARTNM 324 (20) Digital Design (3)
Plus four to six (4-6) units selected from the following: .............. 4-6
CISC 306 (CIS 21B) Introduction to Web Page Creation (1)
CISW 310 Advanced Web Publishing (4)
CISA 340 Presentation Graphics (2)
CISA 330 (CIS 17A) Desktop Publishing (2)
CISW 380 (CIS 24) E-Business (3) or
CISW 380.1 (CIS 24A) E-Business: Intro and Environ. (1.5)
CISW 440 XML: Intro to Extensible Markup Language (2)
CISW 400 Client-side Web Scripting (4)
CISW 410 Middleware Web Scripting (4)
CISW 420 Server-side Web Scripting (4)
TOTAL UNITS REQUIRED ............................................................. 15-17

Suggested Electives:
CISC 310 (CIS 3) Introduction to Computer Information Science
ARTNM 326 (22) Digital Painting
CERTIFICATE
Computer Information Science ~

Web Programming
CODE #1500
This certificate prepares students to design, develop, support, and maintain corporate level Web pages and full Web sites at the level of the Intranet or Internet. Additionally, this certificate will prepare students to design and develop database management applications to support Web-based commercial objectives.

REQUIRED PROGRAM ......................................................... Units
BUS 310 (8) Business Communication or
ENGWR 300 (ENGL 1A) College Composition ............... 3
CISP 300 (CIS 41) Algorithm Design/Problem Solving .......... 3
CISA 320 (CIS 13A) Introduction to Database Management .... 1
CISC 320 (CIS 14A) Operating Systems (Unix) .................. 1
CISC 321 (CIS 14B) Intermediate Operating Systems (Unix) ... 1
CISW 300 (CIS 22) Web Publishing .................................... 3
CISW 420 Server-side Web Scripting .................................... 4
CISP 360 (CIS 32A) Intro to Structured Programming (C or C#) ... 4
CISP 350 (CIS 37) Database Programming (Oracle or SQL Server) .. 3
CISP 409 (CIS 39) Object Oriented Programming (Java) ......... 4

Plus five to seven (5-7) units selected from the following: ........ 5-7
CISA 405 (CIS 26) Scripting for Applications (3)
CISW 400 Client-side Web Scripting (4)
CISW 440 XML: Intro to Extensible Markup Language (2)
CISW 410 Middleware Web Scripting (4)
CISW 310 Advanced Web Publishing (4)
CISA 321 (CIS 13B) Intermediate Database Management (1)
CISP 370 (CIS 38) Beginning Visual BASIC (4)
TOTAL UNITS REQUIRED ......................................................... 32-34

Suggested Electives:
CISC 310 (CIS 3) Intro to Computer Information Science (3)
CISC 305 (CIS 21A) Introduction to the Internet (1)
CISC 306 (CIS 21B) Web Page Creation (1)
CISC 320 (CIS 14A) Operating Systems (Win) (1)
CISW 380.1 (CIS 24A) E-Business (1.5)

DEGREE
A.S. — Computer Information Science, Information Systems Security
CODE #1535
This degree is designed to give students currently employed as an Information Technology (IT) Professional the additional skill sets necessary to work in this rapidly growing field. This degree covers some of the critical skill sets for the (ISA)² Certified Information Systems Security Professional (CISSP) exam, which is recognized as an international standard for an Information Systems Security (ISS) Professional.

REQUIRED PROGRAM ......................................................... Units
BUS 310 (8) Business Communications or
ENGWR 300 (ENGL 1A) College Composition ............... 3
BUS 340 (18A) Business Law or
BUS 341 (18B) Business Law or
BUS 345 (16) Law and Society ..................................... 3
COMM 301 (1) Introduction to Public Speaking or
COMM 361 (9) The Communication Experience or
COMM 321 (10) Interpersonal Communication or
COMM 325 (14) Intercultural Communication or
COMM 331 (15) Group Discussion ................................... 3
MATH 120 (53) Intermediate Algebra (5) or
MATH 125 (54) Intermediate Algebra with Applic (4) .... 4-5

PHIL 310 (5) Introduction to Ethics or
PSYC 300 (1) General Principles or
PSYC 351 (7) Human Behavior ...................................... 3
CISC 323 Linux Operating System .................................... 1
CISC 324 Intermed. Linux Operating System .................. 1
CISN 300 (CIS 80) Network Systems Administration .......... 3
CISN 302 (CIS 81) Intermediate Network Systems Admin ... 3
CISN 330 (CIS 79A) Data Commun. & Networking Fundamentals ... 3

(ISA)² CISSP Information Systems Security Domains:
- Security Architecture & Models
- Network Security Fundamentals
- Operations Security
- Telecommunications, Network & Internet Security
- Security Management Practices
- Business Continuity Planning and Physical Security
- Law, Investigation & Ethics

TOTAL UNITS REQUIRED ............................................... 48-49

Guideline to students: Certified Information Systems Security Professional (CISSP) candidates are required to satisfy all ten security domains to pass this certification. It is recommended that students use the following Matrix to guide them in their selection of the appropriate course(s) for their personal and/or professional needs.

Take these courses: If you need these CISSP domain skill sets:

<table>
<thead>
<tr>
<th>Course</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISS 310</td>
<td>Security Architecture &amp; Models</td>
</tr>
<tr>
<td>CISS 320</td>
<td>Access Control Systems &amp; Methodology</td>
</tr>
<tr>
<td>CISS 330</td>
<td>Telecommunications, Network &amp; Internet Security</td>
</tr>
<tr>
<td>CISS 341</td>
<td>Implementing Windows Operating System Security or</td>
</tr>
<tr>
<td>CISS 342</td>
<td>Implementing Linux Operating System Security</td>
</tr>
<tr>
<td>CISS 343</td>
<td>Security Management Practices</td>
</tr>
<tr>
<td>CISS 355</td>
<td>Business Continuity Planning</td>
</tr>
<tr>
<td>CISS 360</td>
<td>Law, Investigation &amp; Ethics</td>
</tr>
<tr>
<td>None to Date</td>
<td>Physical Security</td>
</tr>
<tr>
<td>None to Date</td>
<td>Cryptography</td>
</tr>
<tr>
<td>None to Date</td>
<td>Applications &amp; Systems Development</td>
</tr>
</tbody>
</table>

continued in next column - - -
CERTIFICATE
Computer Information Science ~ Information Systems Security
CODE #1535

This certificate is designed to give students currently employed as an Information Technology (IT) professional or those currently working on their Networking degree the additional skill sets necessary to work in this rapidly growing field. This certificate covers some of the critical skill sets for the (ISA) Certified Information Systems Security Professional (CISSP) Certification, which is recognized as an international standard for the Information Systems Security (ISS) professional.

REQUIRED PROGRAM .............................................................. Units
CISC 322 Linux Operating System .............................................. 1
CISC 324 Interned. Linux Operating System .............................. 1
CISC 330 Data Commun. & Networking Fundamentals .............. 3
(ISA)2 CISSP Information Systems Security domains:
Security Architecture & Models
CISS 310 Network Security Fundamentals ................................. 3
Access Control Systems & Methodology
CISS 320 Implementing Network Security & Counter Measures .. 3
Telecommunications, Network & Internet Security
CISS 330 Implementing Internet Security and Firewalls .......... 3
Operations Security
CISS 341 Implementing Windows Operating System Security or
CISS 342 Implementing Linux Operating System Security .... 3
Plus six (6) units selected from the following: ......................... 6
Security Management Practices
CISS 350 Disaster Recovery (3)
Business Continuity Planning
CISS 355 Information Systems Security and Assurance Principles (3)
Law, Investigation & Ethics
CISS 360 Computer Forensics and Investigation (3)
TOTAL UNITS REQUIRED ....................................................... 23

Guideline to students: Certified Information Systems Security Professional (CISSP) candidates are required to satisfy all ten security domains to pass this certification. It is recommended that students use the following Matrix to guide them in their selection of the appropriate course(s) for their personal and/or professional needs.

Take these courses: If you need these CISSP domain skill sets:

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<tr>
<td>CISS 330</td>
<td>Telecommunications, Network &amp; Internet Security</td>
</tr>
<tr>
<td>CISS 341/342</td>
<td>Operations Security</td>
</tr>
<tr>
<td>CISS 350</td>
<td>Security Management Practices</td>
</tr>
<tr>
<td>CISS 355</td>
<td>Business Continuity Planning</td>
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<td>None to Date</td>
<td>Applications &amp; Systems Development</td>
</tr>
</tbody>
</table>

DEGREE
A.S.—Management Information Systems
CODE #1074

This program provides the basic skills necessary for a career in business, while allowing the student to select courses that fit individual needs and desires.

REQUIRED PROGRAM .............................................................. Units
Business Core:
ACCT 301 (1A) Financial Accounting ...................................... 4
BUS 310 (B) Business Communications or
EN GW R 300 (EN GL 1A) College Composition* ...................... 3
BUS 330 (15) Managing Diversity in the Workplace or
SOC 321 (5) Race, Ethnicity & Inequality in the U.S. ......... 3
BUS 340 (18A) Business Law ................................................ 3
BUS 300 (20) Introduction to Business .................................. 3
BUSTEC 302 (BUS 41) Computer Keyboarding or
Keyboarding speed verification at 25 wpm or better .......... 0-2
MKT 300 (20) Principles of Marketing or
MGT 362 (24) Techniques of Management ......................... 3
CISC 310 (CIS 3) Intro to Computer Information Science .......... 3
ECEN 302 (1A) Principles of Macroeconomics ..................... 3

Management Information Systems:
CISA 305 (CIS 11AX) Word Processing .................................. 2
CISA 315 (CIS 12AX) Intro to Electronic Spreadsheets .......... 2
CISA 320 (CIS 13A) Database Management ............................ 1
CISC 320 (CIS 14A) Operating Systems ................................. 1
CISP 320 (CIS 36A) COBOL Programming .............................. 4
CISP 370 (CIS 38) Beginning Visual BASIC ......................... 4
CISP 300 (CIS 41) Algorithm Design/Problem Solving .......... 3

Eight (8) units selected from: ............................................. 8
CISA 306 (CIS 118X), 316 (CIS 12BX), 321 (CIS 13B),
330 (CIS 17A), 340 (CIS 15A), 350 (CIS 18A);
CISC 321 (CIS 14B), 355 (CIS 16AX);
CISP 321 (CIS 36B), 350 (CIS 37); STAT 300 (1).

TOTAL UNITS REQUIRED ..................................................... 50-52

Suggested Electives:
ACCT 311 (1B); BUSTEC 303 (BUS 42); BUS 498 (98);
CISA 331 (CIS 17B); CISC 356 (CIS 16BX); ECEN 304 (1B).

* NOTE: If student plans to transfer to a 4-year institution,
recommend selecting option that is identified with an asterisk.

General Education Graduation Requirements - See page 18.

CERTIFICATE
Management Information Systems ~ Programming COBOL
CODE #1941

REQUIRED PROGRAM .............................................................. Units
BUSTEC 302 (BUS 41) Computer Keyboarding or
Keyboarding speed verification at 25 wpm or better .......... 0-2
CISC 310 (CIS 3) Intro to Computer Information Science .......... 3
CISA 320 (CIS 13A) Introduction to Database Management .......... 1
CISA 321 (CIS 13B) Intermediate Database Management .......... 1
CISP 320 (CIS 36A) COBOL Programming .............................. 4
CISP 321 (CIS 36B) Advanced COBOL Programming ................. 4
CISP 350 (CIS 37) Database Programming ............................ 3
CISP 300 (CIS 41) Algorithm Design/Problem Solving .......... 3
CISC 498 (CIS 98) Work Experience in CIS .......................... 1-4

TOTAL UNITS REQUIRED .................................................... 20-25
CERTIFICATE  
Management Information Systems ~  
Application Data Entry  
CODE #1076  
This certificate is designed for persons who need to know how to perform computer-related data entry. Students who continue their education by pursuing another Business Technology or Management Information Systems certificate may do so without repeating any courses completed for this certificate.

REQUIRED PROGRAM .................................................................................. Units  
CISC 302 (CIS 1X) Computer Familiarization ........................................... 2  
CISC 310 (CIS 3) Intro. to Computer Info Science ...................................... 3  
CISA 305 (CIS 11AX) Beginning Word Processing ...................................... 2  
BU STEC 101 (BUS 53) Computer Keyboarding: 10 Key ............................ 1  
BU STEC 110 (BUS 52) Administrative Procedures .................................... 3  
BU STEC 302 (BUS 41) Computer Keyboard Formatting ............................ 2  
BU STEC 303 (BUS 42) Computer Keyboard Formatting ............................ 2  
TOTAL UNITS REQUIRED ........................................................................ 12-13

CERTIFICATE  
Management Information Systems ~  
Information Processing  
CODE #1079  
This certificate is designed for the person who needs familiarity with the most common computerized business application programs.

REQUIRED PROGRAM .................................................................................. Units  
Management Information Systems—Application Data Entry Certificate (Code #1076) .................................................................. 12-13  
BUS 310 (8) Business Communication ................................................... 3  
CISA 306 (CIS 11BX) Intermediate Word Processing ............................... 2  
CISA 315 (CIS 12AX) Intro to Electronic Spreadsheets ................................ 2  
CISA 320 (CIS 13A) Introduction to Database Management ..................... 1  
TOTAL UNITS REQUIRED ........................................................................ 20-21

CERTIFICATE  
Management Information Systems ~  
Application Analyst  
CODE #1075  
This certificate is designed for the person who needs training beyond the ability to use computerized business application programs that support the office application environment. This course of study would be appropriate for the user who is responsible for general PC use in the office.

REQUIRED PROGRAM .................................................................................. Units  
Management Information Systems—Application Technician Certificate (Code #1078) .................................................................. 26-27  
CISC 321 (CIS 14B) Intermediate Operating Systems .................................. 1  
CISC 355 (CIS 16AX) Intro to Data Communications .................................... 1.5  
CISA 330 (CIS 17A) Desktop Publishing ................................................... 2  
CISA 331 (CIS 17B) Intermediate Desktop Publishing .................................. 2  
TOTAL UNITS REQUIRED ........................................................................ 32.5-33.5

CERTIFICATE  
Management Information Systems ~  
Application Manager  
CODE #1077  
This certificate focuses on financial accounting, programming, and systems analysis for the applications manager needing additional problem-solving skills appropriate to business and government.

REQUIRED PROGRAM .................................................................................. Units  
Management Information Systems—Application Analyst Certificate (Code #1075) .................................................................. 32.5-33.5  
ACCT 301 (1A) Financial Accounting ....................................................... 4  
CISP 370 (CIS 38) Beginning Visual BASIC ............................................. 4  
CISP 320 (CIS 36A) COBOL Programming ............................................... 4  
CISP 321 (CIS 36B) Advanced COBOL Programming ............................... 4  
CISP 300 (CIS 41) Algorithm Design/Problem Solving .............................. 3  
CISP 456 (CIS 51) Data Process System Analysis & Design ..................... 4  
TOTAL UNITS REQUIRED ........................................................................ 55.5-56.5

CERTIFICATE  
Management Information Systems ~  
Application Technician  
CODE #1078  
This certificate provides additional training in the use of the most common computerized business application programs. This course of study would be appropriate for a user who is the lead person in an office.

REQUIRED PROGRAM .................................................................................. Units  
Management Information Systems—Information Processing Certificate (Code #1079) .................................................................. 20-21  
CISA 316 (CIS 12BX) Intermediate Electronic Spreadsheets .................... 2  
CISA 321 (CIS 13B) Intermediate Database Management ......................... 1  
CISC 320 (CIS 14A) Operating Systems .................................................... 1  
CISA 340 (CIS 15A) Presentation Graphics .............................................. 2  
TOTAL UNITS REQUIRED ........................................................................ 26-27
Management Information Systems ~  
E-Business Infrastructure  

This program is designed for those wishing to prepare for entry-level positions on the infrastructure side of the emerging E-business industry. The program also provides a general background for those exploring E-business options in existing careers. The courses are designed to provide students with the knowledge and ability needed to profitably respond to this emerging and evolving industry. The certificate prepares students for positions that participate in the construction and implementation of E-business environments that involve Internet and Intranet processes and communications. Completers of this certificate will possess knowledge of the technical infrastructure that underlies the facilitation of business transactions (such as business-to-business, business-to-consumer, and consumer-to-consumer) over the Internet.

REQUIRED PROGRAM ............................................................... Units  

E-Business Cluster:  
Choose three (3) units from the following: ...................................... 3  
CISW 380 (24) E-Business: Intro & Environ:  
Tech & Infrastructure (3)  
CISW 380.1 (24A) E-Business: Intro and Environment (1.5)  
CISW 380.2 (24B) E-Business: Tools and Techniques (1.5)  
BUS 360 (24) E-Business: Intro & Environ:  
Tech & Infrastructure (3)  
BUS 360.1 (24A) E-Business: Intro and Environment (1.5)  
BUS 360.2 (24B) E-Business: Tools and Techniques (1.5)  

Web Cluster: 
Choose four (4) or more units from the following: ......................... 4  
CISC 305 (21A) Introduction to the Internet (1)  
CISC 306 (21B) Intro to Web Page Creation (1)  
CISW 300 (22) Web Publishing (3)  
CISW 410 Middleware Web Scripting (4)  

Graphics Cluster: 
Choose four (4) or more units from the following: ......................... 4  
ARTNM 324 (20) Digital Design (3)  
ARTNM 326 (22) Digital Painting (3)  
CISW 350 (21G) Imaging for the Web (1)  
PHOTO 400 (57) Digital Imaging (3)  
PHOTO 410 (59) Advanced Digital Imaging (3)  

Open Electives:  
Choose four (4) or more units from the following: ......................... 4  
Any ACCT, BUS, CISA, CISN, CISW, CISP, ECON, or MKT course  

TOTAL UNITS REQUIRED ........................................................... 15

Computer Information Science  
- Core (CISC)  

CISC 290  
Exploring CIS Careers  
1 Unit  
Formerly: CIS 94  
Prerequisite: None  
Hours: 18 hours LEC  
An introductory course about the requirements of careers in Computer Information Science. This includes more traditional computer disciplines of hardware and programming as well as evolving disciplines of web design, computer graphics, computer imaging, artificial intelligence and robotics. The course emphasizes working relationships and ethics, on-the-job realities through research and job-shadowing, transitions to school/career, networking with industry, and how to best present yourself to business. This is a course designed to assist students make a decision to pursue a career or course of study in the computer field. Recommended for all students thinking of working in the computer field.

CISC 295  
Independent Studies  
in Computer Information Science - Core  
1-3 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

CISC 299  
Experimental Offering  
in Computer Information Science - Core  
.5-4 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

CISC 302  
Computer Familiarization  
2 Units  
Formerly: CIS 1X  
Prerequisite: None  
Advisory: BUSTEC 302.  
Course Transferable to CSU  
Hours: 36 hours LEC  
This is an introductory course to provide general knowledge on how computers work, computer terminology and the impact of computers on society and the work environment. Beginning level hands-on instruction using an operating system, word processing software, spreadsheet software, and the Internet will be emphasized. Students will be reading and interpreting written and oral instructions of a technical nature. This course is the same as JOUR 330, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.
CISC 303  
Computer Skills for Educators  3 Units
Formerly: CIS 4  
Prerequisite: None  
Advisory: BUSTEC 302.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is designed for educators of young children. The course will provide a comprehensive overview of the use of computer technology in the classroom in order to enhance the educational advancement of the child and facilitate ease of instruction and administration for the teacher. The course will provide hands-on experience in the use of computer applications, educational software, and problem-solving skills. This course is the same as ECE 302, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

CISC 305  
Introduction to the Internet  1 Unit
Formerly: CIS 21A  
Prerequisite: None  
Advisory: CISC 302 or 310.  
Course Transferable to CSU  
Hours: 18 hours LEC  
Students will learn how the Internet works, how to connect, and how to use the basic services. Topics will include the World Wide Web, E-mail, chat, news groups and mailing lists, Telnet, and File Transfer Protocol (FTP). Students will also be introduced to HyperText Markup Language (HTML).

CISC 306  
Introduction to Web Page Creation  1 Unit
Formerly: CIS 21B  
Prerequisite: CISC 305. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC  
The student will be able to produce a Web page, including design, layout, construction, and presentation. HTML will be used to format a Web page. This course may be taken four times for credit on different software programs.

CISC 308  
Exploring Computer Environments and the Internet  1 Unit
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
The course acquaints the student with the fundamentals of microcomputer hardware, software and computer networking, focusing on widely used hardware and operating system, IBM PC's and the Windows operating system. The fundamentals of the Internet and Internet tools are introduced.

CISC 309  
Applied Applications Lab  .5 Unit
Formerly: CIS 1L  
Prerequisite: None  
Corequisite: Concurrent enrollment in at least one of the following courses is required: CISC 302; CISA 305, 306, 315, 316, 340.  
Course Transferable to CSU  
Hours: 27 hours LAB  
This course will complement CISC 302; CISA 305, 306, 315, 316, 340. Students will complete lab assignments from these courses and will be given additional experience with individualized assistance. The material will reinforce the concepts and techniques presented in these courses.

CISC 310  
Introduction to Computer Information Science  3 Units
Formerly: CIS 3  
Prerequisite: None  
Advisory: BUSTEC 302.  
Course Transferable to UC/CSU  
Hours: 54 hours LEC  
This course is an introduction to the computer field covering the function and concepts of hardware, computer programming, application and operating software, data communications, the Internet, databases, employment opportunities, and the social impact of the computer. Students will be reading and interpreting written and oral instruction of a technical nature.

CISC 320  
Operating Systems  1 Unit
Formerly: CIS 14A  
Prerequisite: None  
Advisory: CISC 302 or 310.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course introduces the student to the concepts of an operating system (for example, Windows, AS 400, or UNIX). Students may receive one unit credit for each topic offered. Consult the class schedule for specific topics.

CISC 321  
Intermediate Operating Systems  1 Unit
Formerly: CIS 14B  
Prerequisite: CISC 320. Grade of “C” or better required to meet prerequisite. Computer programing experience highly recommended.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course is intended to advance the students knowledge of operating systems, (for example, DOS, Windows or UNIX). The class covers the study of advanced commands, effective utility use, advanced batch files/script files, program logic, disk organization, making user-friendly systems, anticipating and preventing system problems. The class may be taken more than once for credit, if the course covers a different operating system than that for which the student had previously received credit.
CISC 322  
Advanced Operating Systems  1 Unit  
Formerly:  CIS 14C  
Prerequisite: CISC 321. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course is an extension of concepts learned in Intermediate Operating Systems. It covers issues including: system maintenance, system optimization, system protection, adding system utilities, scripting, defining user parameters, trouble shooting, device and file sharing. Students may receive one unit of credit for each topic offered. Consult the class schedule for specific topics. This course may be taken four times for credit.

CISC 323  
Linux Operating System  1 Unit  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course introduces the Linux operating system for desktop computers. Concepts include kernels, file structures, Daemons, shells, GUIs, procedures for installing software, creation of user accounts, shell commands, scripts, and file security. Students may receive one unit of credit for each new version of an operating system offered or for a different operating system offered. Consult the class schedule for specific operating system offered. This course may be taken four times for credit.

CISC 324  
Intermediate Linux Operating System  1 Unit  
Prerequisite: CISC 323 with a grade of “C” or better  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course covers the Linux operating system for desktop computers. It covers advanced shell scripting, C Shell, K Shell, and BASH. Other topics covered in this course include decision-making logic, looping, and nesting. Students may receive one unit of credit for each new version of an operating system offered or for a different operating system offered. Consult the class schedule for specific operating system offered. This course may be taken four times for credit.

CISC 329  
Operating Systems - Update  .5-1 Units  
Formerly:  CIS 14U  
Prerequisite: CISC 321. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 9 hours LEC  
New versions of computer software are released on a regular basis. The purpose of this course is to help students develop advanced skills and describe the changes and improvements in the software. This course assumes that students have knowledge of existing software and are looking to update their skills and develop new capabilities. Credit will be awarded on the basis of one-half unit for each nine hours of lecture. This course may be taken four times for credit on new versions of software.

CISC 355  
Introduction to Data Communications  1.5 Units  
Formerly:  CIS 16AX  
Prerequisite: None  
Course Transferable to CSU  
Hours: 27 hours LEC  
Students will learn to select and install a peer-to-peer network to meet their specific home network needs. Other topics this course will cover include how to administer and troubleshoot a home network; how to protect your network from viruses and worms; broadband versus DSL connections; wired versus wireless networks; how to connect computers for multiplayer gaming; sharing hardware and software; and how to increase productivity in a small office. This course will teach you the skills necessary to turn a multi-computer home into a fully connected network.

CISC 356  
Introduction to Local Area Networks  1.5 Units  
Formerly:  CIS 16BX  
Prerequisite: None  
Course Transferable to CSU  
Hours: 27 hours LEC  
From hubs to servers, this course will introduce students to the exciting field of computer networking. Beginners will become comfortable with the concepts and vocabulary of computer networking and will gain hands-on experience in basic networking technology. Some topics include the Internet and its tools; the diversity of Network Operating Systems one can use in a Local Area Network; how to configure communication protocols, such as TCP/IP; the distinction between a Local Area Network and a Wide Area Network; and the fundamentals of network architecture and design.

CISC 360  
Microcomputer Support and Maintenance  4 Units  
Formerly:  CIS 29  
Prerequisite: CISC 323 and 356 with grades of “C” or better.  
Advisory: CISC 310.  
Course Transferable to CSU  
Hours: 36 hours LEC ; 108 hours LAB  
Throughout this course you will learn all of the technical skills necessary to become an A+ certified technician. These skills will be taught through a series of hands-on lab exercises and review questions designed to teach and improve your PC configuration and troubleshooting skills, which are necessary to function as a PC support person or help-desk technician.

CISC 495  
Independent Studies in Computer Information Science - Core  1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
CISC 498
Work Experience in Computer Information Science 1-4 Units
Formerly: CIS 98
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 336)

CISC 499
Experimental Offering in Computer Information Science - Core .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

Computer Information Science - Applications (CISA)

CISA 160
Project Management Techniques and Software 3 Units
Formerly: CIS 75
Prerequisite: None
Advisory: CISC 302 or 310.
Hours: 54 hours LEC
This is an introductory course covering the responsibilities of a project manager. It includes the knowledge needed to manage project resources. The course will also introduce the student to the use of project management software to track project resources, tasks and milestones. This course is the same as MGMT 142, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

CISA 299
Experimental Offering in Computer Information Science - Applications .5-4 Units
Prerequisite: None
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

CISA 305
Beginning Word Processing 2 Units
Formerly: CIS 11A
Prerequisite: BUSTEC 302 or keyboarding speed verification at 25 wpm or better. Grade of “C” or better required to meet prerequisite.
Advisory: CISC 302 or 310.
Course Transferable to CSU
Hours: 36 hours LEC
This is a course designed to introduce students to the use of word processing programs. The course includes basic word processing operations: formatting, editing, saving, retrieving, printing text and creating and editing simple tables. It also includes business document formatting. Students may receive two units credit for each topic offered. Consult the class schedule for specific topics. This course may be taken four times for credit.

CISA 306
Intermediate Word Processing 2 Units
Formerly: CIS 11B
Prerequisite: CISA 305. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC
This course is designed to build upon previous training in the use of word processing. The course covers intermediate to advanced word processing features, such as styles, macros, outlines, document notations, forms, charts, and mail merge. Also covered are integrating word processing with other applications and creating documents for use on the Internet, i.e. web pages and e-mail attachments in word processing. Advanced business document formatting will also be included. Students may receive two units credit for each topic offered. Consult the class schedule for specific topics.

CISA 308
Exploring Word Processing and Presentation Software 1 Unit
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
The course introduces the student to the most widely used word processing and presentation software, Microsoft Word and PowerPoint. The basic features and skills of creating, editing, formatting, inserting tables and graphics and enhancing word documents and power point presentations are covered.

CISA 309
Word Processing - Update .5-1 Units
Formerly: CIS 11U
Prerequisite: CISA 306. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 18 hours LEC
New versions of computer software are released on a regular basis. The purpose of this course is to help students develop advanced skills and describe the changes and improvements in the software. This course assumes that students have knowledge of existing software and are looking to update their skills and develop new capabilities. Credit will be awarded on the basis of one-half unit for each nine hours of lecture. This course may be taken four times for credit on new versions of software.

CISA 315
Introduction to Electronic Spreadsheets 2 Units
Formerly: CIS 12AX
Prerequisite: None
Advisory: CISC 302 or 310.
Course Transferable to CSU
Hours: 36 hours LEC
This course is designed to introduce the student to the use of spreadsheet programs. The course will include: designing a spreadsheet, developing formulas for automatic calculations, using special functions, developing what-if models, producing charts, performing spreadsheet data base functions, and producing reports. Students will be using mathematical concepts and skills. Students may receive two units credit for each topic offered. Consult the class schedule for specific topics.
CISA 316  
**Intermediate Electronic Spreadsheets**  2 Units  
Formerly: CIS 12BX  
Prerequisite: CISA 315. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 36 hours LEC  
This course introduces students to the intermediate features of spreadsheet programs. The course will cover macros, data tables and lookup functions, logical expressions as well as advanced file operations, functions, and convenience commands. Students will follow spreadsheet templates and design their own sheets. Students may receive two units credit for each topic offered. Consult the class schedule for specific topics.

CISA 318  
**Exploring Spreadsheet Software**  1 Unit  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
The course acquaints the student with widely used spreadsheet software. The basic features and skills of editing a workbook, using basic formulas and functions in a workbook, formatting a workbook, inserting and formatting charts and graphics in a workbook and analyzing and presenting a workbook are covered.

CISA 319  
**Electronic Spreadsheet-Update**  .5-1 Units  
Formerly: CIS 12U  
Prerequisite: CISA 316. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 9 hours LEC  
New versions of computer software are released on a regular basis. The purpose of this course is to help students develop advanced skills and describe the changes and improvements in the software. This course assumes that students have knowledge of existing software and are looking to update their skills and develop new capabilities. Credit will be awarded on the basis of one-half unit for each nine hours of lecture. This course may be taken four times for credit on new versions of software.

CISA 320  
**Introduction to Database Management**  1 Unit  
Formerly: CIS 13A  
Prerequisite: None  
Advisory: CISC 302 or 310.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course is designed to introduce the student to the use of database management programs on the computer. The course will include designing a database; accessing, searching and updating files; and designing and producing printed reports. Students will be reading and interpreting written and oral instructions of a technical nature. Students may receive one unit credit for each topic offered. Consult the class schedule for specific topics.

CISA 321  
**Intermediate Database Management**  1 Unit  
Formerly: CIS 13B  
Prerequisite: CISA 320. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course will extend the capabilities of students who have started to use a microcomputer database. Topics and laboratory will include complex relational databases, form design, intermediate report design, advanced queries, OLE objects, macros and an introduction to visual programming. Students may receive one unit credit for each topic offered. Consult the class schedule for specific topics. This course may be taken four times for credit.

CISA 329  
**Database Management - Update**  .5-1 Units  
Formerly: CIS 13U  
Prerequisite: CISA 321. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 9 hours LEC  
New versions of computer software are released on a regular basis. The purpose of this course is to help students develop advanced skills and describe the changes and improvements in the software. This course assumes that students have knowledge of existing software and are looking to update their skills and develop new capabilities. Credit will be awarded on the basis of one-half unit for each nine hours of lecture. This course may be taken four times for credit on new versions of software.

CISA 330  
**Desktop Publishing**  2 Units  
Formerly: CIS 17A  
Prerequisite: None  
Advisory: CISC 302 or 310; and CISA 305.  
Course Transferable to CSU  
Hours: 27 hours LEC ; 27 hours LAB  
This course will cover the introductory elements of desktop publishing. The course is taught in three modules with a project attached to each module. The course covers hardware and software, elements of design, computer graphics, text composition, page layout, and integration of text and graphics. Projects may include, but are not limited to: business cards, stationery, logos, covers, flyers, brochures, newsletters. This course is the same as JOUR 335. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.
CISA 331
Intermediate Desktop Publishing  2 Units
Formerly:  CIS 17B
Prerequisite: CISA 330 or JOUR 335. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 27 hours LEC; 27 hours LAB
This course will cover the intermediate elements of desktop publishing. The course is taught in three modules with a project attached to each module. The course covers intermediate hardware and software, elements of intermediate design, graphics and text composition, multi-page layout, design for publishing presentations, project management and single- and multi-page documents. Projects may include, but are not limited to, reports, slicks, slides, overheads, posters, transparencies, billboards, brochures, newsletters. This course is the same as JOUR 336. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

CISA 339
Desktop Publishing - Update  .5-1 Units
Formerly:  CIS 17U
Prerequisite: CISA 331. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 9 hours LEC; 9 hours LAB
New versions of computer software are released on a regular basis. The purpose of this course is to help students develop advanced skills and describe the changes and improvements in the software. This course assumes that students have knowledge of existing software and are looking to update their skills and develop new capabilities. Credit will be awarded on the basis of one-half unit for each nine hours of lecture. This course may be taken four times for credit on new versions of software.

CISA 340
Presentation Graphics  2 Units
Formerly:  CIS 15A
Prerequisite: None
Advisory: CISC 302 or 310.
Course Transferable to CSU
Hours: 27 hours LEC; 27 hours LAB
This course is an introduction to the use of the computer to generate graphics used in business. Topics covered include hardware (screens, printers, input devices), software (paint, chart, CAD), and types of graphics (pictures, graphs, charts, designs). Students may receive two units of credit for each topic offered. Consult the class schedule for specific topics. This course may be taken four times for credit on different software programs.

CISA 349
Presentation Graphics - Update  .5-1 Units
Formerly:  CIS 15U
Prerequisite: CISA 341. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 9 hours LEC
New versions of computer software are released on a regular basis. The purpose of this course is to help students develop advanced skills and describe the changes and improvements in the software. This course assumes that students have knowledge of existing software and are looking to update their skills and develop new capabilities. Credit will be awarded on the basis of one-half unit for each nine hours of lecture. This course may be taken four times for credit on new versions of software.

CISA 350
Groupware  1 Unit
Formerly:  CIS 18A
Prerequisite: None
Advisory: CISC 302 or 310.
Course Transferable to CSU
Hours: 18 hours LEC
This course introduces desktop management software which allows students to organize and communicate across microcomputer applications. Using different Windows-based software, the student will design and manage electronic mail messages, faxes, appointments, contacts, task activities, and notes. Topics include calendar manipulation, information management, and profile interfaces. This course may be taken three times for credit on different software programs or operating systems.

CISA 405
Scripting for Applications  3 Units
Formerly:  CIS 26
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course is an introduction to the application scripting. Topics include OS environment, office suites, scripting languages, user interface, creating macros, using application objects, properties and methods, customizing applications, linking application data, buttons, boxes, graphics, data handling, error handling, control, and form handling. This course will enable students to understand object oriented programming concepts like forms, methods, projects and modules. Students will design useful application macros and scripts. Students may receive three units of credit for each topic offered. Consult the class schedule for specific topics. This course may be taken four times for credit.

CISA 499
Experimental Offering in Computer Information Science - Applications  .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)
Computer Information Science
- Networking (CISN)

CISN 300
Network Systems Administration 3 Units
Formerly: CIS 80
Prerequisite: None.
Corequisite: CISC 323 and 356.
Advisory: CISC 302, 308, or 310.
Course Transferable to CSU
Hours: 45 hours LEC; 27 hours LAB
This course covers the administration of a server in a client/server network. Topics include designing a basic network, installing and configuring a network operating system, managing network security with user and group accounts, creating directory structures and network shares, setting up and managing network printers, backing up servers, monitoring and troubleshooting network resources, and establishing policies and procedures for network operations. Students may receive three units of credit for each new version of an operating system offered or for a different operating system offered. Consult the class schedule for specific operating system offered. This course may be taken four times for credit.

CISN 301
Network Client Systems Administration 3 Units
Prerequisite: None
Corequisite: CISC 323 and 356.
Advisory: CISC 302, 308, or 310.
Course Transferable to CSU
Hours: 45 hours LEC; 27 hours LAB
This course covers the administration of a client in a client/server network. Topics include designing a basic network, installing and configuring a client network operating system, managing network security with user and group accounts, creating directory structures and network shares, setting up and managing network printers, backing up servers, monitoring and troubleshooting network resources, and establishing policies and procedures for network operations. Students may receive three units of credit for each new version of an operating system offered or for a different operating system offered. Consult the class schedule for specific operating system offered. This course may be taken four times for credit.

CISN 302
Intermediate
Network Systems Administration 3 Units
Formerly: CIS 81
Prerequisite: CISN 300 with a grade of “C” or better.
Course Transferable to CSU
Hours: 45 hours LEC; 27 hours LAB
This course covers advanced administrative tasks of a server in a client/server network. Topics include configuring the server environment, implementing system policies, implementing and managing fault-tolerant disk volumes, managing applications, installing and managing connectivity for different network and client operating systems, managing remote servers, implementing directory replication and file synchronization, and troubleshooting advanced network problems. Students may receive three units of credit for each new version of an operating system offered or for a different operating system offered. Consult the class schedule for specific operating system offered. This course may be taken four times for credit.

CISN 304
Networking Technologies 3 Units
Formerly: CIS 63
Prerequisite: CISC 356. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 54 hours LEC
This is an introductory course to teaching the basic concepts and applications of data communications and networking, including digital signal representation, data codes, media, and data transmission. Other topics include the OSI model, protocols, network topologies, network architecture, network standards, network security, and network management.

CISN 305
Managing a Windows Network Environment 3 Units
Prerequisite: CISN 302 with a grade of “C” or better.
Course Transferable to CSU
Hours: 45 hours LEC; 27 hours LAB
This course provides students with knowledge and skills necessary to administer, manage, support, and troubleshoot information systems that incorporate medium to large Windows networks. The student will learn to create, configure, and manage file, print, and web resources; manage data storage; create shared resources and configure access rights; monitor and manage network security; configure and troubleshoot TCP/IP on servers and client computers; monitor and troubleshoot server health and performance; deploy software by using Group Policy; and implement and troubleshoot Terminal Services.

CISN 306
Advanced Network Systems Administration 3 Units
Formerly: CIS 82
Prerequisite: CISN 302. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 45 hours LEC; 27 hours LAB
Students will learn to install, configure, and administer Microsoft Windows Active Directory services. The course also focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers. Students will use Group Policies to configure and manage the user desktop environment, to configure and manage software, and implement and manage security settings. Students will install and manage Windows Domains and Domain Controllers through Active Directory.
**CISN 308**  
*Internetworking with TCP/IP*  
3 Units  
Formerly: CIS 84  
Prerequisite: CISN 302. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
*Hours: 45 hours LEC ; 27 hours LAB*  
This course will enable students to install, configure, manage and support a network infrastructure that uses the Microsoft Windows Server products. The course focuses heavily on TCP/IP and related services, including DHCP Server service, DNS Server service, WINS, network security protocols, Public Key Infrastructure (PKI), Internet Protocol Security (IPSec), remote access. The course also enables the student to configure Windows as a network router, configure Internet access for a network, configure a Web server, and manage a Windows deployment using Remote Installation Services (RIS). The student will also learn to enable network connectivity between NetWare, Macintosh, and UNIX networks.

**CISN 309**  
*Network Systems Administration-Update*  
1-3 Units  
Formerly: CIS 80U  
Prerequisite: CISN 302. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
*Hours: 9 hours LEC ; 27 hours LAB*  
New versions of network operating systems are released on a regular basis. The purpose of this course is to help students develop advanced skills and describe the changes and improvements in the network operating system. This course assumes that students have knowledge of existing network operating systems and are looking to update their skills and develop new capabilities. Credit will be awarded on the basis of one-half unit for each nine hours of lecture and for each 27 hours of lab. This course may be taken four times for credit on new versions of network operating systems.

**CISN 320**  
*Designing Windows Directory Services*  
3 Units  
Formerly: CIS 55  
Prerequisite: CISN 306. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
*Hours: 45 hours LEC ; 27 hours LAB*  
This course provides students with the knowledge and skills necessary to design a Microsoft Windows directory services infrastructure in an enterprise network. At the end of the course, students will be able to describe guidelines for gathering business and administrative information from an organization, and explain how an architect uses that information to design an Active Directory structure for an enterprise; design an Active Directory naming strategy; develop a plan to secure and delegate administrative authority over Active Directory objects based on the administrative model of an organization; identify business needs and scenarios that may require modifications of the Active Directory schema, create an Active Directory design based on administrative Group Policy requirements defined by business needs; design a site topology for a multi-domain organization; and design an Active Directory replication plan based on the site topology design.

**CISN 322**  
*Designing a Secure Windows Network*  
3 Units  
Formerly: CIS 56  
Prerequisite: CISN 306. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
*Hours: 45 hours LEC ; 27 hours LAB*  
This course provides students with the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks using Microsoft Windows technologies. Students will learn how to provide secure access to local network users, to remote users and remote offices, between private and public networks, and provide secure access to partners. Group Policy, site topology, Virtual Private Networks (VPNs), e-commerce, printer security, and security for non-Microsoft clients are also taught in the course.

**CISN 324**  
*Designing Windows Networking Services*  
3 Units  
Formerly: CIS 57  
Prerequisite: CISN 308. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
*Hours: 45 hours LEC ; 27 hours LAB*  
This course provides students with the knowledge and skills necessary to create a networking services infrastructure design that supports the required network applications. Each module provides a solution based on the needs of the organization. The course includes designing and planning for Dynamic Host Configuration Protocol (DHCP), Domain Name Service (DNS) Internet Protocol (IP) address configuration, routing solutions using Open Shortest Path First (OSPF) and Internet Group Management Protocol (IGMP), Internet connectivity design using Network Address Translation, Internet connectivity using Microsoft Proxy Server 3.0, remote access connectivity; and a management strategy for networking services.

**CISN 330**  
*Data Communication and Networking Fundamentals*  
3 Units  
Formerly: CIS 79A  
Prerequisite: CISC 356 with a grade of “C” or better.  
Course Transferable to CSU  
*Hours: 45 hours LEC ; 27 hours LAB*  
This course is an introduction to data communication and networking fundamentals. It surveys data communication hardware and software components and basic networking concepts. Topics covered include data communication, the OSI Model, IP addressing, routing concepts, LAN media, and network management and analysis.

**CISN 331**  
*Networking Theory and Routing Technologies*  
3 Units  
Formerly: CIS 79B  
Prerequisite: CISN 304 or 330. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
*Hours: 54 hours LEC ; 18 hours LAB*  
This course is an introduction to networking theory and routing technologies, including the OSI Model, beginning router configurations, routed and routing protocols.
CISN 332
Advanced Routing and Switching 3 Units
Formerly: CIS 79C
Prerequisite: CISN 331. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 54 hours LEC ; 18 hours LAB
This course provides advanced routing and switching technologies. Topics include advanced router configurations, network management, and advanced network design, LAN switching, and VLAN’s.

CISN 333
Wide-Area Networks and Project-Based Learning 3 Units
Formerly: CIS 79D
Prerequisite: CISN 332. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 54 hours LEC ; 18 hours LAB
This course develops knowledge and skills to design and configure advanced wide area network (WAN) projects.

CISN 370
Web Server Administration 3 Units
Formerly: CIS 86
Prerequisite: CISN 302. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 45 hours LEC ; 27 hours LAB
This course provides students with the knowledge and skills required to support the various features of IIS and Proxy Server. The course covers Proxy architecture, methods of controlling Internet access, using Microsoft Management Console to administer Proxy Server. Students will learn how to install, configure, and implement all components that comprise IIS including Microsoft World Wide Web (www) Service, Microsoft File Transfer Protocol (FTP) Service, Microsoft Simple Mail Transfer Protocol (SMTP), Microsoft Network News Transfer Protocol (NNTP), Microsoft Certificate Server, Index Server, Transaction Server, and Microsoft Site Server Express. Students will also learn to implement security on IIS. Active Server Pages will be explained and the student will learn the basic programming techniques of Active Server Pages (ASPs).

CISN 374
Messaging Server Administration 3 Units
Formerly: CIS 87
Prerequisite: CISN 302. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 45 hours LEC ; 27 hours LAB
This course provides students with the knowledge and skills required to deploy and administer/support Microsoft Exchange Server. This course covers use of Exchange Server to create and manage recipient objects; maintain an existing Exchange Server organization, as well as design and implement a new organization; create and manage public folders; perform basic backup procedures; monitor server performance and configure link monitors between connected sites; and manage electronic forms in an organization. The student will also create and configure the various messaging connectors; configure directory and public folders replication; and configure Exchange Server for connectivity to the Internet. The course also examines how Exchange Server provides for connectivity to foreign messaging systems such as Lotus cc: Mail, Lotus Notes, and Microsoft Mail and Schedule+.

CISN 378
Database Administration for Microsoft SQL Server 3 Units
Formerly: CIS 58
Prerequisite: CISN 302 with a grade of “C” or better.
Course Transferable to CSU
Hours: 45 hours LEC ; 27 hours LAB
This course provides students with the knowledge and technical skills required to install, configure, administer, and troubleshoot the client/server database management system of Microsoft SQL Server. The student will also learn to manage files and databases; choose and configure a login security method; plan and implement database permissions; secure SQL Server in an enterprise network; perform and automate administrative tasks; create custom administrative tools; monitor and optimize SQL Server performance; and replicate data from one SQL Server to another.

CISN 380
Microsoft Systems Management Server 3 Units
Formerly: CIS 59
Prerequisite: CISN 302. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 45 hours LEC ; 27 hours LAB
This course provides students with the knowledge and skills required to administer and to deploy and support Microsoft Systems Management Server (SMS). Students will learn to discover and install clients, distribute software to client computers, collect hardware and software inventory, use software metering features, and use the remote tools. Students will learn to troubleshoot common errors. Students will learn how to design and implement different types of sites, establish a site hierarchy, and configure site-to-site communications. The student will also use Network Monitor to trace a task from its initiation through to its completion and trace network traffic.

CISN 490
Networking Helpdesk Practicum 2 Units
Formerly: CIS 16C
Prerequisite: CISC 308 and 356 with grades of “C” or better.
Course Transferable to CSU
Hours: 24 hours LEC ; 36 hours LAB
This course is an introduction to computer and networking support for a Local Area Network. It includes lecture and hands-on application of helpdesk concepts and responsibilities, hardware and software troubleshooting in a networked environment, system documentation, and technical communication skills.

CISN 499
Experimental Offering in Computer Information Science - Networking .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Computer Information Science
- Programming (CISP)

CISP 300
Algorithm Design/Problem Solving 3 Units
Formerly: CIS 41
Prerequisite: None
Corequisite: CISC 310 (may be taken previously). Grade of “C” or better required to meet corequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is designed to assist the Computer Science major with the understanding of typical computer problems. Topics covered include assessing and analyzing computer problems in a top down, divide and conquer approach that leads to a programming solution. Students will create programming plans and detailed design documents from which source code versions of programs can be created.

CISP 310
Assembly Language Programming for Microcomputers 4 Units
Formerly: CIS 35A
Prerequisite: CISC 310. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
(CAN CSCI 10)
Hours: 72 hours LEC
This course teaches Assembly language programming using the Pentium family of microprocessors. The course will cover architecture, instruction set, addressing modes, interrupts and peripheral control. Program structure and operating system support features that are available to the Assembly language programmer will be studied. Structured programming and efficient design will be emphasized.

CISP 320
COBOL Programming 4 Units
Formerly: CIS 36A
Prerequisite: CISC 310 and CISP 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 72 hours LEC
This is a class in computer programming using the language COBOL, emphasizing structured program design, coding, and documentation. Laboratory assignments will cover a variety of input/output techniques, sequential and indexed sequential file access, and one and two dimensional table handling. The course is recommended for Business/MIS majors.

CISP 321
Advanced COBOL Programming 4 Units
Formerly: CIS 36B
Prerequisite: CISP 320. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 72 hours LEC
This course covers advanced COBOL concepts and programming techniques. The topics to be covered include sequential file processing, data editing, indexed sequential disk file processing, disk sorts, job control language, debugging languages and techniques, table handling, segmentation and subroutines. The course will emphasize structured design and structured programming utilizing “top down” and modular techniques.

CISP 340
FORTRAN Programming 3 Units
Formerly: CIS 33
Prerequisite: CISC 310 and CISP 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
(CAN CSCI 4)
Hours: 54 hours LEC
This is a class in computer programming using the language FORTRAN 77, which emphasizes mathematical problem-solving and the analysis of laboratory data. It is recommended for those students majoring in engineering or science technology.

CISP 350
Database Programming 3 Units
Formerly: CIS 37
Prerequisite: CISA 320 and three units in any programming language. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This is an introductory course in programming database. The topics include analysis and design, modular programming, screen displays and menus, and multiple databases. Students may receive three units credit for each topic offered. Consult the class schedule for specific topics. This course may be taken four times for credit.

CISP 351
Introduction to Relational Database Design and SQL 3 Units
Formerly: CIS 52A
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course is designed to introduce relational database technology, normalization, entity relationships, logical model design, and ISO-ANSI standard Structured Query Language (SQL). Topics covered include: database design, basic properties of a relational database such as relations, tables, primary keys, foreign keys and principles of normalization, simple SQL select statements, sorting and grouping data, joining tables, subqueries and views. The database design section focuses on logical model design and entity relationship (ER) modeling. Students will leave the course with a good working knowledge of database technology.
CISP 352  
Intermediate SQL 3 Units  
Formerly: CIS 52B  
Prerequisite: None  
Advisory: CISP 351.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course builds upon the Introduction to Relational Databases and SQL course with more in-depth SQL constructs common to most commercial database products and extensions to the SQL language. Topics include: complex joins including inner and outer joins, correlated subqueries, complex table definition, table and column constraints, Union, Intersection, Minus, triggers, procedures and packages.

CISP 353  
Application Development in a Client Server Environment 3 Units  
Formerly: CIS 53  
Prerequisite: None  
Advisory: CISP 352  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is designed for the intermediate level SQL programmer to design, create and deploy GUI applications that access relational database management systems. Topics include: GUI design fundamentals, data control and access methods (remote and local), creating datasets, implementing joins, transaction processing, multi-user data access, record locking, and deploying and installing applications on client workstations.

CISP 354  
Introduction to Relational Database Administration 3 Units  
Formerly: CIS 54  
Prerequisite: None  
Advisory: CISP 352.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is designed to introduce students to administering a relational database management system. Topics include: managing users, privileges, resources, and tablespaces; creating an operational database, managing database files; how to start up and shut down an instance or database, the data dictionary, transaction processing, and backup and recovery issues. Completion will provide students with sufficient knowledge for an entry level Database Administration position in industry.

CISP 356  
Relational Database Design and Information Retrieval 3 Units  
Prerequisite: CISP 350. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is designed to serve as a capstone course within the Database Design certificate. The course covers advanced database concepts. Topics include data analysis, the principal data models with emphasis on the relational model, entity-relationship diagrams, logical design, data administration and normalization.

CISP 360  
Introduction to Structured Programming 4 Units  
Formerly: CIS 32A  
Prerequisite: CISP 300. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 72 hours LEC  
This course is an introduction to structured programming. The topics covered include: top-down design, input/output considerations, control structures and flow control, variables, constants, the use of libraries, simple to intermediate data structures, functions, and arguments. An introduction into objects will be included.

CISP 365  
Structured Programming with PASCAL 4 Units  
Formerly: CIS 31  
Prerequisite: CISC 310. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
(CAN CSCI 12)  
Hours: 54 hours LEC ; 54 hours LAB  
This course introduces the student to Pascal, a language that emphasizes the concepts of structured programming. Topics include “top down” design, input/output, data types, control structures, functions and procedures. Students will design, code, test and run Pascal programs.

CISP 370  
Beginning Visual BASIC 4 Units  
Formerly: CIS 38  
Prerequisite: CISP 300 with a grade of “C” or better.  
Course Transferable to UC/CSU  
Hours: 72 hours LEC  
This course is an introduction to the Visual BASIC programming language. Topics include buttons, boxes, graphics, data handling, error handling, control, and form handling. This course will enable students to understand object oriented programming concepts like form, methods, projects, and modules and to design useful Windows.

CISP 371  
Intermediate Visual BASIC 4 Units  
Prerequisite: CISP 370. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 72 hours LEC  
This course covers the VB.NET language, data file creation and manipulation, programming with advanced controls, manipulation of database files with a VB.NET front end, development of web applications and web services, and class design and the use of objects.

CISP 371.1  
OOP Using Visual BASIC.NET 2 Units  
Prerequisite: CISP 370 with a grade of “C” or better.  
Course Transferable to CSU  
Hours: 36 hours LEC  
This course focuses on the object-oriented programming topics needed to create .NET database and web applications (CISP 371.2). The specific topics are: understanding the .NET Framework classes, saving data between application executions using data files, trapping and neutralizing run-time errors, creating custom classes and programming with objects of these classes, and using the .NET data structure.
CISP 371.2
Database and Web Programming with Visual BASIC.NET 2 Units
Prerequisite: CISP 371.1. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC
The focus of the course will be on creating VB.NET applications that execute on a server and are accessed through a client web browser, are distributed over a network, and/or are connected to a database. ADO.NET and ASP.NET technologies will be emphasized.

CISP 400
Object Oriented Programming with C++ 4 Units
Formerly: CIS 32B
Prerequisite: CISP 360 with a grade of “C” or better.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 72 hours LEC
This course is an intermediate C++ course designed to further enhance the students’ abilities to design and develop object-oriented programs. Included is an emphasis in higher level programming skills development. Detailed information into class design and implementation, function templates, dynamic data allocation, pointers, strings, arrays, control structures, operator overloading, inheritance, virtual functions, polymorphism, data stream input and output, exception handling and file processing.

CISP 401
Object Oriented Programming with JAVA 4 Units
Prerequisite: CISP 360 or 370. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 72 hours LEC
This course is an introduction to object oriented programming using the JAVA language. The student will learn the JAVA programming language as well as a JAVA compiler. Topics will include: creating JAVA Applications, writing JAVA Applet, using the Control Statements, creating JAVA Methods, declaring JAVA Arrays, Object-Based Programming, Object-Oriented Programming: Inheritance and Polymorphism, handling Strings and Characters, controlling graphics by using Graphics and JAVA2D, generating graphics by using Graphical User Interface Components, Exception Handling, Multithreading, and Managing Files and Streams handling.

CISP 402
JAVA - Data Handling 4 Units
Prerequisite: CISP 401 with a grade of “C” or better.
Course Transferable to CSU
Hours: 72 hours LEC
This course is an intermediate JAVA class. The student will enhance their knowledge in Java Application Program Interface (API) and programming skills. Topics will include Files and Streams, Networking, Multimedia (Images, Animation and Audio), Data Structures, Java Utilities Package and Bit Manipulation, Collections, Java Database Connectivity with JDBC, Servlets and JavaServer Pages (JSP).

CISP 403
JAVA - Smart Device Applications 4 Units
Prerequisite: CISP 402 with a grade of “C” or better.
Course Transferable to CSU
Hours: 72 hours LEC
This course covers Java Beans, J2ME, Security, and Advanced GUI and Web Services Topics. The student will learn Advanced Swing Graphical User Interface Components, Model-View-Controller, Graphics Programming with Java 2D and Java 3D, Java Beans Component Model, Security, advanced features of Java Database Connectivity (JDBC), Servlets, and JavaServer Pages (JSP), Java-Based Wireless Applications Development and J2ME, and Remote Method Invocation.

CISP 404
JAVA - Enterprise Applications 4 Units
Prerequisite: CISP 403 with a grade of “C” or better.
Course Transferable to CSU
Hours: 72 hours LEC
This course explores features of Enterprise JavaBeans (EJB) and Java 2 Platform, Enterprise Edition (J2EE). Students will gain knowledge of Session EJBs, Distributed Transactions, Entity EJBs, Messaging with JMS, Application Servers, Jini, JavaSpaces, JMX, Jiro, CORBA, Peer-to-Peer Applications, JXTA, Web Services, and SOAP, and apply those knowledges at an enterprise environment.

CISP 405
Object Oriented Programming using C# on Visual Studio .NET 4 Units
Formerly: CIS 32C
Prerequisite: CISP 400. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 72 hours LEC
This course is designed for students to understand the web base as well as system development capabilities of C#.

CISP 409
Object Oriented Programming 4 Units
Formerly: CIS 39
Prerequisite: The student must have satisfactorily completed a course in introduction to programming, required to meet prerequisite in the fundamental language of the object oriented programming language (examples: CISP 370-Beginning Visual BASIC for Visual BASIC, CISP 365-Pascal for Delphi, CISP 400-Object Oriented Programming with C++). Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 72 hours LEC
This course is an introduction to C# object oriented programming language on Visual Studio .NET environment. Topics will include Visual Studio .NET IDE, Constructors, Methods, Arrays, Inheritance, Polymorphism, Exception Handling, GUI, and Multithreading. This course is designed for students to understand the web base as well as system development capabilities of C#.
CISP 430
Data Structures 4 Units
Formerly: CIS 40
Prerequisite: The student must have satisfactorily completed a course in intermediate programming in the language of the structures course being offered. For example: CISP 409 or 400 with a grade of “C” or better.
Course Transferable to UC/CSU
(CAN CSCI 24)
Hours: 72 hours LEC
This course applies a case study approach which incorporates techniques for systematic problem analysis, program specification, design, coding, testing, debugging and documentation of large programs. Advanced language features related to strings, non-text files, pointers, recursion, and object-oriented programming methodology are covered. Data structures include stacks, queues, trees, lists, etc. Searching and sorting techniques are discussed. Student may receive four units of credit for each topic offered. Consult the class schedule for specific topics. This course may be taken four times for credit.

CISP 440
Discrete Structures for Computer Science 3 Units
Formerly: CIS 44
Prerequisite: MATH 370. Grade of “C” or better required to meet prerequisite.
Corequisite: CISP 430. Grade of “C” or better required to meet corequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introduction to the essential discrete structures used in Computer Science, with emphasis on their applications. Topics to be covered include: elementary formal logic and set theory, elementary combinatorics, recursive programming and algorithm analysis, digital logic and switching, combinational circuits, and computer arithmetic.

CISP 456
Data Processing System Analysis and Design 4 Units
Formerly: CIS 51
Prerequisite: None
Advisory: CISP 320.
Course Transferable to CSU
Hours: 72 hours LEC
This course is a study of the systems approach to data processing. This includes the collection, review, processing and presentation of data used in data processing systems. Detailed case studies will be analyzed. Software analysis tools will be utilized. Students will have both individual and group projects.

CISP 499
Experimental Offering in Computer Information Science - Programming .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
CISS 330
Implement Internet Security and Firewalls 3 Units
Prerequisite: CISS 310 with a grade of “C” or better.
Course Transferable to CSU
Hours: 48 hours LEC ; 18 hours LAB
With the increased connectivity to the Internet and the wide availability of automated cracking tools, organizations can no longer simply rely on operating system security to protect their valuable corporate data. The firewall has emerged as a primary tool used to prevent unauthorized access. Students will learn how to allow access to key services while maintaining your organization’s security, as well as how to implement firewall-to-firewall Virtual Private Networks (VPNs).

CISS 341
Implementing Windows Operating System Security 3 Units
Prerequisite: CISS 310 with a grade of “C” or better.
Advisory: CISC 308.
Course Transferable to CSU
Hours: 48 hours LEC ; 18 hours LAB
As organizations increasingly come to rely on Windows-based networks, it is essential that system administrators have a complete understanding of the security models integral to Windows Server and Workstation. This course will provide indepth explanations of operating system security features as well as step-by-step configuration guides for proper operating system configuration. It also provides the knowledge and skills students will need to know in order to maintain the integrity, authenticity, availability and privacy of data.

CISS 342
Implementing Linux Operating System Security 3 Units
Prerequisite: CISC 323 with a grade of “C” or better.
Advisory: CISS 310.
Course Transferable to CSU
Hours: 48 hours LEC ; 18 hours LAB
The UNIX family of operating systems is prized by developers and other IT professionals for their flexibility and openness. Vulnerabilities in standard configurations, however, can make UNIX systems susceptible to security threats. For the many organizations that depend upon UNIX systems, protection against intrusion is an absolute requirement. This course provides the knowledge and skills you need to establish security for the Linux platform. It will present in-depth explanations of operating system security features as well as step-by-step configuration guides for proper operating system configuration. This course also will cover the knowledge and skills students will need to maintain the integrity, authenticity, availability and privacy of data.

CISS 350
Disaster Recovery 3 Units
Prerequisite: CISS 310 with a grade of “C” or better.
Course Transferable to CSU
Hours: 48 hours LEC ; 18 hours LAB
This course teaches students how to identify network vulnerabilities and how to take the appropriate countermeasures to prevent and mitigate failure risks for an organization. Students will gain an understanding of the steps needed for good disaster recovery including, how to prepare a disaster recovery plan, the various risks associated with an enterprise network, the diverse job functions of employees in a Disaster Recovery Plan, and the methods needed to implement a plan once it is complete. In addition, each student will develop a Disaster Recovery Plan with a group for a real or fictitious organization.

CISS 355
Information Systems Security and Assurance Principles 3 Units
Prerequisite: CISS 310 with a grade of “C” or better.
Course Transferable to CSU
Hours: 48 hours LEC ; 18 hours LAB
The purpose of the course is to provide students with an overview of a Business Continuity Plan as it relates to disaster recovery. Accordingly, students will be exposed to a wide-spectrum of security activities, methods, procedures and methodologies related to this field. This course also examines the inspection and protection of information assets; detection of and reaction to threats; examination of pre- and post-incident procedures; technical and managerial responses; and security planning and staffing functions as they relate to assurance principles.

CISS 360
Computer Forensics and Investigation 3 Units
Prerequisite: CISS 310 with a grade of “C” or better.
Advisory: CISC 308.
Course Transferable to CSU
Hours: 48 hours LEC ; 18 hours LAB
This course is an introduction to the methods used to properly conduct a computer forensics investigation beginning with a discussion of ethics, while mapping to the objectives of the International Association of Computer Investigative Specialists (IACIS) certification. Topics covered include an overview of computer forensics as a profession; the computer investigation process; understanding operating systems boot processes and disk structures; data acquisition and analysis; technical writing; and a review of familiar computer forensics tools.
CISW 300
Web Publishing  3 Units
Formerly: CIS 22
Prerequisite: None
Advisory: CISC 305: familiarity with the Internet and its basic services.
Course Transferable to CSU
Hours: 54 hours LEC
This course is an introduction to publishing on the Internet’s World Wide Web (www). Topics include creating www pages with the HyperText Markup Language (html), organizing a series of pages into a website, and uploading web pages to a server. The course makes extensive use of the computer tools necessary to insert html tags, create images, and view web documents. This course prepares apprentice web designers and publishers to identify the information dissemination needs of a client, design an appropriate World Wide Web solutions, and implement it.

CISW 310
Advanced Web Publishing  4 Units
Prerequisite: CISW 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 72 hours LEC
This course builds upon previous web publishing concepts and study. The primary focus of this course is the systematic development of interactive web sites. Topics include cascading style sheets, dynamic HTML, forms, client-side programming with JavaScript, server-side scripting, and web-database interactivity.

CISW 350
Imaging for the Web  1 Unit
Formerly: CIS 21G
Prerequisite: None
Advisory: CISC 306.
Course Transferable to CSU
Hours: 18 hours LEC
This course takes a look at designing graphics for the Web. Using industry standard graphic software, students will create original graphics as well as manipulate found imagery. Through lecture, demonstration and hands-on methods as well as class/instructor critiques, students will understand the process for designing graphics for use on World Wide Web. Topics include developing graphic elements for a Web site using a visual theme, creating buttons and intuitive navigational elements, making background textures and images, understanding Web file formats, scanning, and simple animations that enhances a Web site. This course may be taken four times for credit.

CISW 380
E-Business: Introduction and Environment; Technology and Infrastructure  3 Units
Formerly: CIS 24
Prerequisite: None
Advisory: BUS 300; CISC 305.
Course Transferable to CSU
Hours: 54 hours LEC
Information is now exchanged very rapidly and customers have an instantaneous way to compare offerings from sellers on a worldwide basis. The purpose of this course is to describe the E-business environment, describe the options available to business utilizing E-business, and identify the critical components needed to develop a plan and strategy to implement for a business. The course will focus on E-business for small and medium sized businesses. This course is the same as BUS 360, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

CISW 380.1
E-Business: Introduction and Environment  1.5 Units
Formerly: CIS 24A
Prerequisite: None
Advisory: BUS 300; CISC 305.
Course Transferable to CSU
Hours: 27 hours LEC
Information is now exchanged very rapidly and customers have an instantaneous way to compare offerings from sellers on a worldwide basis. The purpose of this course is to describe the E-business environment, describe the options available to business utilizing E-business, and identify the critical components needed to develop a plan and strategy to implement for a business. The course will focus on E-business for small and medium sized businesses. This course is the same as BUS 360.1, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

CISW 380.2
E-Business: Tools and Techniques  1.5 Units
Formerly: CIS 24B
Prerequisite: None
Advisory: BUS 300; CISC 305; CISW 380.1 or BUS 360.1.
Course Transferable to CSU
Hours: 27 hours LEC
The explosive growth of the Internet has changed the fundamental ways in which business is conducted. Information is now exchanged instantly and customers have an instantaneous way to compare offerings from sellers on a worldwide basis. The purpose of this course is to explore the tools, techniques, and technology needed to implement a company’s E-business strategy. Specific content will include payment systems, privacy and security issues, hardware and software solutions, and business issues directly related to E-commerce. The course will focus on E-business infrastructure for small and medium sized businesses. This course is the same as BUS 360.2, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.
CISW 400
Client-side Web Scripting 4 Units
Prerequisite: CISW 300. Grade of “C” or better required to meet prerequisite.
Advisory: CISW 310 or CISP 300.
Course Transferable to CSU
Hours: 72 hours LEC
This course emphasizes the creation of dynamic and interactive web sites using a client-side scripting language such as JavaScript. Topics include the Document Object Mode of web pages, core features of the client-side scripting language, event handling, control of windows and frames, functions, and form validation. This course may be taken twice on a different client-side scripting language.

CISW 410
Middleware Web Scripting 4 Units
Prerequisite: CISW 300. Grade of “C” or better required to meet prerequisite.
Advisory: CISW 310 or CISP 300.
Course Transferable to CSU
Hours: 72 hours LEC
This course emphasizes the creation of dynamic and interactive web sites using a middleware scripting language such as PHP or ASP. Topics include core features of the middleware scripting language, embedding server commands in HTML pages, control structures, functions, arrays, form validations, cookies, environmental variables, email applications, and database-driven web applications. This course may be taken twice on a different middleware scripting language.

CISW 420
Server-side Web Scripting 4 Units
Prerequisite: CISW 300. Grade of “C” or better required to meet prerequisite.
Advisory: CISW 310 or CISP 300.
Course Transferable to CSU
Hours: 72 hours LEC
This course emphasizes the creation of interactive web sites using a server-side scripting language such as Perl. Topics include the core features of the server-side scripting language, event handling, control of windows and frames, functions, and form validation. This course may be taken twice on a different server-side scripting language.

CISW 440
XML: Introduction to Extensible Markup Language 2 Units
Prerequisite: CISW 300. Grade of “C” or better required to meet prerequisite.
Advisory: CISA 320 or CISP 350.
Course Transferable to CSU
Hours: 36 hours LEC
XML is a universal method for representing information that is especially well suited to distribution over the Internet. This course will address the most fundamental XML questions - what XML is, why it’s needed, and how it can be used. Students will learn the most current, practical XML technologies available at the present time.

CISW 499
Experimental Offering in Computer Information Science-Web .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Construction

DEGREE
A.S.—Construction

CERTIFICATES
Construction
Construction Pre-Apprenticeship

This CRC program trains for an industry that is one of the largest employers in the nation. CRC’s program is designed to provide students with basic and applied technical skills and knowledge necessary for employment in the building and construction industry. Standard construction procedures are emphasized throughout the program. (See also Construction Management Technology Program.)

Career Options
Building and Construction Tradesperson;
General Contracting; Estimators;
Construction Supervisors;
Material Salespersons; Building Inspection;
Construction Apprenticeship programs

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

DEGREE
A.S.—Construction
CODE #1110

This CRC program trains for an industry that is one of the largest employers in the nation. CRC’s program is designed to provide students with basic and applied technical skills and knowledge necessary for employment in the building and construction industry. Standard construction procedures are emphasized throughout the program.

REQUIRED PROGRAM ............................................................... Units
CMT 112 (52) Construction Estimating ....................................... 3
CMT 120 (53) Legal Aspects of Construction ............................. 3
CONST 130 (CMT 130) Construction Pre-Apprenticeship I .......... 6
CONST 131 (CMT 131) Construction Pre-Apprenticeship II .......... 7
CMT 136 (55) Construction Safety ............................................. 3
CMT 300 (50) Intro to Construction Plans & Specifications or
BIT 102 (58) Reading & Non-Structural Plan Review ........... 3
CMT 310 (51) Materials of Construction ................................. 3
CMT 313 (58) Computer Estimating for Construction ............... 3
BIT 100 (57) Introduction to Uniform Building Code .............. 3
TOTAL UNITS REQUIRED .............................................................. 34

General Education Graduation Requirements - See page 18.
CERTIFICATE
Construction
CODE #1110

This program prepares students for entry into the building and construction industry as a general tradesperson; and prepares students currently working within the industry for advancement.

REQUIRED PROGRAM ............................................................... Units
CMT 112 (52) Construction Estimating ..................................... 3
CONST 130 (CMT 130) Construction Pre-Apprenticeship I ............ 6
CONST 131 (CMT 131) Construction Pre-Apprenticeship II .......... 7
CMT 136 (55) Construction Safety ........................................... 3
CMT 300 (50) Intro to Construction Plans & Specifications or
BIT 102 (58) Reading & Non-Structural Plan Review .......... 3
CMT 310 (51) Materials of Construction ................................. 3
TOTAL UNITS REQUIRED .............................................................. 25

CERTIFICATE
Construction Pre-Apprenticeship
CODE #1546

This program prepares students for entry into an apprenticeship program in the building and construction industry.

REQUIRED PROGRAM ............................................................... Units
CONST 130 Construction Pre-Apprenticeship I ....................... 6
CONST 131 Construction Pre-Apprenticeship II ..................... 7
TOTAL UNITS REQUIRED .............................................................. 13
Construction Management Technology

**DEGREE**  A.S.—Construction Management Technology

**CERTIFICATE**  Construction Management Technology

This CRC program offers training of management-level employees for the construction industry, as well as preparation for transfer to a four-year college or university construction program. Graduates may be employed by contractors, business and government agencies for work in project planning, estimating and project coordinating. A student planning to transfer to a four-year college or university should consult the lower division requirements of the anticipated college program.

**Career Options**
- Plan Checker; Estimator; Superintendent; Project Manager; Contractor; Retail/Wholesale; Office Manager; Developer; Foreman; Laborer

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

**Highlights**
- Current curriculum emphasizes analytical problem solving and management skills
- Field trips to a variety of construction sites to study construction methods and procedures (Instructor option)
- Transfer potential to 4-year programs in Construction Technology

**Note to Transfer Students:**
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.

**DEGREE**  A.S.—Construction Management Technology

**CODE #1080**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 101 (60)</td>
<td>Fundamentals of College Accounting or ACCT 131 (96) Accounting for The Small Business or ACCT 301 (1A) Financial Accounting</td>
</tr>
<tr>
<td>ADT 310 (DRAFT 310)</td>
<td>Intro to Computer-Aided Design Drafting</td>
</tr>
<tr>
<td>CISC 302 (CIS 1X)</td>
<td>or JOUR 330 Computer Familiarization</td>
</tr>
<tr>
<td>CMT 300 (50)</td>
<td>Intro to Construction Plans &amp; Specifications or BIT 102 (58)</td>
</tr>
<tr>
<td>CMT 112 (52)</td>
<td>Construction Estimating</td>
</tr>
<tr>
<td>CMT 120 (53)</td>
<td>Legal Aspects of Construction</td>
</tr>
<tr>
<td>CMT 134 (54)</td>
<td>Construction Scheduling &amp; Critical Path Method</td>
</tr>
<tr>
<td>CMT 136 (55)</td>
<td>Construction Safety</td>
</tr>
<tr>
<td>CMT 310 (51)</td>
<td>Materials of Construction</td>
</tr>
<tr>
<td>CMT 313 (58)</td>
<td>Computer Estimating for Construction</td>
</tr>
<tr>
<td>CMT 330 (56)</td>
<td>Construction Surveying</td>
</tr>
<tr>
<td>ENV 300 (1)</td>
<td>Introduction to Environmental Tech.</td>
</tr>
<tr>
<td>PHYS 310 (10)</td>
<td>Conceptual Physics</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED** 38-39

**Suggested Electives:**
ARCH 310 (40), BUS 310 (8), 345 (16); STAT 300 (1); FITNS 355 (PER 1); (these courses also satisfy CRC General Education Graduation Requirements); CMT 105 (70); ADT 300 (51); PHYS 350 (5A), 360 (5B).

**General Education Graduation Requirements** - See page 18.
CERTIFICATE
Construction Management Technology
CODE #1080

This program prepares students for entry into the building and construction industry as a general tradesperson; and prepares students currently working within the industry for advancement.

REQU MET PROGRAM ................................................................. Units
ADT 310 (66)  Intro to Computer-Aided Design Drafting ............ 3
CISC 302 (CIS 1X) or JOUR 330  Computer Familiarization .......... 2
CMT 112 (52)  Construction Estimating .................................... 3
CMT 120 (53)  Legal Aspects of Construction ......................... 3
CMT 134 (54)  Construction Scheduling & Critical Path Method...... 3
CMT 300 (50)  Intro to Construction Plans & Specifications or
BIT 102 (58)  Reading And Non-Structural Plan Review .......... 3
CMT 310 (51)  Materials of Construction ............................... 3
CMT 313 (58)  Computer Estimating for Construction ............... 3
TOTAL UNITS REQUIRED ............................................................. 23

Construction Management Technology (CMT)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMT 102</td>
<td>2</td>
<td>Introduction to Construction Practices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Formerly: CMT 60A</td>
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<tr>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<tr>
<td></td>
<td></td>
<td>Hours: 36 hours LEC ; 18 hours LAB</td>
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<tr>
<td></td>
<td></td>
<td>This course is an introduction to construction practices and the construction trades with an emphasis on safe working procedures along with proper use of tools and equipment.</td>
</tr>
<tr>
<td>CMT 112</td>
<td>3</td>
<td>Construction Estimating</td>
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<tr>
<td></td>
<td></td>
<td>Formerly: CMT 52</td>
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<tr>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<tr>
<td></td>
<td></td>
<td>Advisory: CMT 310</td>
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<tr>
<td></td>
<td></td>
<td>Hours: 54 hours LEC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This course covers construction quantity survey and estimating practices for residential and light commercial building projects.</td>
</tr>
<tr>
<td>CMT 120</td>
<td>3</td>
<td>Legal Aspects of Construction</td>
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<tr>
<td></td>
<td></td>
<td>Formerly: CMT 53</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<tr>
<td></td>
<td></td>
<td>Hours: 54 hours LEC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This course is a summary of the legal implications of licensing, contracts, specifications and their interpretations. Emphasis on the laws of liability, workers compensation, social security, Cal-OSHA, lien laws, and federal laws affecting construction and compliance problems.</td>
</tr>
<tr>
<td>CMT 134</td>
<td>3</td>
<td>Construction Scheduling and Critical Path Method</td>
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<tr>
<td></td>
<td></td>
<td>Formerly: CMT 54</td>
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<tr>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<tr>
<td></td>
<td></td>
<td>Advisory: CMT 112.</td>
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<tr>
<td></td>
<td></td>
<td>Hours: 36 hours LEC ; 54 hours LAB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This course introduces computer and manual techniques used in planning, scheduling and controlling construction projects. Network analysis and applications using critical path method and current computer programs will be utilized.</td>
</tr>
<tr>
<td>CMT 136</td>
<td>3</td>
<td>Construction Safety</td>
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<tr>
<td></td>
<td></td>
<td>Formerly: CMT 55</td>
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<tr>
<td></td>
<td></td>
<td>Prerequisite: None</td>
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<tr>
<td></td>
<td></td>
<td>Advisory: CMT 300.</td>
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<tr>
<td></td>
<td></td>
<td>Hours: 54 hours LEC</td>
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<tr>
<td></td>
<td></td>
<td>This course addresses the application of safety principles in construction with emphasis on the Occupation Safety and Health Act of 1970 and California OSHA.</td>
</tr>
</tbody>
</table>
CMT 294
Topics in Construction Management Technology .5-4 Units
Formerly: CMT 81
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
Course work designed to cover special topics not included in current construction management offerings in a timely manner. Topics may be offered in workshops or seminar presentations on timely subjects or targeted for specific audiences.

CMT 295
Independent Studies in Construction Management Technology 1-3 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

CMT 299
Experimental Offering in Construction Management Technology .5-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

CMT 300
Introduction to Construction Plans and Specifications 3 Units
Formerly: CMT 50
Prerequisite: None
Advisory: Concurrent enrollment in CMT 310.
Course Transferable to CSU
Hours: 54 hours LEC
This is an introductory course in how to read building plans and specifications. Intended for both the homeowner and the builder, the course gives emphasis to building plan symbols, interpretation of shop and field drawings, and requirements for obtaining building permits.

CMT 310
Materials of Construction 3 Units
Formerly: CMT 51
Prerequisite: None
Advisory: CMT 300.
Course Transferable to CSU
Hours: 54 hours LEC
This is a general survey of materials and methods of building construction. An overall view of residential, commercial, and heavy construction practices will be studied.

CMT 313
Computer Estimating for Construction 3 Units
Formerly: CMT 58
Prerequisite: None
Advisory: CMT 112.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is designed to meet current demands for computerized estimating in the construction industry. This course will integrate computer technology with current construction estimating practices. This technology will provide the student with experience in determining construction quantities and costs quickly, economically and effectively.

CMT 330
Construction Surveying 3 Units
Formerly: CMT 56
Prerequisite: None
Advisory: CMT 310 and completion of or concurrent enrollment in ADT 300.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course covers the theory and practice of measurements for distance, elevations and angles. Topics include: analysis and adjustment of errors, traverse calculation and adjustment, and boundary surveying. This course is designed for construction management and engineering students. Not open to students who have received credit for ENGR 310. See “Cross-Listed Courses” in the catalog.

CMT 495
Independent Studies in Construction Management Technology 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

CMT 498
Work Experience in Construction Management Technology 1-4 Units
Formerly: CMT 98
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

CMT 499
Experimental Offering in Construction Management Technology .5-4 Units
Formerly: CMT 49
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Culinary Arts Management

DEGREE  A.A.—Culinary Arts Management
CERTIFICATES  Cooking & Supervision
               Community Nutrition Specialist
               Basic Culinary Services
               School Foodservice Specialist

This program provides professional training for employment in commercial culinary service operations. Courses begin at entry-level training; advanced courses are designed for working professionals as well as full-time degree students.

The program includes coursework in culinary arts, baking and pastry, food purchasing, culinary sanitation, nutrition, marketing, legal control and financial analysis. Students will apply those skills with hands-on training in the campus cafeteria.

Sanitation training is offered as an integral part of each certificate and degree, and is certified by the National Restaurant Association as well as Sacramento County Environmental Health Division.

A Management Development Diploma is also available from the National Restaurant Association by taking eight (8) culinary arts courses at CRC. Contact the area dean or instructional staff for more information.

Career Options
Culinary Manager; Culinary Supervisor;
Cook; Kitchen Manager; Waiter / Waitress;
Restaurant Manager; Caterer; Foodservice Worker; Baker; Community Nutrition Specialist; School Foodservice Specialist

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

Highlights
Hands-on experience in all aspects of commercial culinary services through campus cafeteria and catering activities
Professional Management Development Diploma from the Educational Foundation of the National Restaurant Association
State-of-the-art technology in a commercial kitchen facility and instructional laboratory
Curriculum developed in collaboration with Sacramento employers in restaurants, schools, hospitals, and grocery stores
Flexible class scheduling designed to meet the needs of working adults
Faculty qualified as “Certified Hospitality Educators”
Certificates for specialists in community nutrition and school foodservice
DEGREE
A.A.— Culinary Arts Management
CODE #1128

REQUISITE PROGRAM ......................................................... Units
CAM 300 (50) Introduction To Culinary Arts Management ............ 2
CAM 306 (51) Culinary Sanitation and Safety ............................. 2
CAM 301 (52) Food Theory and Preparation .............................. 4
CAM 310 (53A) Quantity Food Production ............................... 3
CAM 316 (53B) Hors d’oeuvres & Canapes or CAM 312 (56) Baking and Pastry ................................................. 3
CAM 322 (54) Culinary Customer Service ................................. 2
CAM 320 (55) Culinary Management ........................................ 2
CAM 324 (57) Culinary Supervision ......................................... 2
CAM 326 (58) Applied Culinary Purchasing .............................. 2
CAM 340 (59) Nutrition For Culinary Professionals .................... 2
CAM 334 (60) Culinary Marketing ........................................... 2
CAM 330 (61) Legal Aspects of Culinary Management ............... 2
CAM 332 (62) Culinary Financial Management ........................... 2
CAM 302 (64) Food and Culture in America ................................ 3
TOTAL UNITS REQUIRED ..................................................... 13

Suggested Electives:
CAM 498 (98) Work Experience in Culinary Arts Management

General Education Graduation Requirements - see page 18.

CERTIFICATE
Basic Culinary Services
CODE #1129

For people new to the field

REQUISITE PROGRAM ......................................................... Units
CAM 300 (50) Introduction To Culinary Arts Management ............ 2
CAM 306 (51) Culinary Sanitation and Safety ............................. 2
CAM 301 (52) Food Theory and Preparation .............................. 4
CAM 310 (53A) Quantity Food Production ............................... 3
CAM 322 (54) Culinary Customer Service ................................. 2
TOTAL UNITS REQUIRED ..................................................... 13

* This requirement can also be met through instructor approval of two years work experience in quantity food production operations and completion of at least 3 units of CAM 498 (98): Work Experience with a grade of “C” or better.

CERTIFICATE
Community Nutrition Specialist
CODE #1275

REQUISITE PROGRAM ......................................................... Units
NUTRI 300 (10) Nutrition .................................................. 3
CAM 306 (51) Culinary Sanitation and Safety ............................. 2
CAM 301 (52) Food Theory and Preparation .............................. 4
CAM 302 (64) Food and Culture in America or COMM 325 (14) Intercultural Communication ............................. 3
CISC 302 (CIS 1X) or JOUR 330 Computer Familiarization ............ 2
CAM 340 (59) Nutrition for Culinary Professionals .................... 2
TOTAL UNITS REQUIRED ..................................................... 16

CERTIFICATE
Cooking and Supervision
CODE #1130

Designed to provide promotional skills

REQUISITE PROGRAM ......................................................... Units
CAM 300 (50) Introduction To Culinary Arts Management ............ 2
CAM 306 (51) Culinary Sanitation and Safety ............................. 2
CAM 301 (52) Food Theory and Preparation .............................. 4
CAM 310 (53A) Quantity Food Production .................................. 3
CAM 316 (53B) Hors d’oeuvres & Canapes or CAM 312 (56) Baking and Pastry ................................................. 3
CAM 322 (54) Culinary Customer Service ................................. 2
CAM 320 (55) Culinary Management ........................................ 2
CAM 324 (57) Culinary Supervision ......................................... 2
CAM 326 (58) Applied Culinary Purchasing .............................. 2
CAM 340 (59) Nutrition For Culinary Professionals .................... 2
TOTAL UNITS REQUIRED ..................................................... 24

* This requirement can also be met through instructor approval of two years work experience in quantity food production operations and completion of at least 3 units of CAM 498 (98): Work Experience with a grade of “C” or better.

CERTIFICATE
School Foodservice Specialist
CODE #1276

REQUISITE PROGRAM ......................................................... Units
NUTRI 300 (10) Nutrition .................................................. 3
CAM 306 (51) Culinary Sanitation and Safety ............................. 2
CAM 301 (52) Food Theory and Preparation .............................. 4
CAM 302 (64) Food and Culture in America or COMM 325 (14) Intercultural Communication ............................. 3
CISC 302 (CIS 1X) or JOUR 330 Computer Familiarization ............ 2
CAM 340 (59) Nutrition for Culinary Professionals .................... 2
CAM 310 (53A) Quantity Food Production .................................. 3
CAM 320 (55) Culinary Management ........................................ 2
ECE 415(14) / NUTRI 320 (14) Children’s Nutrition, Health, and Safety ..................................................... 3
CAM 498 (98) Work Experience in CAM .................................... 1-4
TOTAL UNITS REQUIRED ..................................................... 25-28

NATIONAL RESTAURANT ASSOCIATION
PROFESSIONAL MANAGEMENT DEVELOPMENT PROGRAM

Cosumnes River College now offers a Professional Management Development Diploma Program, sponsored by the Educational Foundation of the National Restaurant Association. The Diploma Program offers:

- an industry-recognized credential from the National Restaurant Association and the Educational Foundation;
- a Certificate of Completion for each course in the program;
- additional scholarship money available for Diploma Program students; and

(continued on next page)
National certification in sanitation.

Courses to complete the National Restaurant Association Management Development Diploma include:

**Required Course:**
- CAM 306 (51) Culinary Sanitation & Safety

**Administrative Management:**
- CAM 330 (61) Legal Aspects of Culinary Management

**Financial Management:**
- CAM 332 (62) Culinary Financial Management

**Human Resource Management:**
- CAM 324 (57) Culinary Supervision

**Marketing Management:**
- CAM 334 (60) Culinary Marketing

**Operations Management:** (select three)
- CAM 326 (58) Applied Culinary Purchasing
- CAM 320 (55) Culinary Management
- CAM 340 (59) Nutrition for Culinary Professionals
- CAM 310 (53A)/316 (53B) Quantity Food Production

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**Culinary Arts Management (CAM)**

**CAM 294**
**Topics in Culinary Management**
Formerly: CAM 494
*5-4 Units*
Prerequisite: None
*Hours: 18 hours LEC; 54 hours LAB*
Coursework designed to cover special topics not included in current culinary offerings. Topics may be offered in a workshop or seminar presentation on timely subjects or targeted for specific audiences.

**CAM 300**
**Introduction to Culinary Arts Management**
Formerly: CAM 50
*2 Units*
Prerequisite: None
Course Transferable to CSU
*Hours: 36 hours LEC*
This course profiles the culinary industry and an introduction to the skills and attributes that predict success for professionals. Trends, ethics and issues facing the culinary industry will be discussed.

**CAM 301**
**Food Theory and Preparation**
Formerly: CAM 52
*Prerequisite: None*
Course Transferable to CSU
*Hours: 36 hours LEC; 108 hours LAB*
A comprehensive study of food ingredients and the basic principles and techniques involved in food preparation. A study of the factors that influence foods and the changes which occur in foods during preparation. The laboratory emphasizes basic cooking skills and theory application. The course emphasizes the reasons for procedures and phenomena and the prevention and/or correction of cooking failures. This course is the foundation for the beginning student in professional culinary management.

**CAM 302**
**Food and Culture in America**
Formerly: CAM 64
*Prerequisite: None*
Course Transferable to CSU
*Hours: 54 hours LEC*
This course is an in-depth study of the food habits of various minority groups in the United States including Native Americans, African Americans, Asian Americans and Latin American populations. Current foods and food habits will be studied for each group within the context of culture to improve communication and understanding and reduce bias. Food culture stereotypes will be analyzed as vehicles of ethnocentrism, gender-related issues, and/or racism. The course will be comparative in nature, contrasting various western and non-western food patterns.

**CAM 306**
**Culinary Sanitation & Safety**
Formerly: CAM 51
*Prerequisite: None*
Course Transferable to CSU
*Hours: 36 hours LEC*
This course covers the principles of food microbiology, important foodborne diseases, standards that are enforced by regulatory agencies, and applied measures for the prevention of foodborne diseases and other microbiological problems. All phases of sanitation for professional culinary operations are covered in the context of schools, hospitals and commercial restaurants and cafeterias. Subjects covered include types and causes of food borne illnesses, correct procedures for handling food in quantity, and the principles of cleaning and sanitizing. The course focuses on practical applications for culinary workers, supervisors, and trainers. Completion of the course includes optional certification by the Educational Foundation of the National Restaurant Association.

**CAM 310**
**Quantity Food Production**
Formerly: CAM 53A
*Prerequisite: None*
Course Transferable to CSU
*Hours: 18 hours LEC; 108 hours LAB*
This course is an introduction to the principles of quantity food production. Components include knife skills, equipment recognition, operation and cleaning, use of hand tools and measuring devices; cleaning and cutting raw materials. This course also covers preparation of sandwiches, soups, salads, vegetables, meats, poultry, seafood, breakfast dishes, rice and other grains, pastas and potatoes, sauces and simple dessert items.
| Course Code | Course Title                          | Units | Formerly | Prerequisite | Advisory | Course Transferable to CSU | Hours | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|---------------------------------------|-------|----------|-------------|----------|-----------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
| CAM 312     | Baking and Pastry                     | 3     | CAM 56   | None        | CAM 310. | Course Transferable to CSU   | 18 LEC; 108 LAB | This course is designed to introduce students to the fundamental principles of baking and procedures for preparing baked goods, pastries, and desserts. Students gain knowledge and understanding of baking science; laboratory hours are spent in commercial production. Products include yeast breads, Danish pastry, croissants, puff pastry, tarts and fine cakes, tarts and pies, and chocolate work. Emphasis is placed on production of high quality products and professional presentation.                                      |
| CAM 314     | Fine Food to Go: Gourmet Cooking      | 3     | CAM 63   | None        |          | Course Transferable to CSU   | 36 LEC; 54 LAB | This course is designed to provide the student with the special skills necessary to prepare and market restaurant meals for the home — one of the fastest growing aspects of the culinary field. Students will practice basic and advanced techniques in soups, salads, sauces, vegetable, starch, meat, poultry and fish cookery. Emphasis will also be placed on bread and desserts preparation.                                                      |
| CAM 316     | Hors d‘oeuvres and Canapes            | 3     | CAM 53B  | None        | CAM 310. | Course Transferable to CSU   | 18 LEC; 108 LAB | This course is designed to teach the students to utilize any foodstuffs in the production of hors d‘oeuvres. Hot and cold hors d‘oeuvres as well as the production of canapes will be emphasized. Service styles, service issues, production pointers, and logistics of catering functions will be emphasized.                                                                                                 |
| CAM 320     | Culinary Management                   | 2     | CAM 55   | None        |          | Course Transferable to CSU   | 36 LEC | Organizing, planning, and control of production for a quantity culinary operation. Includes menu planning and pricing, scheduling of staff and production, portion and temperature control, recipe standardization and scaling, and elements of culinary layout and design.                                                                                                                                  |
| CAM 322     | Culinary Customer Service             | 2     | CAM 54   | None        |          | Course Transferable to CSU   | 18 LEC; 54 LAB | A skills development course to provide entry-level training in culinary customer service for quantity operations. An examination of the components of professional hospitality and meal service. Students will participate in hands-on culinary customer service in the campus culinary operation.                                                                                                               |
| CAM 324     | Culinary Supervision                  | 2     | CAM 57   | None        |          | Course Transferable to CSU   | 36 LEC | This course is designed to help supervisors meet the challenges and demands of the hospitality field. The course will focus on the skills necessary to be effective leaders, developing human relations’ skills and building on workplace diversity. The course will also cover communicating effectively, and creating a positive work climate. Management responsibilities of planning, organizing, controlling, decision making, problem solving and delegating will be included. |
| CAM 326     | Applied Culinary Purchasing           | 2     | CAM 58   | None        | CAM 300. | Course Transferable to CSU   | 36 LEC | This course provides a comprehensive view of purchasing activity as well as its relationship to the management of a successful hospitality operation. This course offers practical applications of purchasing principles from the culinary manager’s viewpoint. This course focuses on distribution channels, purchasing principles and buying techniques, selection factors, receiving, storing, issuing and inventory control. |
| CAM 330     | Legal Aspects of Culinary Management  | 2     | CAM 61   | None        | CAM 300. | Course Transferable to CSU   | 36 LEC | This course is an introduction to the legal aspects of culinary operations through an explanation of and applications to legal subjects relevant to culinary operations. Topics include government regulations, patron civil rights, liability for sales of food and alcoholic beverages, as well as liability for patron safety and property, selection and supervision of employees, property rights and forms of business organizations. |
CAM 332
Culinary Financial Management 2 Units
Formerly: CAM 62
Prerequisite: None
Advisory: C1AM 300 and 320.
Course Transferable to CSU
Hours: 36 hours LEC
Culinary accounting and finance for culinary operations and the use of accounting techniques in analyzing business performance, in budgeting, and in cost and profit planning.

CAM 334
Culinary Marketing 2 Units
Formerly: CAM 60
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC
This course is an introduction to culinary marketing with a profile of management's role in marketing. The course includes information systems and marketing research methods to assist in planning. Hospitality consumers and their behavior are discussed. Other topics include advertising, group sales strategies, the importance of carefully designed menus and menu pricing.

CAM 340
Nutrition for Culinary Professionals 2 Units
Formerly: CAM 59
Prerequisite: None
Advisory: CAM 300.
Course Transferable to CSU
Hours: 36 hours LEC
This course is designed for students in Culinary Arts Management and focuses on personal nutrition, as well as nutrition in restaurants and foodservices. The course will cover the dietary needs of selected populations and methods used to meet those needs. Emphasis is placed on recipe adaptation and menu planning for more healthful menu offerings in culinary operations. Successful completion of this course meets the certification requirements by the American Culinary Federation.

CAM 495
Independent Studies in Culinary Arts Management 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

CAM 498
Work Experience in Culinary Arts Management 1-4 Units
Formerly: CAM 98
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 336)

CAM 499
Experimental Offering in Culinary Arts Management .5-4 Units
Formerly: CAM 49
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)
Digital Media

DEGREE: A.A.—Communications Media, Digital Media
CERTIFICATE: Communications Media, Digital Media

This two-year instructional program is designed to provide skills for industry and for degree or transfer. This option can lead to entry-level jobs in television, Cable TV, business or industrial video and graphics, animation, or digital media for broadcast, CD/DVD production and the Internet.

Career Options
Tape or Nonlinear Video Editor, Computer Graphic Artist, Animation Artist, Personal or Corporate Video Producer/ Director.

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE:
A.A.—Communications Media, Digital Media
CODE #1534

RE REQUIRED PROGRAM ............................................................... Units
CMED 300 (5) Mass Media and Society .................................... 3
CMED 302 (61) Introduction to Digital Media .......................... 3
CMED 312 (56) Radio Studio Operations ............................... 3
CMED 331 (64) Television Production .................................... 3
CMED 360 (80) Intro to Motion Graphics: Adobe After Effects ... 3
CMED 362 (82) Digital Nonlinear Video Editing: Final Cut Pro ... 3
PHOTO 400 (57) Digital Imaging.................................................. 3
ARTNM 326 (22) Digital Painting ................................................... 3
Plus six (6) units selected from: ........................................................ 6
COMM 311 (3) Argumentation and Debate (3) 
COMM 361 (9) The Communication Experience (3) 
(For Transfer to Cal State, Sacramento Digital Media Program)
CMED 304 (70) Introduction to MultiMedia (3) or
ART 320 (14) Design Fundamentals (3)
CMED 330 (54) Basic Film/Video Camera Techniques (3)
CMED 332 (74) Advanced Television Production (2)
CMED 361 (81) Intermediate Motion Graphics:
Adobe After Effects and Lightwave 3-D (3)
CMED 363 Intro to DVD Prod: IDVD & DVD Studio Pro (3)
CMED 370 (63) Broadcast Writing and Announcing (3)
CMED 377 (85) Corporate Video (3)
CMED 498 (98) Work Experience in Communications Media (3)
PHOTO 410 (59) Advanced Digital Imaging (3)
TOTAL UNITS REQUIRED .................................................................. 30

CERTIFICATE: Communications Media, Digital Media
CODE #1534

RE REQUIRED PROGRAM ............................................................... Units
CMED 302 (61) Introduction to Digital Media .......................... 3
CMED 331 (64) Television Production ....................................... 3
CMED 360 (80) Intro to Motion Graphics: Adobe After Effects ... 3
CMED 362 (82) Digital Nonlinear Video Editing: Final Cut Pro ... 3
PHOTO 400 (57) Digital Imaging.................................................. 3
ARTNM 326 (22) Digital Painting ................................................... 3
ART 320 (14) Design Fundamentals (3)
CMED 304 (70) Introduction to MultiMedia (3) or
CMED 312 (56) Radio Studio Operations (3)
CMED 330 (54) Basic Film/Video Camera Techniques (3)
CMED 361 (81) Intermediate Motion Graphics:
Adobe After Effects & Lightwave 3-D (3)
CMED 363 Intro to DVD Prod: IDVD & DVD Studio Pro (3)
CMED 377 (85) Corporate Video (3)
CMED 498 (98) Work Experience in Communications Media (3)
ARTNM 326 (22) Digital Painting (3)
PHOTO 410 (59) Advanced Digital Imaging (3)
TOTAL UNITS REQUIRED .................................................................. 21

General Education Graduation Requirements - See page 18.

2005 - 2006 COSUMNES RIVER COLLEGE
Early Childhood Education

DEGREES
A.A.—Early Childhood Education
A.A.—Early Childhood Education, Site Supervisor

CERTIFICATES
Early Childhood Education, Assistant Teacher
Early Childhood Education, Associate Teacher
Early Childhood Education, Teacher
Early Childhood Education, Master Teacher
Early Childhood Education, Infant Specialist
Early Childhood Education, School Age Child Care
Early Childhood Education, Program Management
Early Childhood Education, Family Day Care
Early Childhood Education, Elementary School Teacher Assistant
Early Intervention Assistant I
Family Support Services

This program offers a hands-on approach to learning skills in working with young children from birth through the age of 12. Certificates and degrees have been designed to prepare students for employment at the various levels within privately funded child care centers and publicly funded child development programs.

The program meets the course requirements for teachers and directors of private child care programs licensed by the California State Department of Social Services (Title 22). In addition, the program meets the coursework requirements for the Child Development Permit issued by the California Commission on Teacher Credentialing.

Elementary Teaching
For the person interested in teaching in a self-contained elementary school classroom, Cosumnes River College has courses leading toward a Liberal Studies major at California State University, Sacramento. Before selecting classes, please check with your counselor to receive the most up-to-date information.

Secondary Teaching
In order for a student to prepare for a secondary teaching credential, the student should complete the lower division requirements for the teaching major while completing the transfer general education requirements needed for transfer. A counselor can assist the student in selecting the appropriate courses.

Note: Students planning to enroll in Work Experience or practicum classes [ECE 320 (3), ECE 321 (4), ECE 334, and ECE 498 (48)] must show evidence of TB clearance before working with children.

Early Childhood Career Options
Preschool Teacher; Infant Care Teacher; School Age Teacher; Preschool Director; Infant Care Director; Site Supervisor of Preschool/School Age Programs; Family Child Care Provider; Public School Aide; Pediatric Nurse; Camp Counselor; Recreational Leader; Nanny; Elementary School Teaching Assistant; Parent Educator; Home Visitor

Some career options may require more than two years of college study.

Highlights
Two AA Degrees and nine certificates
On- and off-campus course offerings
Day, evening, and weekend offerings
A. A. DEGREES

The Teacher and Master Teacher Certificates, as well as the AA Degrees in Early Childhood Education and the Site Supervisor, are aligned with the Child Development Permits issued by California’s Commission of Teacher Credentialing (January 1997). California law requires that teachers in state-funded child care and development programs possess a Child Development Permit.

DEGREE

A.A.—Early Childhood Education

CODE #1089

 REQUIRED PROGRAM ........................................... Units
ECE 300 (1) Introduction to Early Childhood Education .......... 3
ECE 320 (3) Principles and Practices in ECE ....................... 4
ECE 321 (4) Advanced Principles and Practices in ECE .......... 4
ECE 420 (5) Administration of Child Development Centers (3) or
ECE 330 (7A) Infant Development (3) or
ECE 400 (8) Children with Exceptional Needs (3) or
ECE 404 (11) Children with Special Needs (3) or
ECE 356 (9) Programs for the School-Age Child (3) ............. 3
ECE 410 (13) Health and Safety in the Child Care Setting ...... 1
ECE 415 (14) Children’s Health, Safety & Nutrition or
NUTRI 320 (14) Children’s Health, Safety & Nutrition .......... 3
ECE 430 (36) Culture and Diversity in ECE ............................ 3
FCS 312 (34) Child Development or
PSYC 372 (34) Child Development .................................. 3

Plus six (6) units selected from: .................................. 6
ART 430 (26) Art and Children (3)
ENGLT 370 (39) Children and Literature (3)
MUSM 370 (9) Music for Children (3)
CISC 303 (4) / ECE 302 (29) Computer Skills for Educators (3)
TA 401 (28) Children’s Literature and Creative Drama (3)
ECE 342 Constructive Math and Science in ECE (3)
ECE 343 Language & Literacy Devel. in Early Childhood (3)

TOTAL UNITS REQUIRED ........................................... 33

Suggested Electives:
ECE 402 (6), 356 (9), 422 (15), 424 (47);
FCS 322 (33); MUIVI 340 (30A), 341 (30B), 370 (42A);
NUTRI 300 (10); SPAN 401 (1A), 101 (50A);
PET 306 (24) / ECE 364 (24).

General Education Graduation Requirements - See page 18.

CERTIFICATES

Early Childhood Education, Assistant Teacher

CODE #1344

 REQUIRED PROGRAM ........................................... Units
FCS 312 (34) Child Development or
PSYC 372 (34) Child Development .................................. 3
ECE 498 (48) Work Experience in ECE ............................... 1

TOTAL UNITS REQUIRED ........................................... 7

Upon completion, this certificate will allow students entry into the field and with additional units be able to become a fully qualified Assistant Teacher (14 unit certificate).
CERTIFICATE  
Early Childhood Education, Associate Teacher  
CODE #1343  
REQUIRED PROGRAM ................................................. Units  
ECE 300 (1) Introduction to Early Childhood Education ............ 3  
ECE 320 (3) Principles and Practices in ECE ...................... 4  
FCS 312 (34) Child Development or  
PSYC 372 (34) Child Development .................................... 3  
ECE 410 (13) Health and Safety in Child Care Setting ............... 1  
TOTAL UNITS REQUIRED .......................................... 14  
To be eligible for the Child Development Permit  
(Associate Teacher) students must also complete experience requirements for the particular permit for which they are applying. See ECE Department for further information.

CERTIFICATE  
Early Childhood Education, Family Day Care  
CODE #1093  
REQUIRED PROGRAM ................................................. Units  
ECE 300 (1) Introduction to Early Childhood Education ............ 3  
ECE 410 (13) Health and Safety in Child Care Setting ............... 1  
ECE 304 (19) Introduction to Family Day Care ...................... 1  
ECE 498 (48) Work Experience in ECE ................................ 4  
FCS 312 (34) Child Development or  
PSYC 372 (34) Child Development .................................... 3  
TOTAL UNITS REQUIRED .......................................... 15  

CERTIFICATE  
Early Childhood Education, Infant Specialist  
CODE #1094  
Upon completion of this certificate and with appropriate documented experience, the student meets the minimum requirements for employment in an infant care program.  
REQUIRED PROGRAM ................................................. Units  
ECE 300 (1) Introduction to Early Childhood Education ............ 3  
ECE 320 (3) Principles and Practices in ECE ...................... 4  
ECE 330 (7A) Infant Development .................................... 3  
ECE 331 (7B) Education and Care of Infants in Group Settings .... 3  
ECE 410 (13) Health and Safety in Child Care Setting ............... 1  
FCS 312 (34) Child Development or  
PSYC 372 (34) Child Development .................................... 3  
TOTAL UNITS REQUIRED .......................................... 21  

CERTIFICATE  
Family Support Services  
CODE #1486  
REQUIRED PROGRAM ................................................. Units  
FCS 312 (34) Child Development (3) or  
FCS 324 (38) Human Development: Life Span (3) .................... 3  
ECE 440 (38) Introduction to Family Support Services in ECE .... 3  
ECE 442 (39) Advanced Studies in Family Support Services ...... 3  
ECE 498 (48) Work Experience ....................................... 4  
TOTAL UNITS REQUIRED .......................................... 16  

CERTIFICATE  
Early Childhood Education, School Age Child Care  
CODE #1098  
REQUIRED PROGRAM ................................................. Units  
ECE 300 (1) Introduction to Early Childhood Education ............ 3  
ECE 320 (3) Principles and Practices in ECE ...................... 4  
ECE 321 (4) Advanced Principles and Practices in ECE* or  
ECE 498 (48) Work Experience in ECE*  
ECE 336 (9) Programs for the School-Age Child (3) or  
PET 306 (24)/ECE 364 (24) Fundamentals of Movement & Rhythm in ECE (2) .............. 2-3  
ECE 410 (13) Health and Safety in Child Care Setting ............... 1  
FCS 312 (34) Child Development or  
PSYC 372 (34) Child Development .................................... 3  
TOTAL UNITS REQUIRED .......................................... 20-21  

CERTIFICATE  
Early Childhood Education, Program Management  
CODE #1097  
REQUIRED PROGRAM ................................................. Units  
ECE 300 (1) Introduction to Early Childhood Education ............ 3  
ECE 320 (3) Principles and Practices in ECE ...................... 4  
ECE 321 (4) Advanced Principles and Practices in ECE* or  
ECE 498 (48) Work Experience in ECE*  
ECE 420 (5) Administration of Child Development Centers ......... 3  
ECE 410 (13) Health and Safety in Child Care Setting ............... 1  
ECE 415 (14) Children’s Health, Safety and Nutrition or  
NUTRI 320 (14) Children’s Health, Safety and Nutrition ........... 3  
FCS 312 (34) Child Development or  
PSYC 372 (34) Child Development .................................... 3  
TOTAL UNITS REQUIRED .......................................... 24  

CERTIFICATE  
Elementary School Teacher Assistant  
CODE #1092  
For students who would like to work with children in a classroom situation as a teacher assistant under the direction of a credentialed elementary teacher. Designed to prepare students for employment as a teacher assistant; and, for those who wish to become elementary teachers, this certificate provides the opportunity for exploratory classroom experience early in their training.  
REQUIRED PROGRAM ................................................. Units  
CISC 303 (CIS 4)/ECE 302 (29) Computer Skills for Educators .... 3  
ECE 410 (13) Health and Safety in Child Care Setting ............... 1  
ENGL 370 (ENGL 39) Children and Literature or  
ART 430 (26) Art and Children ....................................... 3  
ENGR 300 (ENGL 1A) College Composition ........................... 3  
FCS 312 (34) Child Development or  
PSYC 372 (34) Child Development .................................... 3  
HCD 350 (43) Introduction to Tutor Training ......................... 1  
ENGED 320 (10) Tutoring Elementary Students in Reading ...... 3  
MATH 120 (53) Intermediate Algebra .................................. 5  
MUSM 370 (9) Music for Children .................................... 3  
PET 306 (24)/ECE 364 (24) Fundamentals of Games & Rhythm .... 2  
TOTAL UNITS REQUIRED .......................................... 27
CERTIFICATE
Early Childhood Education Teacher
CODE #1329

REQUIRED PROGRAM .................................................. Units

Core Courses
ECE 300 (1) Introduction to Early Childhood Education ......... 3
ECE 320 (3) Principles and Practices in ECE ................. 4
ECE 321 (4) Advanced Principles and Practices in ECE ...... 4
ECE 330 (7A) Infant Development (3) or
ECE 400 (8) Children with Exceptional Needs (3) or
ECE 404 (11) Children with Special Needs (3) or
ECE 356 (9) Programs for the School-Age Child (3) ...... 3
ECE 410 (13) Health and Safety in the Child Care Setting .... 1
ECE 430 (36) Culture and Diversity in ECE .................... 3
FCS 312 (34) Child Development or
PSYC 372 (34) Child Development ......................... 3
FCS 314 (35) The Child, the Family and the Community .... 3

TOTAL CORE UNITS REQUIRED .................................. 24

GENERAL EDUCATION UNITS ...................................... 16

To be eligible for the Child Development Permit (Teacher) students must complete 16 units in general education categories which meet graduation requirements and with at least one course in each of the following areas: English, Humanities, Social Science, Math/Science. Please refer to the General Education Requirements for a list of acceptable courses. Students must also complete experience requirements for the particular permit for which you are applying. See ECE Department for further information.

CERTIFICATE
Early Childhood Education, Master Teacher
CODE #1328

REQUIRED PROGRAM .................................................. Units

Core Courses
ECE 300 (1) Introduction to Early Childhood Education ......... 3
ECE 320 (3) Principles and Practices in ECE ................. 4
ECE 321 (4) Advanced Principles and Practices in ECE ...... 4
ECE 330 (7A) Infant Development (3) or
ECE 400 (8) Children with Exceptional Needs (3) or
ECE 404 (11) Children with Special Needs (3) or
ECE 356 (9) Programs for the School-Age Child (3) ...... 3
ECE 410 (13) Health and Safety in the Child Care Setting .... 1
ECE 430 (36) Culture and Diversity in ECE .................... 3
FCS 312 (34) Child Development or
PSYC 372 (34) Child Development ......................... 3
FCS 314 (35) The Child, the Family and the Community .... 3

TOTAL CORE UNITS REQUIRED .................................. 32

GENERAL EDUCATION UNITS ...................................... 16

To be eligible for the Child Development Permit (Teacher) students must complete 16 units in general education categories which meet graduation requirements and with at least one course in each of the following areas: English, Humanities, Social Science, Math/Science. Please refer to the General Education Requirements for a list of acceptable courses. Students must also complete experience requirements for the particular permit for which you are applying. See ECE Department for further information.

Master Teacher Specialization Options

Select one (1) six-unit option below:

Infant and Toddler Care .................................................. 7 units
ECE 330 (7A) Infant Development (3)
ECE 331 (7B) Education and Care of Infants (3)
ECE 334 (7L) Laboratory with Infants and Toddlers (1)

School-Age Care .................................................. 6 units
ECE 356 (9) Programs for School-Age Children (3)
And a combination of the following to total three (3) units:
ENGED 320 (10) Tutoring Elementary Students in Reading (3)
PET 306 (24) ECE 364 (24) Fundamentals of Games & Rhythm (2)
and
1 unit of Physical Education activity or
ECE 498 (48) With field or practicum placement in a school-age program (1)

Art with Children .................................................. 6 units
ART 430 (26) Art and Children (3)
And one of the following:
ARTH 300 (ART 10) Introduction to Art (3)
ART 320 (14) Design Fundamentals (3)

Music with Children .................................................. 6 units
MUSM 370 (9) Music for Children (3)
And one of the following:
MUFLH 330 (9) World Music (3)
MUIVI 340 (30A) & 341 (30B) Beginning Piano (4)
MUIVI 370 (42A) & 371 (42B) Beginning Guitar (4)

Children’s Drama and Literature ..................................... 6 units
ENGLT 370 (ENGL 39) Children and Literature (3)
TA 401 (28) Children’s Literature and Creative Drama (3)

Children’s Health, Safety and Nutrition .................................. 6 units
ECE 415 (14) NUTRI 320 (14) Children’s Health, Safety & Nutrition (3)
NUTRI 300 (10) Nutrition (3)

Bilingual/Bicultural Development ...................................... 6-7 units
Select one of the following:
ANTH 310 (2) Cultural Anthropology (3)
BUS 330 (15) Managing Diversity in the Workplace (3)
SOC 321 (5) Race, Ethnicity and Inequality in the U.S. (3)
COMM 325 (14) Intercultural Communication (3)
And one of the following Foreign Language courses:
Spanish or Vietnamese (3-4)

Children with Exceptional Needs ..................................... 6 units
Choose one of the following:
ECE 400 (8) Children with Exceptional Needs (3) or
ECE 404 (11) Children with Special Needs (3)

Early Intervention Assistant II
Core units must include:
ECE 330 (7A) Infant Development (3) and
and
Specialization units include: .................................. 6 units
ECE 402 (6) Infants with Atypical Development (3)
ECE 404 (11) Children with Special Needs (3)
## Early Childhood Education (ECE)

**ECE 106**  
**Parenting Through Participation**  
1 Unit  
Formerly: ECE 90  
Prerequisite: None  
Hours: 9 hours LEC ; 36 hours LAB  
This course is primarily designed for student parents who have their children enrolled in CRC’s Child Development Center, but others interested in learning parenting skills by practicing are also encouraged to enroll. May be repeated for a maximum of four units.

**ECE 295**  
**Independent Studies in Early Childhood Education**  
1-3 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

**ECE 299**  
**Experimental Offering in Early Childhood Education**  
0.5-4 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

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### Required Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>ECE 300</td>
<td>Introduction to Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE 320</td>
<td>Principles and Practices in ECE</td>
<td>3</td>
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<tr>
<td>ECE 321</td>
<td>Advanced Principles and Practices in ECE</td>
<td>4</td>
</tr>
<tr>
<td>ECE 498</td>
<td>Work Experience in ECE</td>
<td>4</td>
</tr>
<tr>
<td>ECE 330</td>
<td>Infant Development</td>
<td>3</td>
</tr>
<tr>
<td>ECE 404</td>
<td>Children with Special Needs</td>
<td>3</td>
</tr>
<tr>
<td>ECE 410</td>
<td>Health and Safety in the Child Care Setting</td>
<td>3</td>
</tr>
<tr>
<td>ECE 430</td>
<td>Culture and Diversity in ECE</td>
<td>3</td>
</tr>
<tr>
<td>FCS 312</td>
<td>Child Development</td>
<td>3</td>
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<td>PSYC 372</td>
<td>Child Development</td>
<td>3</td>
</tr>
<tr>
<td>FCS 314</td>
<td>The Child, the Family and the Community</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED**: 27

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**ECE 300**  
**Introduction to Early Childhood Education**  
3 Units  
Formerly: ECE 1  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course will introduce students to the field of early childhood education, including an overview of the history of the field, current curriculum approaches, and programs serving children from infancy through the school-age years. It reviews the current status of education of young children, with a focus on integrated education. Students will learn and apply skills in observing young children, documenting the work of young children, and interpreting these documents in order to plan subsequent curriculum. Opportunities to observe in a variety of early childhood education settings will be included. This class will prepare students with background and skills they need before entry into the student teaching laboratory classes.

**ECE 302**  
**Computer Skills for Educators**  
3 Units  
Formerly: ECE 29  
Prerequisite: None  
Advisory: BUSTEC 302.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is designed for educators of young children. The course will provide a comprehensive overview of the use of computer technology in the classroom in order to enhance the education advancement of the child and facilitate ease of instruction and administration for the teacher. The course will provide hands-on experience in the use of computer applications, educational software, and problem-solving skills. This course is the same as CISC 303, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

**ECE 304**  
**Family to Family: Introduction to Family Child Care**  
1 Unit  
Formerly: ECE 19  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course is an orientation to Family Child Care including local regulations, health and safety, curriculum, behavior management, and business requirements of in-home child care services.

**ECE 320**  
**Principles and Practices in Early Childhood Education**  
4 Units  
Formerly: ECE 3  
Prerequisite: FCS 312 or PSYC 372; ECE 300. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 36 hours LEC ; 108 hours LAB  
This laboratory class provides experience working with children in an early childhood setting under the supervision of a mentor teacher. Students will be assigned to the campus child development centers or centers with approved mentor teachers for the supervised laboratory experience. Lectures cover principles and practices behind effective education of young children. Students gain experience in planning, implementing, and interpreting activities with young children; in creating settings for learning with a classroom; and in guiding children’s behavior. Laboratory provides opportunities for applying these key-teaching principles in practical situations. Before beginning lab assignments, students must show proof of TB clearance.
ECE 321
Advanced Principles and Practices in Early Childhood Education 4 Units
Formerly: ECE 4
Prerequisite: FCS 312 or PSYC 372; ECE 300, ECE 320. Grade of "C" or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 108 hours LAB
This advanced laboratory class provides experiences in applying principles of overall early childhood curriculum design and effective classroom management. While working with children in an early childhood setting under the supervision of a mentor teacher, students will build on introductory experiences offered in ECE 320. Students will be assigned to the campus child development centers or centers with approved mentor teachers for the supervised laboratory experience. Lecture and laboratory components provide opportunities to plan, provision, and supervise the overall learning setting. Course work is aimed at mastering classroom leadership in the areas of child observation, documentation of children’s work, child assessment, guidance of behavior, group management, collaborative teaching and effective oversight of long-term study projects. Before beginning lab assignments, students must show proof of TB clearance.

ECE 330
Infant Development 3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course covers infant development from conception through three years of age. Students will apply current research to the preparation for conception, birth, and raising children in the first three years of life. Students will learn strategies for caring for infants at each developmental stage. This course is for parents or professionals working with infants in health fields, education, or social services.

ECE 331
Education and Care of Infants in Group Settings 3 Units
Prerequisite: ECE 330.
Course Transferable to CSU
Hours: 54 hours LEC
This course applies current research in infant development to the teaching and care of infants in group settings. Early childhood education principles and practices are emphasized in the application of care and education of infants from birth to three years of age. Students will learn strategies for designing, implementing, and evaluating group care programs for infants and toddlers.

ECE 334
Laboratory with Infants and Toddlers 1 Unit
Prerequisite: None
Corequisite: ECE 331; may be taken previously. Grade of "C" or better required to meet corequisite.
Course Transferable to CSU
Hours: 54 hours LAB
This class provides experience working with infants and toddlers in a group care program. It is designed as a practicum/laboratory for those who have completed or are enrolled in ECE 331. This course requires participation in a designated, supervised infant-toddler care setting for three hours per week with infants and/or toddlers. A current, yearly TB test is required prior to starting lab hours.

ECE 342
Constructive Math and Science in Early Childhood Education 3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
The course is an introduction to the constructivist approach to teaching pre-math and science in early childhood education. The content and teaching techniques support the perspective that children construct knowledge through a dynamic, interactive process that facilitates their development of working theories relating to math and science.

ECE 343
Language and Literacy Development in Early Childhood 3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course will present the fundamentals of planning, implementing age-appropriate activities and day-to-day program operation. Field trip may be utilized to enhance classroom instruction.

ECE 350
Introduction to Elementary Teaching with Field Experience 3 Units
Formerly: ECE 10
Prerequisite: None
Advisory: FCS 312 or PSYC 372.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is a career exploration course with an early field experience for those students considering the field of K-8 teaching. It includes a supervised field placement and four hours weekly in a local elementary school in addition to weekly class meetings on campus. It will also fulfill one of the early field experiences for the CSUS blended liberal studies major. Course content includes the profession and culture of teaching, observation skills, communication skills, diversity and social issues among others. Students’ field experiences will integrate and apply the course content. Students will also complete a service learning project at participating schools.

ECE 356
Programs for the School-Age Child 3 Units
Formerly: ECE 9
Prerequisite: FCS 312 or PSYC 372. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 54 hours LEC
This course will present the fundamentals of planning, implementing and evaluating programs for before- and after-school care of school-age children (K-6). Course emphasis is on developmental levels, age-appropriate activities and day-to-day program operation. Field trip may be utilized to enhance classroom instruction.

ECE 340
Programs for the School-Age Child 3 Units
Formerly: ECE 9
Prerequisite: FCS 312 or PSYC 372. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 54 hours LEC
This course will present the fundamentals of planning, implementing and evaluating programs for before- and after-school care of school-age children (K-6). Course emphasis is on developmental levels, age-appropriate activities and day-to-day program operation. Field trip may be utilized to enhance classroom instruction.
### ECE 364
**Fundamentals of Movement and Rhythm in Early Childhood Education**  
2 Units  
Formerly: ECE 24  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC : 54 hours LAB  
This course is designed for early childhood, elementary education, and recreation majors. Recommended for physical education majors. Early childhood education, elementary and lead-up games for individuals and team sports, stunts, tumbling, and elementary and culturally diverse rhythms and dances will be practiced. This course is the same as PET 306 and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

### ECE 400
**Children with Exceptional Needs**  
3 Units  
Formerly: ECE 8  
Prerequisite: FCS 312 or PSYC 372 with a grade of “C” or better.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course will present the characteristics of exceptional children; assessment techniques and curriculum design; community resources and current issues; observation in public and private school classrooms and agencies. Field trips will be used to support classroom instruction.

### ECE 402
**Infants with Atypical Development**  
3 Units  
Formerly: ECE 6  
Prerequisite: FCS 312 or PSYC 372 with a grade of “C” or better.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course will examine the developmental characteristics, assessment techniques, methods of intervention, natural environments, community and family resources, and current issues of the atypical infant from birth through age three. Students will understand and practice the early intervention techniques the very young children with special needs and disabilities require in the developmental areas of sensory stimulation and integration, gross and fine motor control, cognitive, language, social and self-help skills. The course will explore the community services and agencies that offer family support as well as the laws related to the atypical infant/toddler. Career and vocational opportunities in the fields related to special needs infant/toddlers and the various roles of the multidisciplinary teams that develop the IFSP will be examined.

### ECE 404
**Children with Special Needs**  
3 Units  
Formerly: ECE 11  
Prerequisite: FCS 312 or PSYC 372. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is designed to provide a broad overview of the characteristics, assessment techniques, methods of intervention, natural environments, community and family resources, and current issues of young children from birth to age eight with special needs and disabilities. The focus is to increase the awareness and understanding of children’s individual needs in and early childhood setting and to provide practical information to those currently involved with children with special needs. Observations in public and private children’s centers, schools and agencies are required.

### ECE 410
**Health and Safety in Child Care Settings**  
1 Unit  
Formerly: ECE 13  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course covers health and safety issues in child care centers and family day care homes. It includes pediatric cardiopulmonary resuscitation, pediatric first aid, and preventative health practices. To receive American Red Cross certification, students must successfully demonstrate competency.

### ECE 411
**Health and Safety in Child Care Settings**  
.5 Unit  
Formerly: ECE 13A  
Prerequisite: None  
Course Transferable to CSU  
Hours: 8 hours LEC  
This module covers health and safety issues in child care settings and family day care homes. Course content includes injury prevention, preventative health care practices such as control of infectious diseases, nutrition issues, sanitation, emergency preparedness and evacuation. This course has no renewal requirement.

### ECE 412
**Pediatric CPR**  
.25 Unit  
Formerly: ECE 13B  
Prerequisite: None  
Course Transferable to CSU  
Hours: 6 hours LEC  
This module covers pediatric cardiopulmonary resuscitation (CPR). Successful students earn certification which must be renewed every year to remain current. This course may be taken four times for credit.

### ECE 413
**Pediatric First Aid in Child Care Settings**  
.25 Unit  
Formerly: ECE 13C  
Prerequisite: None  
Course Transferable to CSU  
Hours: 4 hours LEC  
This module covers pediatric first aid in child care settings and family day care homes. Successful students earn Pediatric First Aid certification which must be renewed every two years to remain current (effective as of 9/1/99). This course may be taken four times for credit.
ECE 415  
Children's Health, Safety and Nutrition  
3 Units  
Formerly: ECE 14  
Prerequisite: None  
Advisory: NUTRI 300.  
Course Transferable to CSU  
Hours: 54 hours LEC

This course examines basic nutrition, health, and safety needs of children from the prenatal period through school age. Students will identify the nutrients in foods as they affect a child’s physical and mental development. Course emphasis is placed on maintaining the optimal health, safety, and nutritional status of children at home and in group care. Projects relating to children’s nutrition, health, and safety are required as part of the course. This course is the same as NUTRI 320, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

ECE 420  
Administration of Child Development Centers  
3 Units  
Formerly: ECE 5  
Prerequisite: FCS 312 or PSYC 372; ECE 320. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 54 hours LEC

This is an introductory course in the elements of program planning, budgeting, supervision and personnel administration for public and private centers and schools serving young children.

ECE 422  
Advanced Coordination and Supervision of Child Development Programs  
3 Units  
Formerly: ECE 15  
Prerequisite: FCS 312 or PSYC 372; ECE 320 and ECE 420. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 54 hours LEC

This is an advanced course in administration and coordination of multi-faceted Child Development Programs. The emphasis of the course will be on publicly funded programs and personnel management. This course meets the requirements of the Education Code under Title 5, and the Commission of Teacher Credentialing.

ECE 424  
Adult Supervision: Mentoring in a Collaborative Learning Setting  
2 Units  
Formerly: ECE 47  
Prerequisite: None  
Course Transferable to CSU  
Hours: 36 hours LEC

This course is a study of the methods and principles of collaborative learning, with emphasis on supervising adults working in child care centers. Emphasis is placed on the role of a mentor who functions to guide the teaching team while simultaneously addressing the needs of children, parents and their staff. This course satisfies the adult supervision requirement for receiving a supervising teacher permit from the California Commission on Teacher Credentialing.

ECE 430  
Culture and Diversity in Early Childhood Education  
3 Units  
Formerly: ECE 36  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC

This course covers culturally responsive care and education in early childhood settings. It includes the study of child-rearing and communication styles as they vary across the diverse cultures such as African American, Latino, Asian American, and others represented in the classroom and as they impact a child’s development. Promoting equity for all aspects of human diversity (culture, race, ethnicity, gender, sexual orientation, ability, and age) is explored. Teaching strategies which prevent and eliminate the development of prejudice and racism in growing children will be covered. Included are strategies for helping children negotiate and resolve conflicts caused by cultural and ability differences.

ECE 440  
Introduction to Family Support Services in Early Childhood Education  
3 Units  
Formerly: ECE 38  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC

This course will cover topics that provide support services to families as they identify their own goals, nurture the development of children in the context of their family and culture, and advocate for communities that are supportive to children and families of all cultures. This will include building family relationships, accessing community services and enhancing problem solving skills.

ECE 442  
Advanced Studies in Family Support Services  
3 Units  
Formerly: ECE 39  
Prerequisite: ECE 440. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 54 hours LEC

This course will provide students with advanced information and techniques needed to support families to reach their goals toward self-reliance. Students will gain knowledge of the principles of empowerment-based family assessment as well as obtaining the skills to support families to build strong relationships with their community.

ECE 494  
Topics in Early Childhood Education  
.5-4 Units  
Formerly: ECE 52  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC; 54 hours LAB

Designed to give students an opportunity to study topics in Early Childhood Education which are not included in current course offerings. Topics may include, but are not limited to: Management of Family Day Care Homes; Guidance of the Special Child in Everyday Living; Behavior and Discipline; Children in Crisis; The Single Parent Family; and Cross-Cultural Experiences with Children and Families. May be repeated for credit providing there is no duplication of topics.
ECE 495
Independent Studies in Early Childhood Education 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

ECE 498
Work Experience in Early Childhood Education 1-4 Units
Formerly: ECE 48
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
Note: Before beginning lab assignments with children, students must show proof of TB clearance.

ECE 499
Experimental Offering in Early Childhood Education .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

See next page for a special Department / Course Certificate Matrix
## ECE Department Course / Certificate Matrix

<table>
<thead>
<tr>
<th>Certificate/Degree</th>
<th># of Units</th>
<th>Electives or Gen. Ed. Units/Specialization</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE, Assistant Teacher</td>
<td>7 X X</td>
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</tr>
<tr>
<td>ECE, Associate Teacher</td>
<td>14 X X X X</td>
<td>X</td>
</tr>
<tr>
<td>ECE, Family Day Care</td>
<td>15 X X X</td>
<td>X X</td>
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<td>Family Support Services</td>
<td>16 X X</td>
<td>X X 4</td>
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<tr>
<td>ECE, Infant Specialist</td>
<td>21 X X X X</td>
<td>X</td>
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<tr>
<td>ECE, School-Age Child Care</td>
<td>20-21 X X X X X or X</td>
<td>X or X</td>
</tr>
<tr>
<td>ECE, Program Management</td>
<td>24 X X X X X or X</td>
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<tr>
<td>Early Intervention Assistant I</td>
<td>27 X X X X X or X</td>
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<tr>
<td>ECE, Teacher (CD Permit) 24 ECE +16 Gen. Ed.=40</td>
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<tr>
<td>ECE, Master Teacher (CD Permit) 26 ECE + 6 Specialization in ECE + 16 Gen.Ed.=48</td>
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<td>AA Degree in ECE 33 major + Gen Ed=60</td>
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</tr>
<tr>
<td>AA Degree in ECE/Site Supervisor (CD Permit) 32 major+ Gen Ed = 60</td>
<td>32 ECE major X X X X X X or X or X or X or X</td>
<td>X</td>
</tr>
</tbody>
</table>

* = Work Experience placement related to specific age or group

or = OPTION – See Certificate program description
Economics

Combines with business, computer information science, journalism, human services, political science, social science, or history for an excellent background in any career field

Economic studies analyze how people and societies produce various commodities and distribute them for consumption, now or in the future. CRC’s economics offerings include the study of the American economic system, using techniques for the analysis of contemporary economic problems. There is an emphasis on developing the ability to exercise sound judgment in evaluating public policy issues.

Career Options
Accountant; Arbitrator; Attorney; Budget Analyst; Business Analyst; Business Conditions; Forecaster; Commodity Economist; Commodity Price Forecaster; Development Economist; Economic Analyst; Economic Forecaster; Industrial Relations Specialist; Investment Analyst; Labor Economist; Macro Economist; Manpower Economist; Natural Resource Economist; Operations Research Analyst; Project Economist; Research Economist

Highlights
Knowledgeable instructors and professionals in their fields
Good general overview and conceptual framework of economic issues
Opportunity to combine with business and other related areas of study for a more comprehensive education
Transfer opportunities
A lab with tutorial assistance

Most career options require more than two years of study.

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.
Economics (ECON)

**ECON 100**
Introduction to Economics 3 Units
Formerly: ECON 55
Prerequisite: None
Hours: 54 hours LEC
This course introduces the purpose, terminology, and basic concepts of economic theory. It examines the fundamental economic problem of scarcity and describes how our society is organized to deal with scarcity. It considers some of the problems (unemployment, inflation, national debt, poverty, crime, pollution, etc.) that economic theory may help explain.

**ECON 299**
Experimental Offering in Economics .5-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

**ECON 302**
Principles of Macroeconomics 3 Units
Formerly: ECON 1A
Prerequisite: None
Course Transferable to UC/CSU
(CAN ECON 2)
Hours: 54 hours LEC
This course is a graphical and functional analysis of the economy as a whole. The focus is on the economy’s well-being, problems, and solutions. Major topics include basic principles of economics; basic economic analysis; demand, supply, and equilibrium in a market; macroeconomic sectors, goals, and problems (unemployment, inflation, business cycle, and government budget deficit); the economy’s output, income, and price level; aggregate demand, aggregate supply, and equilibrium; and macroeconomic policies (fiscal and monetary). Time permitting, related topics such as international trade, international finance, and economic growth may also be discussed. Course work includes doing arithmetic problems, solving algebraic equations, and graphing straight and curvilinear lines.

**ECON 304**
Principles of Microeconomics 3 Units
Formerly: ECON 1B
Prerequisite: None
Course Transferable to UC/CSU
(CAN ECON 4)
Hours: 54 hours LEC
This course is a graphical and functional analysis of the units (sectors) making up the economy. The focus is on the sectors’ choices and interactions, microeconomic goals (efficiency and equity), problems, and solutions. Major topics include basic principles of economics; basic economic analyses; demand, supply, and equilibrium in a market; markets and applications; costs and production; product and resources markets; and microeconomic problems (externalities, public goods, and income inequality). Time permitting, related topics such as international trade and health economics may also be discussed. Course work includes doing arithmetic problems, solving algebraic equations, and graphing straight and curvilinear lines.
Education / Teaching

DEGREE
A.A.—Liberal Studies for Elementary Education

This major is designed for students who wish to be teachers in public and private elementary schools. Further education at the university level will be required to fulfill all requirements for a teaching credential authorizing service in California public schools.

Career Options
Teacher, primary grades
Teacher, intermediate grades
Instructional Assistant

Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights
This major is especially designed for students who plan to transfer into California State University, Sacramento's Blended Teacher Preparation Program. This program provides all of the lower division courses necessary to gain admission to the university and the Elementary Teacher Blended Credential Program.

Other CSUS Requirements:
Foreign Language: For graduation from CSUS, students must fulfill the Foreign Language requirement. For other exemptions, see coordinator or a counselor.

Grade point average must be 2.67 in transferable baccalaureate courses.

The Writing Proficiency Exam (WPE) should be taken at CSUS shortly after completing Critical Thinking (ENGWR 302).

The Intermediate Algebra Diagnostic exam should be taken shortly after completing Intermediate Algebra (MATH 125).

It is recommended that the CBEST be taken anytime after taking ENGWR 300 (Engl 1A), ENGWR 302 (Engl 1C), and MATH 310 (2).

Students should accumulate a portfolio of their course work, obtain a letter of recommendation from their field experience cooperating teacher, and check with their counselor for other CSUS application and admission requirements.

Other Associate in Arts degree requirements:
Physical Education - any activity course
Complete 60 Units
Students must meet the Reading Competency requirement through either assessment, a class, or a college-level reading examination.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.
**DEGREE:**

A.A. — Liberal Studies for Elementary Education  
**CODE # 1523**

This major will provide a course of studies for students who want to transfer into CSUS's Blended Teacher Preparation Program. It will provide all of the lower division courses necessary to gain admission to the credential program. It will also provide requirements necessary for transfer.

The program requirements listed below for CSUS applies to students completing this course sequence by Fall 2007. Students should contact a counselor about the new program requirements which were effective with the Fall 2004-05 catalog.

**REQUIRED PROGRAM ............................................................... Units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGWR 300</td>
<td>College Composition</td>
<td>3</td>
</tr>
<tr>
<td>COMM 361 (9)</td>
<td>The Communication Experience</td>
<td>3</td>
</tr>
<tr>
<td>ENGED 305</td>
<td>Structure of English</td>
<td>3</td>
</tr>
<tr>
<td>ENGWR 302</td>
<td>Adv Composition &amp; Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>MATH 310 (2)</td>
<td>Mathematical Discovery</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 307 (13)</td>
<td>Biology of Organisms</td>
<td>4</td>
</tr>
<tr>
<td>GEO 305 (8)</td>
<td>Earth Science</td>
<td>3</td>
</tr>
<tr>
<td>GEO 306 (8L)</td>
<td>Earth Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>HIST 312 (17)</td>
<td>History of U.S. to 1865</td>
<td>3</td>
</tr>
<tr>
<td>ECON 302 (1A)</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 301 (1)</td>
<td>Intro to Govt: United States</td>
<td>3</td>
</tr>
<tr>
<td>HIST 307 (11)</td>
<td>History of World Civilizations to 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 308 (12)</td>
<td>History of World Civiliz, 1500 to Present</td>
<td>3</td>
</tr>
<tr>
<td>FCS 312 (34)</td>
<td>Child Development</td>
<td>3</td>
</tr>
<tr>
<td>ENGED 320 (10)</td>
<td>Tutoring Elem Children in Reading</td>
<td>3</td>
</tr>
<tr>
<td>ECE 350 (10)</td>
<td>Intro to Elem Teaching with Field Experience</td>
<td>3</td>
</tr>
<tr>
<td>SOC 321 (5)</td>
<td>Race, Ethnicity &amp; Inequality in the U.S. (3)</td>
<td>3</td>
</tr>
<tr>
<td>ENGLT 336 (ENGL 18)</td>
<td>Race &amp; Ethnicity in Contemp Amer Lit .</td>
<td>3</td>
</tr>
<tr>
<td>ART 430</td>
<td>Art and Children</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL UNITS REQUIRED ............................................................. 53</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other Requirements:** For graduation from CSUS, students must fulfill the Foreign Language requirement.

**General Education Graduation Requirements** - See page 18.
Emergency Medical Technology

CERTIFICATE Emergency Medical Technician

EMERGENCY MEDICAL TECHNICIAN

EMTs are the backbone of the Emergency Medical Services (EMS) system throughout the nation, helping to reduce injury severity and death at the scene of an accident or sudden illness and during transportation to a medical facility.

CRC’s Emergency Medical Technology 100 course is designed to provide the student with the skills and knowledge to apply for certification as an Emergency Medical Technician (1) and is approved by the Sacramento County Health Department, Division of Emergency Medical Services, the certifying agency for Sacramento County. This certification is mandatory for all personnel who wish to pursue a career working on an ambulance. EMT (1) certification is also a pre-employment requirement for many fire departments. Together with varying levels of actual on-the-job experience, it is often required for admission to Paramedic training programs throughout the state.

CRC’s EMT students will gain actual experience by spending eight hours off-campus in operating ambulance units and an additional eight hours in a hospital emergency department.

Career Options
EMT(1); Fire Service

(With additional training):
Ambulance Technician; Firefighter; Rescue Worker; Paramedic; Emergency Medical Dispatcher

Highlights
Hands-on experience provided in administering proper emergency medical care
Preparation for the EMT(1) Certificate
Recertification
Hospital Emergency Room observation time and opportunities to “ride along” in ambulances
### CERTIFICATE:
**Emergency Medical Technician**

**CODE # 1508**

The EMT certificate is aligned with the testing requirements of the Sacramento County Division of Emergency Medical Services for Basic Certification as an EMT 1, and the entrance requirements for the Paramedic program at American River College.

### REQUIRED PROGRAM ............................................................... Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEED 312</td>
<td>Community CPR (1) (or Adult, Child, Infant CPR Certificate) (0) and</td>
<td>11</td>
</tr>
<tr>
<td>HEED 313</td>
<td>Standard First Aid (1) (or Standard First Aid Certificate) (0) or</td>
<td>10</td>
</tr>
<tr>
<td>HEED 314</td>
<td>Community First Aid and Safety (2) (or CPR &amp; Standard First Aid Certificate) (0) ......</td>
<td>12</td>
</tr>
<tr>
<td>HEED 320</td>
<td>CPR-BLS for the Professional Rescuer (2) (or CPR Professional Rescuer Certificate) (0) .....</td>
<td>14</td>
</tr>
<tr>
<td>BIOL 102</td>
<td>Intro to Concepts of Human Anatomy &amp; Physiology .................................................</td>
<td>4</td>
</tr>
<tr>
<td>EMT 100</td>
<td>Emergency Medical Technician-Basic ..................</td>
<td>5</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED .......................................................... 9-13**

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#### Emergency Medical Technology (EMT)

**EMT 100**

**Emergency Medical Technician - Basic** 5 Units  
Formerly: EMT 50  
Prerequisite: HEED 314 (or HEED 312 and HEED 313) and HEED 320; or equivalent certification. Grades of “C” or better required to meet prerequisite.  
Hours: 72 hours LEC ; 72 hours LAB  
This course instructs students to the level of Emergency Medical Technician-Basic. The EMT-Basic serves as a vital link in the health care team providing emergency pre-hospital care for basic life support with ambulance service, fire service, or other specialized services. Students spend ten hours off-campus in a hospital emergency room and/or in an operational ambulance. The course is in compliance with Title 22, Division 9, Chapter 2, of the California Code of Regulations. Students with an 80% grade or higher receive a course completion certificate, and are eligible to apply for the exam administered by the County of Sacramento for certification as an Emergency Medical Technician I.

**EMT 102**

**Emergency Medical Technician - Basic Refresher** 1 Unit  
Formerly: EMT 51  
Prerequisite: EMT 100 or current/prior certification as an EMT-1. Grade of “C” or better required to meet prerequisite  
Hours: 24 hours LEC ; 4 hours LAB  
This course updates the techniques and current knowledge of persons employed in providing emergency care service. The course is in compliance with Title 22, Division 9, Chapter 2, of the California Code of Regulations. Students receiving an 80% grade or higher receive a course completion certificate. This course may be taken four times for credit.

**EMT 298**

**Work Experience in Emergency Medical Technology** 1-4 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 336)

**EMT 299**

**Experimental Offering in Emergency Medical Technology** .5-4 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
Engineering

Pre-Professional Transfer Opportunities

DEGREE  A.S.—Engineering

CRC's program provides the foundation in mathematics, physics, and engineering necessary to transfer to a university and complete a bachelor's degree in engineering. Engineering involves the application of scientific and mathematical principles needed to solve practical technical problems. Although the first two years of engineering courses for all engineering degrees are similar, students should consult the lower division requirements of the institution to which they wish to transfer.

Career Options
- Aerospace Engineer; Architectural Engineer;
- Chemical Engineer; Civil Engineer;
- Computer Engineer; Electrical Engineer;
- Mechanical Engineer, and other types of engineers

Most career options require a B.S. degree.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.

DEGREE  A.S.—Engineering
CODE #1482

This degree is designed to meet common lower division requirements for a major in Engineering.

<table>
<thead>
<tr>
<th>REQUIRED PROGRAM</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 400 (1A) General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CISP 360 (CIS 32A)* Intro to Structured Programming</td>
<td>4</td>
</tr>
<tr>
<td>CISP 340 (CIS 33)* FORTRAN Programming</td>
<td>3-4</td>
</tr>
<tr>
<td>ENGR 400 (17) Intro to Electrical Circuits and Devices</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 312 (27) Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 420 (35) Statics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 412 (45) Properties of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MATH 400 (9A) Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 401 (9B) Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>MATH 402 (9C) Calculus III</td>
<td>5</td>
</tr>
<tr>
<td>MATH 420 (11) Differential Equations</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 411 (4A) Mechanics of Solids and Fluids</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 421 (4B) Electricity and Magnetism</td>
<td>4</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED .......................................................... 47-48

* Check specific university requirements before choosing a course.

Electives:
(may be required at some universities; check university requirements):
- Engineering 310 (10), Engineering Survey Measurements;
- Physics 431 (4C), Heat, Waves, Light and Modern Physics.

Electrical/Computer Engineering Option:
- CHEM 400 (1A) General Chemistry.............................. 5
- CISP 360 (CIS 32A) Introduction to Structured Programming| 4
- ENGR 400 (17) Introduction to Electrical Circuits/Devices| 3
- MATH 400 (9A) Calculus I....................................... 5
- MATH 401 (9B) Calculus II..................................... 5
- MATH 402 (9C) Calculus III.................................... 5
- MATH 420 (11) Differential Equations....................... 4
- PHYS 411 (4A) Mechanics of Solids and Fluids................ 4
- PHYS 421 (4B) Electricity and Magnetism.................... 4

TOTAL UNITS REQUIRED .......................................................... 39

Electives:
(may be required at some universities; check university requirements):
- Engineering 303 (14), Introduction to Logic Design;
- Mathematics 410 (35), Linear Algebra;
- Physics 431 (4C), Heat, Waves, Light and Modern Physics.

Associate of Science Degree (A.S.) may be obtained by completion of the Required Program, plus General Education Requirements, plus sufficient electives to meet a 60-unit total.

General Education Graduation Requirements - See page 18.
Engineering (ENGR)

ENGR 300
Introduction to Engineering  1 Unit
Formerly: ENGR 2
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC
This course will provide students with information to evaluate the engineering profession as a personal career choice. Students will explore the branches of engineering and the different types of work that engineers do. Participants will investigate personal characteristics which contribute to being happy and successful engineers, and will examine their own traits. They will learn what preparation is needed and strategies for successful completion. Course participants will appreciate the role of engineers in society and understand the responsibilities of engineers in their service to society.

ENGR 303
Introduction to Logic Design  4 Units
Formerly: ENGR 14
Prerequisite: None
Advisory: Any previous or concurrent programming class, MATH 120.
Course Transferable to CSU
Hours: 54 hours LEC ; 54 hours LAB
This is an introductory course in the fundamentals of designing digital computer hardware. This course covers: logic gates, binary number systems, conversion between number systems, Boolean algebra, Karnaugh maps, combinational logic, digital logic design, flip-flops, programmable logic devices (PLDs), counters, registers, memories, state machines, designing combinational logic and state machines into PLDs, and basic computer architecture. Lab emphasizes the use of a software equation entry tool, the use of schematic entry, and the use of a logic simulation tool. Lab assignments are design oriented. Required for Electrical/Electronics Engineering and Computer Engineering majors. Helpful for Computer Science majors. Recommended for students wishing to sample computer engineering, and for current and future electronics technicians.

ENGR 310
Engineering Survey Measurements  4 Units
Formerly: ENGR 10
Prerequisite: Completion of high school trigonometry or MATH 335. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
(CAN ENGR 10)
Hours: 54 hours LEC ; 54 hours LAB
This course covers the theory and practice of measurements for distance and direction, both horizontal and vertical. Applications include layouts, traverse adjustments, areas, state plane coordinates, boundary surveys, mapping, horizontal curves, vertical curves, and earthwork computations. Students will use equipment in the field, learn computational practices, and present project summaries. Students will make field measurements with both traditional and electronic equipment. This course is required for B.S. degrees in civil engineering at many universities.

ENGR 312
Engineering Graphics  3 Units
Formerly: ENGR 27
Prerequisite: None
Advisory: Completion of MATH 112 or high school geometry; and MATH 120.
Course Transferable to UC/CSU
(CAN ENGR 2)
Hours: 36 hours LEC ; 72 hours LAB
Students will learn the graphical tools needed to develop and communicate engineering ideas. They will present three dimensional objects in drawings (basic drafting principles) and solve engineering problems by constructing views of objects from different points of view (descriptive geometry). Participants will create drawings using both pencil and paper and computer aided drafting/design (CADD). Students will learn the steps in a design process and will practice applying it. This course is primarily for Mechanical and Civil Engineering majors.

ENGR 400
Introduction to Electrical Circuits and Devices  3 Units
Formerly: ENGR 17
Prerequisite: PHYS 421. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
(CAN ENGR 6)
Hours: 54 hours LEC ; 18 hours LAB
This course will provide engineering students with circuit analysis concepts and applications that will be of value in any engineering field as well as a solid foundation for electrical engineering and related majors. The course includes the analysis of circuits with resistors, inductors, capacitors, and independent and dependent voltage and current sources. Many analysis techniques will be applied to DC and AC circuits. Differential equations will be used to find the transient response of circuits. Power calculations will be performed on both DC and AC circuits, including an introduction to three-phase AC power. This course is required for most engineering Bachelors of Science degrees.

ENGR 412
Properties of Materials  3 Units
Formerly: ENGR 45
Prerequisite: CHEM 400 and PHYS 411. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 72 hours LAB
This is an introductory course on the relationship of the internal structure of materials to their properties. Topics to be addressed include crystalline structure, imperfections, phases and phase diagrams, steels and non-ferrous alloys, polymers, ceramics, semiconductors, and corrosion. Students will apply the concepts in laboratory activities and will use typical materials testing equipment and analysis techniques.
ENGR 420  
**Statics**  
3 Units  
Formerly: ENGR 35  
Prerequisite: PHYS 411 and MATH 401. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
(CAN ENGR 8)  
Hours: 54 hours LEC  
This course covers analysis of two and three dimensional force systems for bodies in static equilibrium. Vector and scalar analysis methods address forces acting on rigid bodies, trusses, frames, and machines. Students will calculate internal forces in members and will create shear and bending moment diagrams for beams. Friction problems will include slipping vs tipping, and belt friction. Students will learn methods to calculate centroids and moments of inertia for bodies that are combinations of simple geometric shapes. This course is required for most engineering majors.

ENGR 495  
**Independent Studies in Engineering**  
1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

ENGR 499  
**Experimental Offering in Engineering**  
.5-4 Units  
Formerly: ENGR 49  
Prerequisite: None  
Course Transferable to UC/CSU: UC - See Counselor  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
English

DEGREE A.A.—English

“Anyone who has read a great deal can imagine the new world that opened. Let me tell you something: from then until I left that prison, in every free moment I had, if I was not reading in the library, I was reading on my bunk. You couldn’t have gotten me out of books with a wedge . . . Up to then, I never had been so truly free in my life” ~ Malcolm X.

The CRC English department teaches skills that are universal to every other discipline. Taking courses in English increases the student’s chances of success in every other area the student chooses to pursue. The ability to read effectively and to write expressively will prove invaluable for any CRC student.

Career Options
Advertising; Business; Civil Servant; Columnist/Journalist; Contract Specialist; Editor/Evaluator; Information Specialist; Insurance; Interpreter; Lawyer; Lexicographer; Legislative Assistant; Librarian; Manager; Methods Analyst; Program Developer; Public Relations; Publisher; Researcher; Teacher; Technical Writer; Writing Consultant

Some career options may require more than two years of college study.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE A.A.—English

CODE #1403

The English major offers courses in literature, composition, and creative writing designed to enhance communication skills, deepen cultural awareness, provide a breadth of knowledge appropriate for many degree and vocational programs, and prepare students for transfer to four-year institutions, and for a baccalaureate major in English or related majors.

REQUIRED PROGRAM .......................................................... Units
Core Requirements-eleven (11) units:
ENGLT 320 (ENGL 30) American Literature ......................... 3
ENGLT 321 (ENGL 31) American Literature ......................... 3
ENGLT 310 (ENGL 35) English Literature ......................... 3
ENGLT 311 (ENGL 36) English Literature ......................... 3

Electives - Six (6) units selected from the following: ............. 6
ENGL 303 (ENGL 30) American Literature ......................... 3
ENGL 304 (ENGL 31) American Literature ......................... 3
ENGL 305 (ENGL 35) English Literature ......................... 3
ENGL 306 (ENGL 36) English Literature ......................... 3

TOTAL UNITS REQUIRED ....................................................... 24

Associate in Arts Degree: This A.A. degree may be obtained by completion of the Required Program, plus General Education Requirements, plus sufficient electives to meet a 60-unit total.

General Education Graduation Requirements - See page 18.
## English - Writing (ENGWR)

**ENGWR 41**  
**Writing Skills**  
4 Units  
Formerly: ENGL 255  
Prerequisite: None  
Hours: 72 hours LEC  
This writing course, designed to prepare the student for ENGWR 51, will focus on reading and writing as integrally related skills. Students will study and practice such things as reading comprehension, the writing process, critical thinking, and creating clear and correct sentences as they develop the skills necessary to write a variety of focused, developed, organized paragraphs and/or short essays. Students will be responsible for writing at least eight full-process paragraphs/essays. This course may be taken two times for credit. It may include a departmental final.

**ENGWR 42**  
**Spelling**  
1 Unit  
Formerly: ENGL 201  
Prerequisite: None  
Hours: 18 hours LEC  
This course consists of phonetic principles and basic spelling rules with intensive practice in their application. A unit of credit is awarded for each 18 hours of instruction. This course is graded on a credit/no credit basis. This course may be taken two times for credit.

**ENGWR 44**  
**Basics of Sentence Structure**  
1.5 Units  
Formerly: ENGL 203  
Prerequisite: None  
Hours: 27 hours LEC  
This course offers training in grammar, sentence building, correct usage, and punctuation. Recommended for students who wish to review basic principles of standard English as preparation or reinforcement for ENGWR 101 or ENGWR 300. This course is graded on a credit/no credit basis. This course may be taken two times for credit.

**ENGWR 45**  
**Basics of Vocabulary**  
1.5 Units  
Formerly: ENGL 202  
Prerequisite: None  
Hours: 27 hours LEC  
This course is for vocabulary improvement, specializing in the study of prefixes and other word parts. Graded on a credit/no credit basis. This course may be taken two times for credit with the recommendation of the instructor.

**ENGWR 51**  
**Developmental Writing**  
4 Units  
Formerly: ENGL 256  
Prerequisite: ENGWR 41 or equivalent skills demonstrated through the assessment process. Grade of “C” or better required to meet prerequisite.  
Hours: 72 hours LEC  
This writing course, designed to prepare students for ENGWR 101, will focus on reading and writing as integrally related skills.

Students will study and practice reading comprehension, the writing process, critical thinking, and creating clear and correct sentences as they develop skills necessary to write a variety of focused, developed, organized paragraphs and essays. Students will be responsible for writing at least six full-process essays. This course may be taken two times for credit. It may include a departmental final.

**ENGWR 54**  
**Writing Center: Basic Skills**  
.5-3 Units  
Formerly: ENGL 254  
Prerequisite: None  
Corequisite: ENGWR 41 or 51.  
Hours: 54 hours LAB  
Individualized instructional modules designed to help the student acquire or improve writing skills in specific areas. Course offerings vary, depending upon the student's needs and abilities. A partial list includes the following: parts of speech, punctuation, and dictionary use (non-degree applicable modules). This course is graded on a credit/no credit basis. Writing modules may not be repeated for credit and are not substitutes for ENGWR 41, 51, 101, or 300, or for any of the ESL courses. Students may register up to the 14th week of the semester. Scheduling is flexible, to be agreed upon by the student and staff. This course may be repeated for credit up to a maximum of six units.

**ENGWR 101**  
**College Writing**  
4 Units  
Formerly: ENGL 57  
Prerequisite: ENGWR 51, or ESLW 320, or equivalent skills demonstrated through the assessment process. Grade of “C” or better required to meet prerequisite.  
Hours: 72 hours LEC  
This writing course, designed to meet writing proficiency requirements for graduation and to prepare the student for ENGWR 300, will focus on reading and writing as integrally related skills. Students will study and practice such things as the writing process, summarizing, critical thinking, creating clear/varied correct sentences and incorporating sources as they develop the skills necessary to write a variety of focused, developed, organized essays. Students will be responsible for writing at least six full-process essays (500 word minimum). This course may be taken two times for credit. The course includes a departmental final.

**ENGWR 103**  
**Practical Communication**  
3 Units  
Formerly: ENGL 60  
Prerequisite: ENGWR 51, or ESLW 320 and ESLR 320, or equivalent skills demonstrated through the assessment process. Grade of “C” or better required to meet prerequisite.  
Hours: 54 hours LEC  
The course provides instruction in analyzing and writing technical communication and reports, the techniques of which can be used for career and/or college work. Grammar instruction will be directed to help the student write concise and direct sentences, the type needed for technical communication. The course is designed to meet the writing competency requirement for graduation or to prepare students for ENGWR 300. This course may be taken two times for credit with the recommendation of the instructor.
ENGWR 299
Experimental Offering in English - Writing .5-4 Units
Prerequisite: None
Hours: 9 hours LEC
(See catalog page 21)

ENGWR 300
College Composition 3 Units
Formerly: ENGL 1A
Prerequisite: ENGWR 101 or equivalent skills demonstrated through the assessment process. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU (CAN ENGL 2)
Hours: 54 hours LEC
Instruction in critical thinking, reading and writing. The course is designed to help the student demonstrate, in both argumentative and expository prose, critical thinking, clear organization, precise diction, and appropriate style. Throughout the course, fluency and correctness are emphasized.

ENGWR 301
College Composition and Literature 3 Units
Formerly: ENGL 1B
Prerequisite: ENGWR 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU (CAN ENGL 4)
Hours: 54 hours LEC
Introduction to literature and writing about literature through the development of essays based upon the assigned readings.

ENGWR 302
Advanced Composition and Critical Thinking 3 Units
Formerly: ENGL 1C
Prerequisite: ENGWR 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is designed for students who have had ENGWR 300 and who desire further instruction in the techniques of effective critical thinking as expressed in written argument and in the major principles of advanced composition and rhetoric.

ENGWR 309
Documenting Research for College Composition 1 Unit
Prerequisite: ENGWR 101 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Advisory: LIBR 318.
Course Transferable to CSU
Hours: 18 hours LEC
This course provides a basic understanding of the principles and mechanics of documenting research while developing critical thinking skills by writing a researched argumentative essay that shows mastery of the Modern Language Association (MLA) documentation guidelines.

ENGWR 330
Writing for Publication 3 Units
Formerly: ENGL 14A
Prerequisite: ENGWR 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 54 hours LEC
This is an introductory course in writing nonfiction for publication. Emphasis will be on developing a saleable magazine article; finding ideas; analyzing magazines; writing a query letter; researching and interviewing; organizing, writing and illustrating an article. Individual and class criticism of student work will be featured. This course is the same as JOUR 340, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

ENGWR 331
Writing for Publication 3 Units
Formerly: ENGL 14B
Prerequisite: ENGWR 300. Grade of “C” or better required to meet prerequisite.
Advisory: ENGWR 330.
Course Transferable to CSU
Hours: 54 hours LEC
This course offers a marketing approach to selling nonfiction writing. The course surveys consumer, general interest and specialty magazines, including trade journals, company publications, regional magazines and local markets. Activities will include the following: reporting on magazine categories; analysis of a variety of magazine article styles and types; writing and sending articles to the marketplace; individual and class criticism of student manuscripts. Emphasis will be placed on increasing freelance writing publication. The course may be taken two times for credit, with the understanding that many universities and four-year colleges place a nine-unit limit on transfer credit from advanced composition courses.

ENGWR 495
Independent Studies in English - Writing 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

ENGWR 499
Experimental Offering in English - Writing .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
English - Literature (ENGLT)

ENGLT 303
Introduction to the Short Story 3 Units
Formerly: ENGL 42
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
Students will read, analyze, and discuss short stories by a wide variety of writers. Reading will emphasize American and British writers but will include authors from other countries as well. Thematic emphasis will focus on the connections between literature and the human condition.

ENGLT 309
Book Length Literature for Group Discussion 1 Unit
Formerly: ENGL 12
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
Designed to introduce students to book length literature, this course will allow students to read, analyze, and discuss both fiction and non-fiction works by a wide variety of authors. Using a seminar style, the class will meet approximately six times to explore the books. The instructor will select the first book; together, as a class, students will choose the remaining works for reading and discussion from an instructor approved list. This course may be taken two times for credit.

ENGLT 310
English Literature 3 Units
Formerly: ENGL 35
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
(CAN ENGL 8)
(with ENGLT 311, CAN ENGL SEQ B)
Hours: 54 hours LEC
Study of significant works of major English authors from Beowulf through Samuel Johnson, with consideration of the most important aspects of English literary history.

ENGLT 311
English Literature 3 Units
Formerly: ENGL 36
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
(CAN ENGL 10)
(with ENGLT 310, CAN ENGL SEQ B)
Hours: 54 hours LEC
Survey of significant works of major English authors from the beginning of Romanticism in the Eighteenth Century to the poetry of Dylan Thomas in the Twentieth Century, with consideration of the important aspects of English literary history.

ENGLT 320
American Literature 3 Units
Formerly: ENGL 30
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
(CAN ENGL 14)
(with ENGLT 321, CAN ENGL SEQ C)
Hours: 54 hours LEC
Survey of the more representative works in American literature from the beginning through the Civil War.

ENGLT 321
American Literature 3 Units
Formerly: ENGL 31
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
(CAN ENGL 16)
(with ENGLT 320 = CAN ENGL SEQ C)
Hours: 54 hours LEC
Students will survey the representative works in American Literature after the Civil War.

ENGLT 330
African American Literature 3 Units
Formerly: ENGL 40
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
(CAN ENGL 10)
(with ENGLT 336 = CAN ENGL SEQ C)
Hours: 54 hours LEC
A survey of the most representative African American writers from the slave narrative to the present. The comprehensive literary study includes analysis of significant historical and cultural influences.

ENGLT 336
Race and Ethnicity in Contemporary American Literature 3 Units
Formerly: ENGL 18
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This class will examine literature written in the United States during the last 50 years in which the issues of race and racism, ethnicity and ethnocentrism, and culture and assimilation predominate the thematic concerns. All genres will be examined, as well as writers from many of the ethnic groups in America, including African Americans, Mexican Americans, Native Americans, and Asian Americans.
This course will acquaint students with a diverse range of literature from the Ancient World through the Renaissance. Students will identify the commonalities and differences in the myths, epic poetry, philosophy, sacred texts, lyric poetry, prose, and drama of early Middle Eastern, Asian, African, South American, European, and North American literatures. Moreover, students will analyze issues of ethnicity, ethnocentrism, racism, ageism, classism, gender inequity, and religious difference in this literature as a means of developing a common foundation for cultural awareness and tolerance. From this process, students will develop an appreciation for world literature and an understanding of how ethnocentrism, ethnicity, sexism, and racism have affected our institutions, attitudes, and thoughts, and a common foundation for cultural awareness and tolerance.

ENGLT 341
World Literature

Formerly: ENGL 34
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
Survey of significant masterpieces of Eighteenth, Nineteenth, and Twentieth Century literature.

ENGLT 343
Contemporary Third World Literature

Formerly: ENGL 29
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introduction to literature of writers from Africa, Central and South America, Asia and the Middle East. Approached through the reading and discussion of all genre, basic elements of literature interpretation will be stressed to enhance understanding of the world view and culture of writers often not covered in other literature classes. A special effort will be made to sample recent Nobel Prize winners from each area of the world.

ENGLT 345
Mythologies of the World

Formerly: ENGL 26
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course examines some of the myths underlying the western world view, and recognizes diversity and commonality in myths from Middle Eastern, Native North American, African, Asian, and South American cultures. Students analyze, contrast, and compare myths on topics including the goddess culture, creation, the hero’s journey, Judaeo-Christian themes, the dying god, and psychological applications. From this process, they will gain an understanding of ethnocentrism, ethnicity and racism and the impact of these on the American experience.

ENGLT 340
Women in Literature

Formerly: ENGL 27
Prerequisite: Eligibility for ENGWR 300
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is designed for women and men who are interested in examining the roles women have occupied in literature, both as writers and as protagonists. Emphasis will be placed on literature that develops protagonists and explores literary themes that focus on women’s experiences in childhood, adolescence, marriage, childbirth and child rearing, death, love, dependence, independence, and their own creativity. Female authors and protagonists from Western, Eastern, and Third World countries will be included. Male authors may also be included. Over the course of the semester, students will examine issues of ethnicity, ethnocentrism, racism, ageism, classism, gender inequity, and religious differences that are raised in the literature under discussion. In order to develop a sense of cultural tolerance to such issues, the literature will include a variety of genres, such as short stories, novels, plays, and poetry, the emphasis to be determined by the instructor.

ENGLT 370
Children and Literature

Formerly: ENGL 39
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course is designed primarily for parents, prospective teachers, preschool workers and those in frequent contact with children and/or interested in literature written for children. Topics include wide reading of historical and contemporary children's literature, criteria for selection, and practice in storytelling and oral reading.

ENGLT 402
Introduction to Shakespeare and Film

Formerly: ENGL 47A
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
In this course, students will draw connections between traditional and contemporary literary genres as they read William Shakespeare’s plays and critically analyze film versions of these plays. Students will read and analyze a selection of Shakespeare’s histories, comedies, tragedies, and romances in the context of Elizabethan drama. Then they will view a variety of cinematic interpretations of these plays and compare and contrast such elements as plot, character, theme, staging, and critical and directorial interpretation.

ENGLT 495
Independent Studies in English - Literature

Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

ENGLT 499
Experimental Offering

Formerly: ENGL 49
Prerequisite: None
Course Transferable to UC/CSU: UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
English - Creative Writing (ENGCW)

ENGCW 400
Creative Writing 3 Units
Formerly: ENGL 15
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU; UC - See Counselor
(CAN ENGL 6)
Hours: 54 hours LEC
This course is designed to guide students in creative writing through experience in three genres: short story, poetry, and plays. The course includes analysis of literary models (professional writings in each genre), individual and class criticism of work in a workshop mode, and lecture on and discussion of literary techniques in each genre. This course may be taken two times for credit or once in combination with ENGCW 410 and/or 420.

ENGCW 410
Fiction Writing Workshop 3 Units
Formerly: ENGL 15A
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This is a creative writing course designed for students who wish to concentrate on fiction writing. Through lecture, discussion, assigned reading, writing exercises, short story (or novel chapter) writing, and critiques of student writing in a workshop mode, the student will examine critically the elements of literary creation. This course may be taken two times for credit, but only once in combination with ENGCW 400.

ENGCW 420
Poetry Writing Workshop 3 Units
Formerly: ENGL 15B
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This is a creative writing course for students who wish to concentrate on poetry writing. Through lecture, discussion, assigned reading, writing exercises, poetry writing, and critiques of student writing in a workshop mode, the students will examine critically the elements of literary creation. The students will keep a journal and prepare a portfolio of their work. This course may be taken two times for credit, but only once in combination with ENGCW 400.

ENGCW 430
Creative Non-Fiction Writing Workshop 3 Units
Formerly: ENGL 15C
Prerequisite: Eligibility for ENGWR 300.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This is a creative writing course concentrating on the literary essay. The class focuses on constructive in-class analysis of personal essays written by students. Students will write and critically examine essays such as the memoir, autobiography, reflective, and philosophical that have a literary, stylistic component. The class will also emphasize multi-cultural, multi-generational, mythological, and ecological topics. Students will prepare a portfolio of completed work. This course may be taken two times for credit, but only once in combination with ENGCW 400.

ENGCW 452
College Literary Magazine 4 Units
Formerly: ENGL 15
Prerequisite: None
Advisory: Eligibility for ENGWR 300.
Course Transferable to CSU
Hours: 54 hours LEC; 54 hours LAB
This course provides instruction in techniques and experience in writing, editing, and structuring the college literary magazine. Students will write, select, and edit manuscripts in the genres of poetry, short fiction, and creative non-fiction. They will also assist in converting accepted manuscripts onto computer disks and in promoting the college literary magazine through various fundraising and advertising activities. Access is provided to computers, laser printer, and other production equipment. A campus literary reading will be presented. This course may be taken two times for credit.

ENGCW 453
College Literary Magazine 4 Units
Formerly: ENGL 17D
Prerequisite: None
Advisory: Eligibility for ENGWR 300.
Course Transferable to CSU
Hours: 54 hours LEC; 54 hours LAB
In this production semester, the course provides experiences and techniques in producing the college literary magazine, from selecting, writing, and editing manuscripts to actual formation of camera-ready final draft for publication. Discussions include text and art layout, CD-ROM development, and Internet applications. Access is provided to computers, laser printers, and other journalism equipment. A campus literary reading will be presented. This course may be taken two times for credit.

ENGCW 480
Honors Seminar:
Creative Writing and Culture 3 Units
Formerly: ENGL 15H
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This course is an honors seminar for students who wish to write fiction and to do so with an awareness of fiction’s role in culture. Students will study the relationship between cultural events and literary conventions: connections, for example, between World War II and Hemingway’s concise sentences, the birth of jazz and the language of the beatniks, Existentialism and Ralph Ellison’s view of character, or the systematic repression of Native American languages and Joy Harjo’s fluid syntax. While students become familiar with the history and cultural place of fiction, they will be writing and analyzing fiction of their own. Students will be encouraged both to “write from instinct” and to begin deliberately cultivating a style, identifying personal influences, and situating their writing in relation to major cultural events. This course may be taken only once for credit. Enrollment is limited to Honors Program students. (See catalog page 21.)
ENGCW 495
Independent Studies in English - Creative Writing 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

ENGCW 499
Experimental Offering in English - Creative Writing .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

ENGRD 13
Reading Center: Basic Reading Skills .5-3 Units
Formerly: ENGL 268
Prerequisite: None
Hours: 54 hours LAB
Individualized instruction modules at all skill levels designed to help the student acquire or improve reading skills in specific areas. Course offerings vary, depending upon the student’s needs and abilities. A partial list includes the following: comprehension (all levels), vocabulary development (all levels), speed reading, critical reading, textbook reading, study skills, spelling improvement, tutor training. Credit/no credit. Reading modules may not be repeated for credit and are not substitutes for ENGRD 14, 15, 110, 310, or for any of the ESL courses. Students may register up to the 12th week of the semester. Scheduling is flexible and may be agreed upon by the student and staff. A maximum of six units may be earned.

ENGRD 14
Reading Skills 3 Units
Formerly: ENGL 269
Prerequisite: None
Advisory: Concurrent enrollment in ENGWR 45, ENGWR 44, and ENGLB 70.
Hours: 54 hours LEC
This reading course is designed to help students master the foundations of reading skill: word attack, vocabulary, development and basic comprehension. This course may be taken two times for credit with the recommendation of the instructor. Students are strongly encouraged to enroll in ENGLB 70 for access to individualized help in the Reading and Writing Center.

ENGRD 15
Basic Reading Skills 3 Units
Formerly: ENGL 270
Prerequisite: ENGRD 14 or equivalent skills demonstrated through the assessment process. Grade of “C” or better required to meet prerequisite.
Advisory: Concurrent enrollment in ENGLB 70.
Hours: 54 hours LEC
This reading course is designed to help students master basic, pre-collegiate reading skills by developing vocabulary, literal and inferential comprehension, textbook reading techniques, and study skills and by reading for pleasure. Students may become more efficient readers by learning to vary rate and comprehension depending upon purpose for reading. This course may be taken two times for credit with the recommendation of the instructor. Students are encouraged to enroll in ENGLB 70 for access to individualized help in the Reading and Writing Center.

ENGRD 110
Efficient Reading 3 Units
Formerly: ENGRD 16
Prerequisite: ENGRD 15 or equivalent skills demonstrated through the assessment process. Grade of “C” or better required to meet prerequisite.
Advisory: Concurrent enrollment in ENGWR 51 and ENGLB 70.
Hours: 54 hours LEC
This reading course is designed to help students prepare for college level reading by refining vocabulary, literal and inferential comprehension skills, textbook reading techniques, and study skills and by reading for pleasure. Efficiency is gained by learning to vary rate and comprehension depending upon purposes for reading. This course may be taken two times for credit with the recommendation of the instructor. Students are encouraged to enroll in ENGLB 70 for access to individualized help in the Reading and Writing Center.

ENGRD 115
Technical Reading 3 Units
Formerly: ENGL 75
Prerequisite: ENGRD 110, or ESLR 320, or equivalent skills demonstrated through the assessment process. Grade of “C” or better required to meet prerequisite.
Advisory: ENGWR 51 or ESLW 320, and ENGLB 70.
Hours: 54 hours LEC
This course is designed to refine student’s ability to read, understand and respond to college-level textbooks across the curriculum. Activities emphasize discipline-based vocabulary, reading strategies, critical thinking, interpretation of figures, facts, and data and reading rates as they relate to academic success. This course meets the Reading Competency requirement for the A.A. and A.S. degrees. Students are encouraged to enroll in ENGLB 70 for access to individualized help in the Reading and Writing Center.

ENGRD 299
Experimental Offering in English - Reading .5-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
ENGRD 310
College Analytical and Speed Reading 3 Units
Formerly: ENGRD 112
Prerequisite: ENGRD 110, or ESLR 320, or equivalent skills demonstrated through the assessment process. Grade of “C” or better required to meet prerequisite.
Advisory: Concurrent enrollment in ENGWR 51 or ESLW 320, and ENGLB 70.
Course Transferable to CSU
Hours: 54 hours LEC
This course covers theory and practice of reading skills needed for proficient academic performance with emphasis on the following: 1) critical and analytical evaluation of printed material, 2) vocabulary development, 3) proficient comprehension skills, 4) development of flexible reading rate, 5) increased reading speed, and 6) application in textbook, fiction, and nonfiction reading. This course meets the reading competency required for the A.A. and A.S. degrees.
Additional work in the Reading/Writing Center (ENGLB 70) may be advised. This course may be taken two times for credit with the recommendation of instructor.

ENGED 495
Independent Studies in English - Education 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

ENGED 499
Experimental Offering in English - Education .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

English - Laboratory (ENGLB)

ENGLB 70
Reading and Writing Laboratory .5-1 Units
Formerly: ENGL 252
Prerequisite: None
Advisory: For students whose second language is English, completion of or concurrent enrollment in ESLW 310/ESLR 310 or above, or placement in an English course through the assessment process.
Hours: 54 hours LAB
This laboratory course provides assistance in reading and writing skills to students in all subject areas. Students may enter the course at any time during the first 12 weeks of the semester and earn either .5 or 1 unit. Students may repeat the course earning a maximum of six units. This course is graded on a credit/no credit basis. ENGLB 70 is recommended for students who are encountering difficulties in reading, writing, spelling, sentence structure, paragraph or essay structure, and who would benefit from individual tutor/instructor assistance.

ENGLB 299
Experimental Offering in English - Laboratory .5-4 Units
Prerequisite: None
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

See next page for the English Sequence Tree
CRC ENGLISH SEQUENCE

Note: Numbers in parentheses ( ) are from previous catalog numbering system.

COMPOSITION

ENGWR 41 (255) Writing Skills

ENGWR 51 (256)* Developmental Writing

ENGWR 101* (57) College Writing

Required for non-transfer A.A. degree

ENGWR 103 (60) Practical Communication

Required for non-transfer A.A. degree

ENGWR 300 (1A) College Composition

Minimum requirement for transfer to 4-year institutions

ENGWR 301 (1B) College Comp. & Literature

Fulfills CSUS English 20 requirement

ENGWR 302 (1C) Adv. Comp. & Critical Thinking

Fulfills IGETC critical thinking requirements & CSUS Eng 20

ENGLT

343 (29)
Contemp. Third World Literature

320 (30)/321 (31)
American Literature

340 (33)/341 (34)
World Literature

310 (35)/311 (36)
English Literature

330 (40)
African American Literature

303 (42)
Intro. to Short Story

402 (47A)
Intro. to Shakespeare & Film

KEY

* Eligibility is determined by Assessment Process.

** Eligibility for ENGWR 300 (1A)

O Transfers to all campuses of University of California.

X Transfers to all California State Universities.

READING

ENGRD 14 (269)* Reading Skills

ENGRD 15 (270)* Basic Reading Skills

ENGRD 110 (16)* Efficient Reading

ENGRD 115 (75) Technical Reading

Required for A.A. if student does not qualify by proficiency exam.

ENGLB 70 (252) Reading and Writing Laboratory

Open access laboratory provides assistance in reading and writing skills to all students in all subject areas who are encountering difficulties in reading, writing, spelling, sentence structure and paragraph or essay structure.

ENGRD 70 (252) Critical Reading

Required for A.A. if student does not qualify by proficiency exam.

ENGRD 14 (269)* Reading Skills

ENGRD 15 (270)* Basic Reading Skills

ENGRD 110 (16)* Efficient Reading

ENGRD 115 (75) Technical Reading

Meets A.A. degree graduation proficiency

LITERATURE

All literature classes transfer to CSU and/or UC

ENGLT

336 (18)
Race & Ethnic. in Contemp. American Literature

345 (26) Mythologies of the World

360 (27) Women in Literature

343 (29) Contemp. Third World Literature

320 (30)/321 (31) American Literature

340 (33)/341 (34) World Literature

310 (35)/311 (36) English Literature

CSU only

ENGLT 370 (39) Children & Literature

ENGLT 330 (40) African American Literature

ENGLT 303 (42) Intro. to Short Story

ENGLT 402 (47A) Intro. to Shakespeare & Film

ENGLT

336 (18)
Race & Ethnic. in Contemp. American Literature

345 (26) Mythologies of the World

360 (27) Women in Literature

343 (29) Contemp. Third World Literature

320 (30)/321 (31) American Literature

340 (33)/341 (34) World Literature

310 (35)/311 (36) English Literature

CSU only

ENGLT 370 (39) Children & Literature

ENGLT 330 (40) African American Literature

ENGLT 303 (42) Intro. to Short Story

ENGLT 402 (47A) Intro. to Shakespeare & Film

Note: Numbers in parentheses ( ) are from previous catalog numbering system.
English as a Second Language

CRC offers courses in ESL designed to provide students with the command of the English language necessary to pursue both transfer level and vocational courses. Students can enter with virtually no knowledge of English and progress to an extremely proficient level.

Career Options
Command of the English language is critical in any career choice

Highlights
Well-trained, dedicated staff
Wide range of practical course offerings designed to facilitate entry into other programs
Curriculum of interest to international students

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

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English as a Second Language (ESL)

ESL 90
Language Skills Laboratory .5-1 Units
Formerly: ESL 252
Prerequisite: None
Hours: 54 hours LAB
This is a laboratory course designed to enable students to focus on specific English language skills through interaction with tutors, faculty, and computer software programs. This class is recommended for ESL students at any level who need further, focused attention to very specific skills including, but not limited to pronunciation, grammar, vocabulary development and spelling. Students may enter the course at any time during the first nine weeks of the semester and earn either .5 or 1 unit. For each semester of enrollment, a specific study plan will be developed by faculty in consultation with the students. Students may repeat the course, earning a maximum of six units. This course is graded on a credit no credit basis.

ESL 299
Experimental Offering in English as a Second Language .5-4 Units
Prerequisite: None
Hours: 18 hours LEC; 54 hours LAB
(See catalog appge 21)

ESL - Grammar (ESLG)

ESLG 57
Intermediate-Mid English Grammar 3 Units
Formerly: ESL 280G
Prerequisite: None
Hours: 54 hours LEC
This course is designed to provide intermediate students with an intensive overview of English grammar and syntax including sentence building, correct usage and punctuation. Students will analyze native speaker texts and demonstrate ability to control target forms in their own writing. Recommended for students in ESLW 50 or 310 who wish to reinforce their control of English grammar and sentence structure.

ESLG 86
Verb Tense and Aspect 2 Units
Formerly: ESL 288V
Prerequisite: Eligibility is determined by the assessment process, or completion of ESLW 40 with a grade of “C” or better.
Hours: 36 hours LEC
This 2-unit elective course provides an overview of the English verb system. Students will learn the 12 active voice verb structures and their meanings. Intensive practice will be given in choosing appropriate verb "tenses" for different purposes. Students will also learn how various kinds of verbs affect sentence structure.

See Page 183 for the E.S.L. Class Sequence Ladder
ESLG 299
Experimental Offering in English as a Second Language - Grammar .5-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

ESLG 310
Intermediate-High Grammar 4 Units
Formerly: ESL 1G
Prerequisite: Eligibility is determined by the assessment process, or completion of ESLG 57 with a grade of “C” or better.
Course Transferable to CSU
Hours: 72 hours LEC
This course focuses on further practice of the forms, meanings, and usage of grammatical structures of English. Oral practice in class reinforces the structures studied. Students practice writing extensively both in and out of class.

ESLG 320
Advanced-Low Grammar 4 Units
Formerly: ESL 2G
Prerequisite: Eligibility is determined by the assessment process, or completion of ESLG 310 with a grade of “C” or better.
Course Transferable to CSU
Hours: 72 hours LEC
This course focuses on practice in the forms and meaning of major structures used in writing with an emphasis on clause structure. Oral practice reinforces the structures studied. Students practice writing extensively, both in and out of class. Assignments emphasize sentence structure in the context of longer written work.

ESLL 20
Novice Listening and Speaking 4 Units
Formerly: ESL 200L
Prerequisite: None
Hours: 54 hours LEC ; 54 hours LAB
This course will provide an introduction to English at the Novice level. It is characterized by an emerging ability to understand and produce appropriate responses in high-frequency situations utilizing learned materials, standardized messages, phrases and expressions including certain content required for basic communication, such as dates, time, weather, food, family etc. Students will learn all the sounds of English and be introduced to the intonation patterns of American English. Communication will be comprehensible to a sympathetic listener accustomed to interacting with non-native speakers.

ESLL 30
Novice-High Listening and Speaking 4 Units
Formerly: ESL 260L
Prerequisite: Completion of ESL 20 with a grade of “C” or better, or placement through the assessment process.
Hours: 54 hours LEC ; 54 hours LAB
This is a course in listening comprehension and speaking at the novice-high level characterized by common contexts, and high frequency vocabulary and expressions. Students will recognize and produce sounds and patterns in American English, and will understand and be understood by sympathetic listeners and speakers. This course may be taken two times for credit.

ESLL 40
Intermediate-Low Listening and Speaking 4 Units
Formerly: ESL 270L
Prerequisite: Completion of ESL 30 with a grade of “C” or better, or placement through the assessment process.
Hours: 54 hours LEC ; 54 hours LAB
This is a course in listening comprehension and practical conversation for non-native English speakers who plan to take college courses. Students will learn to recognize and use the sounds of American English, stress, rhythm, and intonation patterns. This course may be taken two times for credit.

ESLL 50
Intermediate-Mid Listening and Speaking 4 Units
Formerly: ESL 280L
Prerequisite: Completion of ESL 40 with a grade of “C” or better or placement through the assessment process.
Hours: 54 hours LEC ; 54 hours LAB
This is a course to help students understand and be understood in both familiar and unfamiliar situations. Students will be introduced to academic listening and speaking activities and will continue to work on pronunciation skills. This course may be taken two times for credit.

ESLL 299
Experimental Offering in English as a Second Language - Listening .5-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

ESLL 310
Intermediate-High Listening and Speaking 4 Units
Formerly: ESL 1L
Prerequisite: Completion of ESL 50 with a grade of “C” or better, or placement through the assessment process.
Course Transferable to CSU
Hours: 54 hours LEC ; 54 hours LAB
This course focuses on pronunciation skills within the context of meaningful communication in an academic and employment setting. The emphasis is on understanding and producing stress, rhythm and intonation patterns of English so meaning will not be distorted.

See Page 183 for the E.S.L. Class Sequence Ladder
ESLL 320
Advanced-Low Listening and Speaking 4 Units
Formerly: ESL 2L
Prerequisite: Completion of ESLL 310 with a grade of “C” or better or placement through the assessment process.
Course Transferable to CSU
Hours: 54 hours LEC ; 54 hours LAB
This is a course with intensive practice in listening and active participation strategies that are appropriate for American college courses. Students will listen to extended lectures from various subject areas, refine note-taking skills, be able to participate in in-depth discussions, and give oral presentations. Students will continue to improve pronunciation skills.

ESLP 85
Pronunciation 2 Units
Formerly: ESL 288P
Prerequisite: Eligibility is determined by the assessment process, or completion of ESL 40 with a grade of “C” or better.
Hours: 36 hours LEC
This elective course is designed for students who need to improve their pronunciation. It offers intensive practice in the pronunciation and recognition of American English sounds. Students will be introduced to intonation patterns of English, syllables, and stress. This course may be taken two times for credit.

ESLR 20
Novice Reading 4 Units
Formerly: ESL 200R
Prerequisite: None
Hours: 54 hours LEC ; 54 hours LAB
This course will provide an introduction to English at the Novice level, which is characterized by an emerging ability to read and write words, phrases and sentences common in high-frequency situations utilizing learned materials, standardized messages, phrases and expressions including basic words, phrases, and sentences introduced in the Listening and Speaking core text. In addition, students will learn basic rules, phonetics and basic grammar necessary to read and write comprehensibly.

ESLR 30
Novice-High Reading 4 Units
Formerly: ESL 260R
Prerequisite: Completion of ESLR 20 with a grade of “C” or better, or placement through the assessment process.
Hours: 54 hours LEC ; 54 hours LAB
This course focuses on reading words, phrases, and sentences in short texts. Students will learn more core vocabulary, literal comprehension, and grammar necessary to understand short readings.

ESLR 499
Experimental Offering in English as a Second Language - Reading .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
ESL - Writing (ESLW)

ESLW 20
Novice Writing  4 Units
Formerly: ESL 200W
Prerequisite: None
Hours: 54 hours LEC ; 54 hours LAB
This course is for students with little experience in English. It is an introduction to writing English. Students will learn to spell through phonetics and sight words, phrases, parts of speech and the elements of basic sentences. They will learn to write both yes and no questions, and why and how questions. Finally, they will be able to write about common topics introduced in all beginning language courses. This course is for non-native speakers of English who plan to take college courses.

ESLW 30
Novice-High Writing  4 Units
Formerly: ESL 260W
Prerequisite: Completion of ESLW 20 with a grade of “C” or better or placement through the assessment process.
Hours: 54 hours LEC ; 54 hours LAB
In this course students will learn simple sentences and paragraph structures. This course is an introduction to writing in English for non-native speakers who plan to take college courses.

ESLW 40
Intermediate-Low Writing  4 Units
Formerly: ESL 270W
Prerequisite: Completion of ESLW 30 with a grade of “C” or better, or placement through the assessment process.
Hours: 54 hours LEC ; 54 hours LAB
In this course students will learn to write focused paragraphs with a clear beginning, middle and end. They will learn to use critical thinking skills and correct grammar in their writing.

ESLW 50
Intermediate-Mid Writing  4 Units
Formerly: ESL 280W
Prerequisite: Completion of ESLW 40 with a grade of “C” or better, or placement through the assessment process.
Hours: 54 hours LEC ; 54 hours LAB
In this course students will learn techniques essential to essay writing. They will continue to develop techniques in longer pieces of writing.

ESLW 85
Parts of Speech  2 Units
Formerly: ESL 288F
Prerequisite: Eligibility is determined by the assessment process, or completion of ESLW 40 with a grade of “C” or better.
Hours: 36 hours LEC
This elective course covers the most important parts of speech in English. Students will learn to identify and use nouns, pronouns, adjectives, adverbs, verbs, prepositions, and conjunctions in basic sentences. This course may be taken two times for credit.

ESLW 86
Spelling  2 Units
Formerly: ESL 288S
Prerequisite: Eligibility is determined by the assessment process, or completion of ESLR 40 with a grade of “C” or better.
Hours: 36 hours LEC
This elective course is designed for students who need to improve their spelling. It includes an introduction to the basic spelling rules and patterns of English. Students will also learn homophones, suffixes, and plurals. Students will develop competence in the ability to spell. This course may be taken two times for credit.

ESLW 310
Intermediate-High Writing  4 Units
Formerly: ESL 1W
Prerequisite: Completion of ESLW 50 with a grade of “C” or better or placement through the assessment process.
Course Transferable to CSU
Hours: 72 hours LEC
In this course students will continue to develop their ability to respond to a variety of essay assignments. They will practice critical thinking skills through class discussion and written response to readings and prompts. They will refine their ability to control a range of sentence structures.

ESLW 320
Advanced-Low Writing  4 Units
Formerly: ESL 2W
Prerequisite: Completion of ESLW 310 with a grade of “C” or better, or placement through the assessment process.
Course Transferable to UC/CSU
Hours: 72 hours LEC
In this course students will use critical thinking skills and the writing process to produce a variety of focused, developed and organized essays. The course emphasizes sentence variety and the mechanics of English in the context of the essay. Essays will incorporate outside sources as well as personal experience.

ESLW 499
Experimental Offering in English as a Second Language - Writing .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
English As A Second Language Course Ladder

Note: Numbers in parentheses ( ) are from previous catalog numbering system

Unless noted, all courses are four units, 3 hours Lecture and 3 hours Lab

* 4 Unit Lecture Only Sequence Courses
** 2 Unit Lecture Only Overview Courses
(useful for Intermediate and Advanced Students)
+ 3 Unit Lecture Only Course

= Transferable to UC & CSU
= Transferable to CSU

(Course Level Reflects California Pathway Descriptors)
Environmental Technology

DEGREE  A.S.—Environmental Technology
CERTIFICATES  Environmental Applications of Desktop GIS
               Environmental Health & Safety
               Environmental Sampling & Analysis
               Environmental Technology
               Applications of Desktop GIS, (see Geography, page 202)
               (Environmental Technology emphasis)

Environmental Technology (EnvT) is a program designed to provide training for entry-level technicians who will be involved with environmental protection, regulatory compliance and workplace safety and health applications. Students may also transfer to four year degree programs at several California universities.

Graduates may be employed by businesses and governmental agencies that require a knowledge of techniques for storage, treatment, transport and disposal of hazardous materials, a basic understanding of the chemical and biological phenomena which underlie environmental protection, and an understanding of environmental health and safety. Technicians may be employed in remediation, monitoring, compliance or environmental information applications.

Career Options
Engineering/Consulting Firms; Governmental Compliance Agencies; Solid Waste Disposal Landfills; Agricultural Chemical Manufacture & Application Firms; Analytical Laboratories; Treatment, Storage, Disposal Facilities; Warehouse-Transportation Systems; Electronics Semiconductor Industry; Workplace Health and Safety Support; Energy & Environmental Audit/Inventories

Many career options require a B.S. degree. Classes beyond the associate degree may be required to fully prepare students for transfer to a university program.

Highlights
A “hands-on” program providing a firm foundation in all areas of hazardous materials handling
Broad-based field with applications ranging from recordkeeping to pollution cleanup to emergency response

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.
Certificate
Environmental Technology
CODE #1285

Required Program.................................................. Units
ENVT 300 (1) Intro To Environmental Technology............. 3
ENVT 310 (10) Safety and Emergency Response or.............. 4
ENVT 310.1 (10A) Hazard Materials Awareness & Safety (1) and
ENVT 310.2 (10B) Spill Control & Emergency Response (1.5) and
ENVT 310.3 (10C) Decision Making in Emergencies (1.5) and
ENVT 310.4 (10D) Hazard Materials Management Applications or
ENVT 320 (15) Hazardous Materials Management Applications or
ENVT 320.1 (15A) Right-to-Know Laws (1.5) and
ENVT 320.2 (15B) Transport & Storage of Hazard Mat. (1.5) and
ENVT 320.3 (15C) Air Quality Issues (1)
ENVT 342 (20) Hazard Waste Generation &
Reduction/Treatment or ............................................. 3
ENVT 342.1 (20A) Pollution Prevention (1) and
ENVT 342.2 (20B) Pollution Control (1) and
ENVT 342.3 (20C) Indus/Serv. Waste Stream Case Studies (1)
ENVT 360 (30) Health Effects of Hazardous Materials or ....... 3
ENVT 360.1 (30A) Basics of Toxicology (2) and
ENVT 360.2 (30B) Basics of Industrial Hygiene (1)
ENVT 340 (40) Hazard Waste Management Applications or .... 4
ENVT 340.1 (40A) Hazard Waste Generator Req. (1.5) and
ENVT 340.2 (40B) Sampling and Analysis (1.5) and
ENVT 340.3 (40C) Environmental Hazard Waste
Mgmt. Topics (1)
ENVT 304 (4) Environmental Biology or
BIOL 350 (14) Environmental Biology ............................ 3
BIOL 310 (16) General Biology ..................................... 4
CHEM 305/307 (2A) Introduction to Chemistry.................... 4-5
CHEM 306/308 (2B) Introduction to Chemistry..................... 4-5
INDIS 110 (58) Computer Applications for the Environmental,
Natural & Physical Sciences .................................... 2

Total Units Required .................................................. 38-40

Suggested Electives:
BUS 310 (8); CISC 302 (CIS 1X) orOUR 330 (1),
CISA 305 (CIS 11AX), CISA 315 (CIS 12AX), CISA 320 (CIS 13A);
ENVT 302 (9),330 (19), 350 (25), 370 (45), 494 (90);
GEOG 300 (1), 331 (9), 354 (14), 335 (19);
COMM 341 (13), 331 (15); STAT 300 (1).

General Education Graduation Requirements - see page 18.

Certificate
Environmental Sampling and Analysis
CODE #1346

Required Program.................................................. Units
ENVT 300 (1) Intro To Environmental Technology............. 3
ENVT 310 (10) Safety and Emergency Response or.............. 4
ENVT 310.1 (10A) Hazard Materials Awareness & Safety (1) and
ENVT 310.2 (10B) Spill Control & Emergency Response (1.5) and
ENVT 310.3 (10C) Decision Making in Emergencies (1.5) and
ENVT 320 (15) Hazardous Materials Management Applications or
ENVT 320.1 (15A) Right-to-Know Laws (1.5) and
ENVT 320.2 (15B) Transport & Storage of Hazard Mat. (1.5) and
ENVT 320.3 (15C) Air Quality Issues (1)
ENVT 342 (20) Hazard Waste Generation &
Reduction/Treatment or ............................................. 3
ENVT 342.1 (20A) Pollution Prevention (1) and
ENVT 342.2 (20B) Pollution Control (1) and
ENVT 342.3 (20C) Industrial/Service Waste Stream
Case Studies (1)
ENVT 360 (30) Health Effects of Hazardous Materials or ....... 3
ENVT 360.1 (30A) Basics of Toxicology (2) and
ENVT 360.2 (30B) Basics of Industrial Hygiene (1)
ENVT 340 (40) Hazard Waste Management Applications or .... 4
ENVT 340.1 (40A) Hazard Waste Generator Req. (1.5) and
ENVT 340.2 (40B) Sampling and Analysis (1.5) and
ENVT 340.3 (40C) Environmental Hazard Waste
Mgmt. Topics (1)
ENVT 304 (4) Environmental Biology or
BIOL 350 (14) Environmental Biology ............................ 3
BIOL 310 (16) General Biology ..................................... 4
CHEM 305/307 (2A) Introduction to Chemistry.................... 4-5
CHEM 306/308 (2B) Introduction to Chemistry..................... 4-5
INDIS 110 (58) Computer Applications for the Environmental,
Natural & Physical Sciences .................................... 2

Plus four (4) units selected from: ..................................... 4
BUS 310 (8); CISC 302 (CIS 1X) orOUR 330 (1),
CISA 305 (CIS 11AX), CISA 315 (CIS 12AX),
CISA 320 (CIS 13A);
ENVT 302 (9), 330 (19), 350 (25), 370 (45),
GEOG 300 (1), 331 (9), 354 (14), 335 (19);
COMM 341 (13), 331 (15);
STAT 300 (1).

Total Units Required .................................................. 42-44

Suggested Electives:
ENVT 300 (1),330 (19), 350 (25);
GEOG 354 (14); GEO 300 (1), 301 (2); STAT 300 (1).
CERTIFICATE
Environmental Health and Safety
CODE #1347
REQUIRED PROGRAM ............................................................... Units
ENVT 310 (10)  Safety and Emergency Response ...................... 4
ENVT 360 (30)  Health Effects of Hazardous Materials ............. 3
ENVT 370.2 (45B) Sampling & Analysis Methods for ............... 1
Human Health & Safety ...................................................... 1
BIOl  310 (16)  General Biology ............................................. 4
CHEM 305/307 (2A) Introduction to Chemistry or .......... 4-5
CHEM 321 (7)   Environmental Chemistry (3) and .................
CHEM 322 (7L)  Environmental Chemistry Lab (1)
INDIS 110 (58)  Computer Applications for the Environmental, Natural & Physical Sciences ................. 2
TOTAL UNITS REQUIRED ............................................. 18-19
Suggested Electives:
AH 110 (54); BUS 310 (8); STAT 300 (1).

Environmental Technology (ENVT)

ENVT 300
Introduction to Environmental Technology 3 Units
Formerly: ENVT 1
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This introductory course is designed to give students a general overview of the Environmental Technology industry. Past and current sources of pollution are discussed along with the technologies used to alleviate environmental problems. The management systems, source controls and methodologies designed to protect the human community are presented. An historical perspective of the legislative process that has led to current regulations, and where to find and how to read these regulations will be addressed. Definitions, terminology and regulatory framework are emphasized. A discussion of career opportunities will be included.

ENVT 302
Introduction to Geographic Information Systems 4 Units
Formerly: ENVT 9
Prerequisite: None
Advisory: CISC 302 and GEOG 300.
Course Transferable to CSU
Hours: 54 hours LEC ; 54 hours LAB
A Geographic Information System (GIS) is a computer-based data processing tool used to manage and analyze spatial information. This course introduces students to the theory and techniques of GIS including spatial data capture, management and analysis, and cartographic output. Emphasis is placed on the use of technical analysis and software in order to provide students with skills and a conceptual base on which they can build further expertise in GIS. This course is especially useful for Geography, Environmental Science, Economics, and land-use planning majors. This course is the same as GEOG 331, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

ENVT 304
Environmental Biology 3 Units
Formerly: ENVT 4
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course presents an overview of ecosystems and natural resources. Major topics covered include ecological principles, ecosystem functioning, conservation biology, resource use and management, pollution and other human-caused environmental impacts. This course provides the background needed to understand major global and regional issues such as acid rain, global warming, hazardous waste disposal, deforestation and endangered species recovery. ENVT 304 is especially useful for Environmental Technology, Environmental Sciences, Ecology, Recreation, Education and Political Science majors. Field trips, attendance at public meetings and/or a semester project may be required. This course is the same as BIOL 350, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

ENVT 306
Introduction to Toxicology: The Biology and Chemistry of Poisons 3 Units
Formerly: ENVT 32
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course provides an overview of the biology of natural and man-made toxic substances. It will provide an introduction to physiological and environmental processes and will cover a breadth of biological principles, from cell biochemistry to ecology. The course will employ case studies to analyze how the scientific method is used to discover how toxic substances affect individuals, populations, and ecosystems. This course is the same as BIOL 366, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

ENVT 310
Safety and Emergency Response 4 Units
Formerly: ENVT 10
Prerequisite: None
Advisory: ENVT 300.
Course Transferable to CSU
Hours: 54 hours LEC ; 54 hours LAB
This is a semester length course which includes all of the content of ENVT 310.1, Hazardous Materials Awareness and Safety; ENVT 310.2, Spill Control and Emergency Response; and ENVT 310.3, Decision Making in Emergencies.
ENVT 310.1 Hazardous Materials Awareness and Safety 1 Unit
Formerly: ENVT 10A
Prerequisite: None
Advisory: ENVT 300.
Course Transferable to CSU
Hours: 24 hours LEC
This course covers the health and safety aspects of working with hazardous materials. Emphasis is placed on the recognition of hazardous materials and the nature of worksite hazards which includes the study of hazard classifications, laws and regulations applying to worker health and safety, types of health effects, personal protective equipment, risk reduction processes, and health and safety planning processes. The course is designed to meet general requirements of OSHA Hazardous Materials Training for work not requiring the use of respiratory protection (OSHA 29 CFR 1910.120, 24-hour Hazwoper).

ENVT 310.2 Spill Control and Emergency Response 1.5 Units
Formerly: ENVT 10B
Prerequisite: None
Advisory: ENVT 310.1 (or 24 hour or 40 hour Hazwoper OSHA Certificate) and ENVT 300.
Course Transferable to CSU
Hours: 18 hours LEC; 27 hours LAB
This course covers procedures for safety and emergency response to chemical spills in industrial and field setting. The focus is on various spill control schemes, containment, and mitigation procedures, and development and implementation of a personal protective program pursuant to OSHA standards.

ENVT 310.3 Decision Making in Emergencies 1.5 Units
Formerly: ENVT 10C
Prerequisite: None
Advisory: ENVT 300 and 310.2.
Course Transferable to CSU
Hours: 18 hours LEC; 27 hours LAB
This course is designed to provide students with hands-on instruction in safety and emergency response to chemical spills in industrial and field settings. Emphasis is placed on hazard analysis and emergency response planning including contingency and emergency plans, hazard identification, vulnerability analysis and risk evaluation, response functions, and incident command functions.

ENVT 320 Hazardous Materials Management Applications 4 Units
Formerly: ENVT 15
Prerequisite: None
Advisory: ENVT 300.
Course Transferable to CSU
Hours: 54 hours LEC; 54 hours LAB
This is a semester length course which includes all of the content of ENVT 320.1, Right-to-Know Laws; ENVT 320.2, Transportation and Storage of Hazardous Materials; and ENVT 320.3, Air Quality Issues.

ENVT 320.1 Right-to-Know Laws 1.5 Units
Formerly: ENVT 15A
Prerequisite: None
Advisory: ENVT 300.
Course Transferable to CSU
Hours: 18 hours LEC; 27 hours LAB
This course examines the requirements and applications of federal, state, and local laws and regulations relating to hazardous materials disclosure. The course will cover California and Federal OSHA Hazard Communication Standards, Hazardous Material Emergency Planning and Community Right-to-Know regulations, and California’s Safe Drinking Water & Toxic Enforcement Act. Emphasis will be placed on applications of these laws and regulations in the community and workplace, including: proper labeling and handling of hazardous materials; obtaining MSDS’s; and planning, recordkeeping and reporting functions.

ENVT 320.2 Transportation and Storage of Hazardous Materials 1.5 Units
Formerly: ENVT 15B
Prerequisite: None
Advisory: ENVT 300 and 320.1.
Course Transferable to CSU
Hours: 18 hours LEC; 27 hours LAB
This course covers the requirements and applications of federal, state, and local laws and regulations relating to hazardous materials management. This course will focus on California and Federal Transportation and Underground Tank regulations. Emphasis will be placed on applications of laws and regulations in the work of environmental technicians in industry, including proper completion of shipping papers; obtaining permits for operating, installing or closing underground tank facilities; and general planning and reporting functions.

ENVT 320.3 Air Quality Issues 1 Unit
Formerly: ENVT 15C
Prerequisite: None
Advisory: ENVT 300, 304 (or BIOL 350), and 320.2.
Course Transferable to CSU
Hours: 18 hours LEC
This course covers the requirements and applications of federal, state, and local laws and regulations relating to hazardous materials management. The course will focus on California federal, state, and local air quality issues. Emphasis will be placed on applications of laws, regulations, and procedures in industry including: identification of toxic air pollutants; new source review and permitting; and general planning and reporting functions.
ENVT 330
Introduction to Desktop Geographic Information Systems Applications 3 Units
Formerly: ENVT 19
Prerequisite: None
Course Transferable to CSU
Hours: 30 hours LEC ; 72 hours LAB
Geographic Information Systems (GIS) are systems of computers and people used to integrate spatial data in order to make a decision. Through the use of ArcView GIS software, this course provides a practical introduction to basic functionality of desktop GIS. Students will learn GIS skills including identifying zones, measuring distances, calculating areas, integrating spatial data and displaying output. The types of information analyzed in GIS may include environmental, economic, political, social, health care, and transportation. This course is the same as GEOG 335, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

ENVT 330.1
Fundamentals of Geographic Information Systems 1 Unit
Formerly: ENVT 19A
Prerequisite: None
Course Transferable to CSU
Hours: 12 hours LEC ; 18 hours LAB
Geographic Information Systems (GIS) are computer mapping programs that allow rapid and sophisticated analysis of spatial data. This course provides a basic introduction to geographical informational systems. Students will be introduced to basic concepts and techniques of map analysis and the way these are used in geographical information systems in general and desktop GIS in particular. The major areas of practical application of GIS will be discussed. The use of data and principles of sampling and modeling will be presented. The basic computer skills necessary to use a desktop GIS will be taught. This course is useful to students interested in the analysis of economic, political, health care and natural resource data. This course is the same as GEOG 335.1, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

ENVT 330.2
Introduction to Using Desktop GIS 1 Unit
Formerly: ENVT 19B
Prerequisite: None
Advisory: GEOG 335.1/ENVT 330.1
Course Transferable to CSU
Hours: 12 hours LEC ; 18 hours LAB
Geographic Information Systems (GIS) are systems of computers and people used to generate spatial data in order to make a decision. Through the use of ArcView GIS software, this course builds on the foundation of GIS techniques learned in ENVT 330.1. Students will learn techniques for GIS data input, spatial analysis, methods of ArcView customization, and database management. The basics of spatial data models will be discussed. Students will learn how to input spatial data, normalize spatial data, perform spatial analysis, measure distances, and output GIS based maps. This course is the same as GEOG 335.2, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

ENVT 330.3
Projects Using Desktop GIS 1 Unit
Formerly: ENVT 19C
Prerequisite: None
Advisory: GEOG 335.1/ENVT 330.1
Course Transferable to CSU
Hours: 6 hours LEC ; 36 hours LAB
Geographic Information Systems (GIS) are increasingly being used by business, industry, and research institutions in place of other analyses of spatial data. This course is designed to allow students to produce projects using desktop GIS. The students will work in groups to plan and produce a project including data selection and input, spatial data analysis, production of output materials, and presentation of results. The types of information analyzed may include political, social, health, environmental, or economic data. The final grade will be partly based on the project produced. This course may be taken four times for credit. This course is the same as GEOG 335.3, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

ENVT 340
Hazardous Waste Management Applications 4 Units
Formerly: ENVT 40
Prerequisite: CHEM 305/307 or CHEM 321 and CHEM 322. Grade of “C” or better required to meet prerequisite.
Advisory: ENVT 300.
Course Transferable to CSU
Hours: 54 hours LEC ; 54 hours LAB
This is a semester length course which includes all of the content of ENVT 340.1, Hazardous Waste Generator Requirements; ENVT 340.2, Sampling and Analysis; and ENVT 340.3, Environmental Hazardous Management Topics.

ENVT 340.1
Hazardous Waste Generator Requirements 1.5 Units
Formerly: ENVT 40A
Prerequisite: None
Advisory: ENVT 300.
Course Transferable to CSU
Hours: 18 hours LEC ; 27 hours LAB
This course will include a study of the requirements and applications of federal, state, and local laws and regulations relating to hazardous waste management, including California and Federal requirements for generators of hazardous waste. Emphasis will be placed on applications of laws and regulations applicable to industry including proper labeling, packaging, placarding, and manifesting of hazardous waste; storage requirements; permitting; and general planning and reporting functions.
ENVT 340.2  
**Sampling and Analysis**  
1.5 Units  
Formerly: ENVT 40B  
Prerequisite: CHEM 305/307 or CHEM 321 and CHEM 322. Grade of “C” or better required to meet prerequisite.  
Advisory: ENVT 300.  
Course Transferable to CSU  
Hours: 18 hours LEC; 27 hours LAB  
This course covers the requirements and applications of environmental sampling methodology, equipment recognition and maintenance, calibration procedures, basic analytical techniques, and data interpretation. Selecting and working with analytical service laboratories, development and use of sampling plans, and performance of basic tests using typical field equipment will also be covered.

ENVT 340.3  
**Environmental Hazardous Waste Management Topics**  
1 Unit  
Formerly: ENVT 40C  
Prerequisite: None  
Advisory: ENVT 300.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course covers the requirements and applications of federal, state, and local laws and regulations relating to hazardous waste management. The focus of the course will be on California and federal requirements for special hazardous waste management areas with an emphasis on applications of laws and regulations including overlapping jurisdictions, real estate transactions, infectious waste control, and household hazardous waste. Current issues or regulations will be included.

ENVT 342  
**Hazardous Waste Generation/Reduction/Treatment**  
3 Units  
Formerly: ENVT 20  
Prerequisite: CHEM 305/307 or CHEM 321 and CHEM 322. Grade of “C” or better required to meet prerequisite.  
Advisory: ENVT 300.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This is a semester length course which includes all of the content of ENVT 342.1, Pollution Prevention; ENVT 342.2, Pollution Control; and ENVT 342.3, Industrial/Service Waste Stream Case Studies.

ENVT 342.1  
**Pollution Prevention**  
1 Unit  
Formerly: ENVT 20A  
Prerequisite: None  
Advisory: ENVT 300.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course discusses the opportunities, benefits, and barriers to waste minimization. Basic information is provided concerning waste reduction strategies and the steps involved in preparing a pollution prevention plan.

ENVT 342.2  
**Pollution Control**  
1 Unit  
Formerly: ENVT 20B  
Prerequisite: CHEM 305/307 or CHEM 321 and CHEM 322. Grade of “C” or better required to meet prerequisite.  
Advisory: ENVT 300 and ENVT 342.1.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course analyzes industrial processes and the waste streams they produce. Emphasis is placed on the main biological, chemical, physical and thermal methods used for air pollution abatement and waste water treatment.

ENVT 342.3  
**Industrial/Service Waste Stream Case Studies**  
1 Unit  
Formerly: ENVT 20C  
Prerequisite: ENVT 342.1 and 342.2 with a grade of “C” or better.  
Advisory: ENVT 300.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course uses industrial case studies to illustrate applications of waste reduction practices, resource conservation techniques, and waste treatment processes. A business unit is analyzed and a waste minimization plan developed. The integration of pollution prevention, environmentally conscious practices and the identification of “cost/benefit” alternatives are emphasized.

ENVT 350  
**Water Resources**  
4 Units  
Formerly: ENVT 25  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC; 54 hours LAB  
This course provides an overview of water resources including aspects of the chemistry, geography, and biology of aquatic systems. Water laws and the ecotoxicology of water resources will also be discussed. Students will learn to use basic sampling and analysis methods to assess water resources. Students will be expected to conduct lab work, some of which may be outdoors. The class is useful for students interested in Environmental Science, Environmental Technology, Geography, Natural Resources Management, and Biology. The class is not intended for students training as water treatment plant operators.

ENVT 350.1  
**Fundamentals of Water Resources**  
1 Unit  
Formerly: ENVT 25A  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course provides an overview of water resources including aspects of the chemistry, geography, and biology of aquatic systems. Topics include hydrologic cycle, ocean resources, freshwater systems, and groundwater. Water laws and regulations are also discussed. The class is useful for students interested in Environmental Science, Environmental Technology, Geography, Natural Resource Management, and Biology. The class is not intended for students training as water treatment plant operators.
ENVT 350.2  
Groundwater Resources  
1.5 Units  
Formerly: ENVT 25B  
Prerequisite: None  
Advisory: ENVT 350.1.  
Course Transferable to CSU  
Hours: 18 hours LEC; 27 hours LAB  
This course provides an overview of groundwater resources. The structure of aquifers including groundwater recharge, storage, and flow is discussed. Students will analyze the impacts of groundwater withdrawal and contamination. Students will learn to use basic sampling and analysis methods used to assess groundwater systems. The remediation of contaminated groundwater will be discussed. Students will be expected to conduct lab work; some of this may be outdoors. The class is useful for students interested in Environmental Science, Environmental Technology, Geography, Natural Resource Management, and Biology. A basic knowledge of water resources is assumed before beginning the course. The class is not intended for students training as water treatment plant operators.

ENVT 350.3  
Surface Freshwater Resources  
1.5 Units  
Formerly: ENVT 25C  
Prerequisite: None  
Advisory: ENVT 350.1.  
Course Transferable to CSU  
Hours: 18 hours LEC; 27 hours LAB  
This course provides an overview of surface water resources including lakes, streams, and wetlands. The general characteristics of these ecosystems will be discussed with an emphasis on the biology of these systems. Students will learn to use basic sampling and analysis methods used to assess freshwater systems. The ecotoxicology and clean up of contaminated surface water will be discussed. Students will be expected to conduct lab work, some of which may be outdoors. The class is useful for students interested in Environmental Science, Environmental Technology, Geography, Natural Resource Management, and Biology. A basic knowledge of water resources is assumed before beginning the course. The class is not intended for students training as water treatment plant operators.

ENVT 352  
Water Resource Management  
1.5 Units  
Formerly: ENVT 26  
Prerequisite: None  
Advisory: ENVT 350.1.  
Course Transferable to CSU  
Hours: 18 hours LEC; 27 hours LAB  
This course provides an overview of managing potable and waste water supply with respect to use. Topics include water resource demand, the soil/water relationship and water quality. Water treatment laws and regulation will also be discussed. Students learn the basic sampling and analysis methods to assess quality and application issues. Students are expected to conduct lab work, some of which will be outdoors. This class is useful for students interested in Environmental Science or Technology, Natural Resource Management and Biology. This class is not intended for students training as water treatment plant operators.

ENVT 360  
Health Effects of Hazardous Materials  
3 Units  
Formerly: ENVT 30  
Prerequisite: BIOL 310 and CHEM 305/307. Grade of “C” or better required to meet prerequisite.  
Advisory: ENVT 300 and ENVT 310.1.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This is a semester length course which includes all of the content for ENVT 360.1, Basics of Toxicology, and ENVT 360.2, Basics of Industrial Hygiene.

ENVT 360.1  
Basics of Toxicology  
2 Units  
Formerly: ENVT 30A  
Prerequisite: BIOL 310 and CHEM 305/307. Grade of “C” or better required to meet prerequisite.  
Advisory: ENVT 310.1 (or 24 hour or 40 hour Hazwoper OSHA Certificate) and ENVT 300.  
Course Transferable to CSU  
Hours: 36 hours LEC  
This module will cover the health effects produced by exposure to chemical hazards. The course will give an overview of toxicology including environmental and physiological processes, sources of exposure to toxins, and patterns of acute and chronic health effects.

ENVT 360.2  
Basics of Industrial Hygiene  
1 Unit  
Formerly: ENVT 30B  
Prerequisite: None  
Advisory: BIOL 310, ENVT 300, 310.1, and 360.1.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This module is an introduction to the basic study of industrial hygiene. The course will cover regulations and standards, sources of information concerning harmful agents, the use of personal protective equipment, exposure guidelines and limits, monitoring and control of harmful agents in the workplace, and risk evaluation.

ENVT 370  
Advanced Sampling and Analysis Methods for Environmental Technicians  
3 Units  
Formerly: ENVT 45  
Prerequisite: ENVT 360.2 and 340.2. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 36 hours LEC; 54 hours LAB  
This course covers advanced sampling and analysis methods utilized by environmental technicians. The first part of the course will include methods of measuring pollution levels and assessing the health of ecosystems, including sampling and analysis of air, water, soil, and biota. The second part of the course will cover techniques addressing human health and safety including the analysis of risk, safety in the workplace, and the sampling and identification of hazardous materials.
ENVT 370.1
Ecological Sampling and Analysis Methods  2 Units
Formerly: ENVT 45A
Prerequisite: ENVT 340.2. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 24 hours LEC ; 36 hours LAB
This course will address methods of measuring the health of ecosystems, including the sampling and analysis of air, water, soil, and biota. Students will learn to utilize various common sampling and analysis methodology including equipment use; sample collection; chemical, physical, and numerical analyses; and data interpretation. The emphasis is on pollution detection and analysis of toxic impacts. Major ecosystem types, biogeochemical processes, the flow of energy through ecosystems, sources of pollution, and ecotoxicology will also be discussed. The course is useful to students interested in Environmental Technology, Biology and Ecology.

ENVT 370.2
Sampling and Analysis Methods for Human Health and Safety  1 Unit
Formerly: ENVT 45B
Prerequisite: ENVT 360.2. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 12 hours LEC ; 18 hours LAB
This course will cover techniques addressing human health and safety. The course will address sampling and analysis techniques used in industrial hygiene and in the identification of hazardous materials. Topics include risk analysis, workplace safety, industrial hygiene sampling, the sampling and identification of hazardous materials, and calculations used in environmental sampling.

ENVT 495
Independent Studies in Environmental Technology  1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

ENVT 498
Work Experience in Environmental Technology  1-4 Units
Formerly: ENVT 48
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

ENVT 499
Experimental Offering in Environmental Technology  .5-4 Units
Formerly: ENVT 49
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

This course focuses on individualized topics developed in cooperation with business and industry to meet specialized training needs on a timely basis in the ever-changing environmental hazardous materials industry. Topics may be offered in workshop or seminar presentations and may be targeted for specific audiences.
Family & Consumer Science

CRC’s course offerings in Family & Consumer Science are designed primarily to provide knowledge and skills in the areas of nutrition, child development, and family development.

Students planning to transfer should consult with a counselor and/or specific college catalog for transfer, major and general education course work.

See Early Childhood Education (p. 151) and Culinary Arts Management (p. 145) for additional information.

Career Options
- Early Care and Education
- Education
- Pediatric
- Instructional Assistant
- Counseling
- Child Psychology
- Social Work
- Food Preparation
- Community Nutrition Specialist

Some career options may require more than two years of college study.

Highlights
- Strong support for the Early Childhood Education program
- Support for Community Nutrition Specialist (see Culinary Arts Management)
- Opportunities for transfer level instruction
- Professional and innovative staff who are leaders in the field

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

Family and Consumer Science (FCS)

FCS 312
Child Development 3 Units
Formerly: FCS 34
Prerequisite: None
Advisory: ENGW 101 or 103, or ESLL 320, ESLR 320, and ESLW 320.
Course Transferable to UC/CSU: UC - See Counselor
(CAN FCS 14)
Hours: 54 hours LEC

This course is a study of the physical, cognitive, social and emotional development of the child from the prenatal period through adolescence. In the foundation course, students will examine children as individuals and the environmental influences that impact their growth and development.

FCS 314
The Child, The Family and The Community 3 Units
Formerly: FCS 35
Prerequisite: None
Advisory: ENGW 101 or 103, or ESLL 320, ESLR 320, and ESLW 320.
Course Transferable to UC/CSU
Hours: 54 hours LEC

This is a fundamental course that examines the child in the family and the environmental influences on his/her growth and development; including gender, media, sexual orientation, social class/ethnic groups, special needs and their relationship to family behavior. Community resources available to support family systems and dynamics will be examined.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS 322</td>
<td>Family Development</td>
<td>3</td>
<td>A functional study of marriage and the family in light of today’s societal changes. An evaluation of traditional and current attitudes toward roles, life styles and relationships of men and women.</td>
</tr>
<tr>
<td>FCS 324</td>
<td>Human Development: A Life Span</td>
<td>3</td>
<td>This course will provide an overview of the physical, cognitive, social, and emotional development from conception through the life span. The emphasis will be on the practical application of developmental principles. The course is designed as a foundation course of careers in educational, social, psychological, and medical fields. An optional field study unit may be offered to provide opportunities for observation and experience with various age groups.</td>
</tr>
<tr>
<td>FCS 494</td>
<td>Topics in Family and Consumer Science</td>
<td>.5-4</td>
<td>This course presents in-depth discussions of contemporary issues in the Family and Consumer Sciences. Topics will be selected according to current interest, such as: Microwave Cooking; Protein Alternatives; Realities of Aging; Parenting the Young Child. Consult class schedule for specific topics offered.</td>
</tr>
<tr>
<td>FCS 495</td>
<td>Independent Studies in Family and Consumer Science</td>
<td>1-3</td>
<td></td>
</tr>
<tr>
<td>FCS 499</td>
<td>Experimental Offering in Family and Consumer Science</td>
<td>.5-4</td>
<td></td>
</tr>
</tbody>
</table>
### Film and Media Studies

**DEGREE**  
A.A.—Film and Media Studies

*Film and Media Studies is designed to develop critical thinking and screenwriting skills while fostering a humanistic and social scientific understanding of the media. Students combine hands-on courses in scriptwriting, with critical studies of the visual media as an art form and social force. This major is particularly encouraged for students who intend to transfer to university film and media programs or pursue careers that demand a high level of visual literacy, analytic and writing skills. The production of digital film and broadcast television are taught through the Communications Media production program.*

**Career Options**  
Director, Entertainment Writer or Editor, Producer, Screenwriter, Script Supervisor, Story Editor

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

**Highlights**  
State-of-the-art 20-station computer lab for graphics and non-linear editing, including Photoshop, Illustrator, After Effects and Media 100

Hand-on courses in film and video production and editing

Screening room with rear screen projector and advanced sound system

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**DEGREE**  
A.A.—Film and Media Studies

**CODE # 1551**

The Film and Media Studies major is designed to develop screenwriting, film producing, and critical thinking skills while fostering a humanistic and social scientific understanding of the media.

**REQUIRED PROGRAM** ................................................................. Units

<table>
<thead>
<tr>
<th>Core Requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMED 300 (5)/JOUR 310 (10) Mass Media and Society .......... 3</td>
</tr>
<tr>
<td>CMED 305 (14)/FMS 305 Film History ............................. 3</td>
</tr>
<tr>
<td>CMED 330 (54) Basic Film/Video Camera Techniques .......... 3</td>
</tr>
<tr>
<td>FMS 300 (10) Introduction to Film Studies ......................... 3</td>
</tr>
<tr>
<td>FMS 310 (15A) Basic Screenwriting ................................. 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Electives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nine (9) units selected from the following: .................. 9</td>
</tr>
<tr>
<td>FMS 488 Honors Seminar: Intro to Critical Theory (3) or</td>
</tr>
<tr>
<td>HONOR 350 (22H) Honors Sem: Intro to Critical Theory (3)</td>
</tr>
<tr>
<td>FMS 489 Honors Seminar: The Films of Alfred Hitchcock (3) or</td>
</tr>
<tr>
<td>HONOR 352 (23H) Honors Seminar: The Films of Alfred Hitchcock (3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMED 302 (61)</td>
<td>Introduction to Digital Media (3)</td>
<td></td>
</tr>
<tr>
<td>CMED 331 (64)</td>
<td>Television Production (3)</td>
<td></td>
</tr>
<tr>
<td>CMED 360 (80)</td>
<td>Intro to Motion Graphics: Adobe After Effects (3)</td>
<td></td>
</tr>
<tr>
<td>CMED 361 (161)</td>
<td>Intermediate Motion Graphics: Adobe After Effects/Newtec Lightwave 3-D (3)</td>
<td></td>
</tr>
<tr>
<td>CMED 362 (162)</td>
<td>Digital Non-Linear Video Editing: Final Cut Pro (3)</td>
<td></td>
</tr>
<tr>
<td>FMS 320 (20)</td>
<td>Film Genre (3)</td>
<td></td>
</tr>
<tr>
<td>JOUR 320 (12)</td>
<td>Race and Gender in the Media (3)</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED** ......................................................... 24

**General Education Graduation Requirements** - See page 18.
Film and Media Studies (FMS)

FMS 300
Introduction to Film Studies 3 Units
Formerly: FMS 10
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course offers an introduction to the film medium with emphasis on aesthetics, theory, and methods of critical analysis. Students will examine film as an art form, as a medium for communicating ideas and as a social and cultural force.

FMS 305
Film History 3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introduction to the art of motion pictures, using lectures and films. Students will study the history and development of motion pictures and will view, evaluate, and critique landmarks in the art of movie making. This course is the same as CMED 305, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

FMS 310
Basic Screenwriting 3 Units
Formerly: FMS 15A
Prerequisite: None
Advisory: ENGWR 300.
Course Transferable to CSU
Hours: 54 hours LEC
This course is a study of the creativity and techniques of screenwriting for short films, feature films, and television. Students will view and analyze exemplary films, participate in writing exercises and workshops, and complete a treatment and master scenes of a full-length project.

FMS 320
Film Genre 3 Units
Formerly: FMS 20
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course examines the structure, mythology, style, themes and critical theory of one or more film genre, such as the comedy, the thriller and the film noir.

FMS 488
Honors Seminar: Introduction to Critical Theory 3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course investigates questions of interpretation and representation in film, literature, media, and culture. Students examine contemporary critical and cultural theory, them apply these theories in analyzing a variety of texts from the Shakespearean play to the science-fiction horror film. Theories introduced include, but are not limited to, semiotics, psychoanalysis, rhetorical criticism, gender theory, and postmodernism. Students intending to transfer into arts, film, literature, humanities, and cultural studies programs will find this course particularly useful in understanding the critical language of the university. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as HONOR 350, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

FMS 489
Honors Seminar: The Films of Alfred Hitchcock 3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This seminar studies the work of Alfred Hitchcock from the perspective of the key concepts in film theory. Students will investigate the films and criticism of one of the greatest and strangest directors, the self-styled master of suspense. This seminar takes a close reading of Hitchcock’s most important films and the most significant writing on the director’s work. For students interested in film, media, art, literature, and the humanities, the course examines Hitchcock’s visual style, thematic concerns, and directorial techniques, and introduces the major critical approaches to cinema studies. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as HONOR 352, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

FMS 495
Independent Studies in Film and Media Studies 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

FMS 499
Experimental Offering in Film and Media Studies .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Finance

**DEGREE**
A.A.—Finance

Finance is an area of increasing importance in the business world. It is experiencing change in organization and style. CRC offers students the opportunity to learn both business and personal finance concepts necessary for survival in the business world and in the home. Whether it is a course or a career, knowledge of finance is an important and essential part of any well prepared business professional's background. Many people find a fast-paced, exciting career in finance.

### Area
Business & Family Science

### Dean
Ryan Cox

### Phone
691-7226

### Area Office
SOC 158

### Counseling
691-7316

### Cooperative Work Experience
691-7372

### Code #1053

#### REQUIRED PROGRAM

**Units**

<table>
<thead>
<tr>
<th>Business Core:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 301 (1A) Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUS 310 (8) Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>BUS 330 (15) Managing Diversity in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>BUS 340 (18A) Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUS 300 (20) Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUSTEC 302 (BUS 41) Computer Keyboarding</td>
<td>2</td>
</tr>
<tr>
<td>CISC 310 (CIS 3) Intro to Computer Information Science</td>
<td>3</td>
</tr>
</tbody>
</table>

**Purpose:**
One (1) Computer Keyboarding course or Four (4) units to include:

- CISC 302 (CIS 1X) or JOUR 330 (JOUR 1) Computer Familiarization (2)
- and

Two (2) additional units selected from:

- CISA 305 (CIS 11AX), 315 (CIS 12AX), 320 (CIS 13A), 330 (CIS 17A), 340 (CIS 15A), 350 (CIS 18A); CISC 320 (CIS 14A), 355 (CIS 16AX)
- ECON 302 (1A) Principles of Macroeconomics or ECON 100 (55) Introduction to Economics | 3 |
- MKT 300 (20) Principles of Marketing or MGMT 362 (24) Techniques of Management | 3 |

**Finance Option:**

- ACCT 125 (77) Federal and State Taxation | 4 |
- BUS 320 (14)/ECON 320 (14) Concepts of Personal Finance | 3 |
- BUS 498 (98) Work Experience | 3 |
- MGT 310 22) Selling Professionally or MGT 330 (21) Internet Marketing | 3 |
- RE 300 (19) California Real Estate Principles | 3 |

**TOTAL UNITS REQUIRED:**
43-44

**Suggested Electives for concentration:**

- BUS 105 (60), 170 (85A), 171 (85B), 210 (71A), 212 (71B), 214 (71C), 216 (71D), 218 (71E), 220 (71F); ECON 304 (1B); HCD 130 (61), 132 (51C), 310 (2), 333 (4A), 334 (4B), 340 (5), 342 (8), 344 (9), 350 (43), 362 (6); MGMT 372 (23).

**General Education Graduation Requirements** - see page 18.

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**Note to Transfer Students:**

If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

**Highlights**

- Hands-on experience on the use of computers for business purposes
- Opportunities for work experience in local government and business
- Faculty include certified financial planners and investment executives
- Involvement in a regional banking and finance Tech Prep program
- A lab with tutorial assistance

**Career Options**

- Stockbroker; Insurance Representative;
- Tax Consultant; Financial Planner;
- Bank Employee; Entrepreneur;
- Government Service, Investment Counselor;
- Real Estate Sales; Retirement Specialist

Some career options may require more than two years of college study.
Fire Technology

DEGREE A.A.—Fire Technology
CERTIFICATE Fire Technology

The fire service is one of the most dynamic employers in the country. This CRC program is designed to provide the student with updated skills and knowledge necessary to complete and successfully apply for fire service positions.

The curriculum serves as an inservice program as well as a pre-employment program for students seeking employment or advancement in the profession of urban fire fighting and fire suppression.

Career Options
Firefighter; Inspector; Investigator; Supervisor; Manager

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights
Up-to-date technical information
Field trips to a variety of fire service locations
Networking with other fire service members
Fire Technology work experience internships (Fire Technology 498 for on-the-job experience)

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE
A.A.—Fire Technology
CODE #1127

This curriculum is designed to serve both as an in-service program and as a pre-employment program for students seeking employment or advancement in the profession of urban fire fighting and fire suppression.

REQURED PROGRAM ............................................................... Units
FT 300 (1) Fire Protection Organization ........................................ 3
FT 301 (2) Fire Prevention Technology .......................................... 3
FT 302 (3) Fire Protection Equipment and Systems .......................... 3
FT 303 (4) Building Construction for Fire Protection ....................... 3
FT 304 (5) Fire Behavior and Combustion ................................... 3
EMT 100 (50) Emergency Medical Technician - Basic .................. 5

Plus fifteen (15) units selected from: ........................................... 15
FT 110 (73) Fire Apparatus ................................................... 3
FT 130 (61) Fire Company Organization and Management ............ 3
FT 132 (62) Fire Service Records and Reports ........................... 3
FT 140 (63) Related Codes and Ordinances ................................. 3
FT 170 (65) Fire Investigation .................................................. 3
FT 180 (68) Rescue Practices .................................................. 3
FT 190 (66) Fire Tactics and Strategy ....................................... 3
FT 320 (6) Hazardous Materials ............................................. 3

TOTAL UNITS REQUIRED ......................................................... 35

* A current California EMT 1, EMT 1A or EMT IFS certificate will be accepted as satisfactory completion of the EMT 100 (50) requirement.

Suggested Electives:
ENVT 310 (10), 320 (15); FT 498 (98)

General Education Graduation Requirements - See page 18.
CERTIFICATE
Fire Technology
CODE #1127

This curriculum is designed to serve both as an in-service program to improve or maintain job skills and as a pre-employment program for the profession of urban fire fighting and fire suppression.

REQUIRED PROGRAM ............................................................... Units
FT 300 (1) Fire Protection Organization .................................... 3
FT 301 (2) Fire Prevention Technology ..................................... 3
FT 302 (3) Fire Protection Equipment and Systems .................. 3
FT 303 (4) Building Construction for Fire Protection ................. 3
FT 304 (5) Fire Behavior and Combustion ................................. 3
EMT 100 (50) Emergency Medical Technician - Basic ............. 5
Plus fifteen (15) units selected from: ...................................... 15
FT 110 (73) Fire Apparatus ....................................................... 3
FT 130 (61) Fire Company Organization and Management .......... 3
FT 132 (62) Fire Service Records and Reports ......................... 3
FT 140 (63) Related Codes and Ordinances ............................... 3
FT 170 (65) Fire Investigation .................................................. 3
FT 180 (68) Rescue Practices ................................................... 3
FT 190 (66) Fire Tactics and Strategy ........................................ 3
FT 320 (6) Hazardous Materials ................................................. 3
TOTAL UNITS REQUIRED ....................................................... 35

* A current California EMT 1, EMT 1A or EMT IFS certificate will be accepted as satisfactory completion of the EMT 100 (50) requirement.

Fire Technology (FT)

FT 110
Fire Apparatus 3 Units
Formerly: FT 73
Prerequisite: None
Advisory: FT 300, or employment as a firefighter.
Hours: 54 hours LEC
A study of the design, specifications, and performance capabilities of fire apparatus. Effective utilization of equipment on the fireground will be the focus with emphasis on practical applications.

FT 130
Fire Company Organization and Management 3 Units
Formerly: FT 61
Prerequisite: None
Advisory: FT 300, or employment as a firefighter.
Hours: 54 hours LEC
An in-depth review of the operation, organization and planning concepts of today's fire departments. Emphasizes the functions of management including budgeting, time management, delegation, motivation, and discipline. Explores concepts of continuous improvement, team-building, and principles of quality management, relative to fire service operations.

FT 132
Fire Service Records and Reports 3 Units
Formerly: FT 62
Prerequisite: None
Advisory: FT 130 or 300, or employment as a firefighter.
Hours: 54 hours LEC
A course designed for all members of the fire service in the use of typical records and report systems. Involves knowledge and understanding of the fire department records systems, principles of report writing, applications in the area of pre-fire survey, post-fire reporting, research and planning.

FT 140
Related Codes and Ordinances 3 Units
Formerly: FT 63
Prerequisite: None
Advisory: FT 300, or employment as a firefighter.
Hours: 54 hours LEC
Familiarization and interpretation of national, state and local codes, ordinances and laws which influence the field of fire protection.

FT 170
Fire Investigation 3 Units
Formerly: FT 65
Prerequisite: None
Advisory: FT 300, or employment as a firefighter.
Hours: 54 hours LEC
Determining causes of fires (accidental, suspicious and incendiary), types of fires, related laws, introduction to arson and incendiarism, recognizing and preserving evidence, interviewing witnesses and suspects, arrest and detention procedures, court procedures and giving court testimony.

FT 180
Rescue Practices 3 Units
Formerly: FT 68
Prerequisite: None
Advisory: FT 300, or employment as a firefighter.
Hours: 54 hours LEC
Rescue problems and techniques, emergency rescue equipment, toxic gases, chemicals, and diseases, radiation hazards, care of victims, including emergency childbirth, respiration and resuscitation, extrication and other emergency conditions.

FT 190
Fire Tactics and Strategy 3 Units
Formerly: FT 66
Prerequisite: None
Advisory: FT 300, or employment as a firefighter.
Hours: 54 hours LEC
The study of fundamental principles of fire tactics and strategy under fireground conditions and procedures for effective development and application of pre-fire plans. Fire emergency problems and definitive coping strategies are examined, related to staffing, equipment and extinguishing agents.

FT 295
Independent Studies in Fire Technology 1-3 Units
Prerequisite: None
Hours: 18 hours LEC; 36 hours LAB
(See catalog page 21)
FT 299  
Experimental Offering in Fire Technology  .5-4 Units
Formerly: FT 99  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

FT 300  
Fire Protection Organization  3 Units
Formerly: FT 1  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
Provides an introduction to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

FT 301  
Fire Prevention Technology  3 Units
Formerly: FT 2  
Prerequisite: None  
Advisory: FT 300  
Course Transferable to CSU  
Hours: 54 hours LEC  
Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationship of fire prevention with fire safety education and detection and suppression systems.

FT 302  
Fire Protection Equipment and Systems  3 Units
Formerly: FT 3  
Prerequisite: None  
Advisory: FT 300  
Course Transferable to CSU  
Hours: 54 hours LEC  
Provides information relating to the features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection, and portable fire extinguishers.

FT 303  
Building Construction for Fire Protection  3 Units
Formerly: FT 4  
Prerequisite: None  
Advisory: FT 300  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is the study of the components of building construction that relate to fire safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, pre-planning fire operations and operating at fires. The development and evolution of building and fire codes will be studied in relationship to past fires in residential, commercial and industrial occupancies.

FT 304  
Fire Behavior and Combustion  3 Units
Formerly: FT 5  
Prerequisite: None  
Advisory: FT 300  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course provides the student with theories and fundamentals of how and why fires start, spread and are controlled; an in-depth study of fire chemistry and physics, fire characteristics of materials, extinguishing agents and fire control techniques.

FT 320  
Hazardous Materials  3 Units
Formerly: FT 6  
Prerequisite: None  
Advisory: FT 300, 301, 302, 303, and 304.  
Course Transferable to CSU  
Hours: 54 hours LEC  
A study of the fire fighting practices related to hazardous chemicals, including their physical properties, uses in industry, and characteristics when involved in spills, fires, and accidents. Basic information regarding health effects and treatment, and fire department protocols and responsibilities.

FT 495  
Independent Studies in Fire Technology  1-3 Units
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 36 hours LAB  
(See catalog page 21)

FT 498  
Work Experience in Fire Technology  1-4 Units
Formerly: FT 98  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 336)

FT 499  
Experimental Offering in Fire Technology  .5-4 Units
Formerly: FT 49  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
General Education

DEGREE A.A.— General Education Transfer

CRC’s general education degree is designed to provide students with a program of solid preparation emphasizing university studies. This program is aligned with the CSU General Education Breadth Requirements or the Intersegmental General Education Transfer Curriculum (IGETC) offering students a wide variety of transfer courses from which to choose. It is important to emphasize, however, that transferability is a matter determined by receiving institutions and that catalog rights may also affect transferability. University programs have varying lower division requirements, and these may also affect selection of courses. Therefore, any student interested in this degree is strongly advised to meet with a Counselor prior to enrolling in classes.

Required Program: Complete one of the following options:

Option A: CSU General Education Breadth (39 units) (See page 23)

Option B: Intersegmental General Education Transfer Curriculum (IGETC - 34 units) (See page 28)

Option C: Campus specific lower division general education pattern. (18 units) Minimum 18 units selected from the UC Transfer Course Agreement in any of the following categories: English, Mathematics, Humanities, Behavioral and Social Sciences, Biological and Physical Sciences. See a counselor for course requirements for a specific transfer campus.

All degree options require completion of the CRC graduation requirements. (see catalog page 18)

Career Options
Most businesses/agencies acknowledge a higher education degree for promotional and salary enhancement purposes.

Highlights
Major requirements are aligned with CSU General Education, IGETC or common General Education requirements at many transfer institutions.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.
Geography

DEGREE A.S.—Geography

CERTIFICATE Applications of Desktop GIS
Environmental Applications of Desktop GIS (see page 185)
Visit the CRC GIS Program website at:
For Geography emphasis - see this website:
http://crc.losrios.edu/~sme/geosciences/GIS/index.html

Geography is the science of place and space. Geographers study the relationships among geographic places, natural systems, society, cultural activities, and the interdependence of all these over space.

There are two main branches of geography: human geography and physical geography. Human geography is concerned with the spatial aspects of human existence—how people and their activities are distributed in space, how people use and perceive space, and how people create and sustain the places that make up Earth’s surface. Physical geographers study the physical elements and spatial processes that make up and shape the environment, including energy, air, water, weather, climate, landforms, soils, animals, plants, etc. Many human and physical geographers have skills in cartography and Geographic Information Systems (GIS).

Geographers also study the linkages between human activity and natural systems. Geographers were, in fact, among the first scientists to sound the alarm that human-induced changes to the environment were beginning to threaten the balance of life itself. Geographers today are active in the study of global warming, desertification, deforestation, loss of biodiversity, groundwater pollution, flooding, and more.

The CRC Geography program offers courses that satisfy lower division General Education requirements in both the physical and social sciences. In addition, the program offers an Associate Degree in Geography and two certificate programs in Geographic Information Systems (GIS). Students planning to transfer to a four-year school with a major in Geography should consult the lower division requirements at the university they plan to attend.

Career Options
International Development; Natural Resource Management; Environmental Consultant; Urban and regional planning; Educator (elementary through University); Tourism; Cartographer; Climatologist; Park Ranger; Transportation Specialist; Real Estate Analyst; International Business; Marketing Analyst; Land Surveyor; Research Scientist; Remote Sensing Specialist; Demographer; GIS Analyst; and many more (please contact the program for additional information).

Some career options may require more than two years of college study.

Highlights
Comprehensive course offerings including a Physical Laboratory as well as specialized training in Geographic Information Systems (GIS)
Program’s students have won top awards at state-level competitions annually since 1999
Field study courses to Yosemite, Pt. Reyes, Monterey/Big Sur, and the Mt. Diablo area
Internships available with State of California, County of Sacramento, and Federal Land Management Agencies
Three courses fulfill the CRC and CSU multicultural requirement
Day and evening sections
**Note to Transfer Students:**
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.

**DEGREE**

**A.S. — Geography**

CODEx #1536

The CRC Geography Program offers an Associate of Science (A.S.) degree that provides students with a solid foundation in geography as well as the standard prerequisites for upper division coursework leading to the baccalaureate degree. Students may also simultaneously earn a certificate in Applications of Desktop Geographic Information Systems (GIS) should consult the college catalog for course requirements.

**REQUIRED PROGRAM ............................................ Units**

**Core Courses:**
- GEOG 300 (1) Physical Geography: Exploring Earth's Environmental Systems .......................... 3
- GEOG 301 (11) Physical Geography Laboratory .................................. 1
- GEOG 310 (2) Human Geography: Exploring Earth's Cultural Landscapes .................................................. 3
- GEOG 331 (9) Intro to Geographic Information Systems (4) or GEOG 335 (19) Intro to Desktop Geographic Information Systems Applications (3) or CISC 310 (CIS 3) Intro to Computer Info. Science (3) .. 3-4
- PSYC 330 (5) Introductory Statistics for the Behavioral Sciences (3) or STAT 300 (1) Intro to Probability and Statistics (4) ............ 3-4

**Plus six to seven (6-7) units selected from the following:**: 6-7
- ANTH 310 (2) Cultural Anthropology (3)
- BIOL 307 (13) Biology of Organisms (4) or BIOL 310 (16) General Biology (4) or BIOL 350 (14) Environmental Biology (3)
- ECON 302 (1A) Principles of Macroeconomics (3) or ECON 304 (1B) Principles of Microeconomics (3)
- GEOG 306 (6) Weather and Climate (3)
- GEOG 320 (10) World Regional Geography (3)
- GEOG 322 (21) Geography of California (3)
- GEOG 390 (24)* Field Studies in Geography (5.4)
- GEOG 481 (21H) Honors Seminar: Nature and Culture (3)
- GEO 300 (1) Physical Geology (3)
- GEO 301 (2) Physical Geology Lab (1)
- GEO 330 (5) Introduction to Oceanography (3)
- HIST 360 (7) History of African Civilizations (3) or HIST 370 (8) History of the Americas (3) or HIST 371 (9) History of the Americas (3)
- HUM 324 (4) Global Islam: Culture and Civilization (3)
- PHIL 352 (9) Introduction to World Religions (3)
- POLS 310 (10) Introduction to International Relations (3)
- SOC 300 (1A) Introductory Sociology (3)

**TOTAL UNITS REQUIRED ............................................. 19-22**

*A maximum of 2 units from GEOG 390 will be counted toward the degree requirement.

**General Education Graduation Requirements** - see page 18.

A minimum of 60 units is required for the A.S. degree which includes core courses, electives, and general education (GE) graduation requirements. Geography majors are encouraged to complete additional required GE requirements from a list of suggested courses on file in the Geography Department and the Counseling Center. Students should use PROJECT ASSIST (http://www.asst.org) to research lower division major requirements at the transfer institution of their choice and also work with a counselor to determine the most appropriate transfer coursework.

**CERTIFICATE**

**Applications of Desktop GIS**

CODEx #1432

A geographic information system (GIS) is a database management system that facilitates the collection and the analysis of geographic data from both the physical and cultural environments. This interdisciplinary certificate program is designed to equip students to use this powerful new technology to display, model and analyze spatial data of all types to assist with problem solving and decision making processes.

**REQUIRED PROGRAM ............................................ Units**

**Geographic Information Systems courses:**
- Six to seven (6-7) units selected from: ........................................ 6-7
  - GEOG 335.1 (19A) Fundamentals of Geographic Info. Systems (1)
  - GEOG 335.2 (19B) Introduction to Using Desktop GIS (1)
  - GEOG 335.3 (19C) Projects Using Desktop GIS (1)
  - GEOG 331 (9) Intro. to Geography Information Systems (4)
  - GEOG 354 (14) Intro. to the Global Positioning Systems (1)
  - GEOG 370 (27A) Introduction to GIS Programming (2)

**Spatial courses:**
- Three (3) units selected from: ............................................. 3
  - GEOG 300 (1) Physical Geography: Exploring Earth's Environmental System (3)
  - GEOG 310 (2) Human Geography: Exploring Earth's Cultural Landscapes (3)

**Computer Information Science course:**
- CISC 310 (CIS 3) Intro. to Computer Information Science ....... 3

**Spatially related courses:**
- Six(6) units selected from one of the following concentrations: ..... 6

**Biological Sciences:**
- BIOL 400 (1A) Principles of Biology (5)
- BIOL 300 (12) Foundations of Biology (3)
- BIOL 350 (14) Environmental Biology (3)

**Computer Science:**
- CISA 320 (CIS 13A) Introduction to Database Management (1)
- CISA 321 (CIS 13B) Intermediate Database Management (1)
- CISP 300 (CIS 41) Algorithm Design/Program Solving (3)
- CISP 350 (CIS 37) Database Programming (3)
- CISP 360 (CIS 32A) Introduction to Structured Programming (4)
- CISP 409 (CIS 39) Object Oriented Programming (4)

**Environmental Technology:**
- ENVT 300 (1) Introduction to Environmental Technology (3)
- ENVT 304 (4) Environmental Biology (3)
- ENVT 320.3 (15C) Air Quality Issues (1)
- ENVT 342.1 (20A) Pollution Prevention (1)
- ENVT 342.2 (20B) Pollution Control (1)
- ENVT 350 (25) Water Resources (4)

**Earth Science:**
- GEOG 306 (6) Weather and Climate (3)
- GEOG 312 (5) Resources, Environment & People, Economic Geography (3)
- GEOG 320 (10) World Regional Geography (3)
- GEOG 322 (21) Geography of California (3)
- GEO 300 (1) Physical Geology (3)
- GEO 301 (2) Physical Geology Laboratory (1)
- GEO 305 (8) Earth Science (3)
- PS 302 (1) Introduction to Physical Science (4)

continued on next page - - -
CERTIFICATE
Applications of Desktop GIS - - continued

Humanities:
ANTH 300 (1) Physical Anthropology (3)
ANTH 310 (2) Cultural Anthropology (3)
SOC 300 (1A) Introductory Sociology (3)
SOC 301 (1B) Social Problems (3)

Plant Science:
HORT 300 (1) Introduction to Horticulture (3)
HORT 302 (2) Soils and Plant Nutrition (3)
PLTS 300 (1) Introduction to Plant Science (3)

Business/Marketing:
MKT 122 (51) International Marketing (3)
MKT 300 (20) Principles of Marketing (3)
MKT 314 (26) Advertising (3)
RE 140 (84) Real Estate Appraisal (3)
RE 300 (19) California Real Estate Principles (3)

TOTAL UNITS REQUIRED ........................................................18-19

Note:
For other GIS Certificate, see Environmental Technology.

Field Study Classes
at Cosumnes River College

Nature is often the best classroom!
Come learn outside in Cosumnes River College's field study courses. These classes consist of short classroom sessions followed by extended trips to some of the most unique and beautiful environments in California, including Big Sur, Monterey Bay, Mt. Lassen, Point Reyes, Yosemite and more!
These short-term classes are offered by several departments, including Biology, Geography, Geology, Photography, and Physical Education. For more information about specific classes, consult the class schedule or visit the Los Rios Field Study Consortium website at: www.losrios.edu/fieldstudy.

Geography (GEOG)

GEOG 300
Physical Geography:
Exploring Earth’s Environmental Systems 3 Units
Formerly: GEOG 1
Prerequisite: None
Advisory: Concurrent enrollment in GEOG 301.
Course Transferable to UC/CSU
(CAN GEOG 2)
Hours: 54 hours LEC
This course investigates the interrelationships between Earth and humans, with an emphasis on natural systems (solar energy balance, weather and climate, water resources, landforms, natural hazards, vegetation, and soil). Relevant application of these elements to today’s world is stressed to help students better understand Earth’s physical environment as well as human-environment interaction. A field trip is required to relate class discussions to the real world.

GEOG 301
Physical Geography Laboratory 1 Unit
Formerly: GEOG 11
Prerequisite: None
Advisory: GEOG 300 (may be taken concurrently).
Course Transferable to UC/CSU
Hours: 54 hours LAB
This course provides “hands-on” study of the basic principles and concepts involved in understanding Earth’s physical environment. Lab topics include observation, measurement and analysis of Earth’s energy balance, weather and climate, vegetation, landforms, and natural hazards, as well as topographic map reading, interpretation, and navigation skills.

GEOG 306
Weather and Climate 3 Units
Formerly: GEOG 6
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introduction to atmospheric processes including energy and moisture exchanges, atmospheric pressure, winds, and global circulation. Severe weather conditions such as hurricanes and tornadoes are also studied. World, regional, and local climates are investigated. Student work will include weather observations and analysis of atmospheric data using charts, weather maps and radar and satellite imagery from the Internet and other sources. Because this course involves the use of some quantitative concepts, students are encouraged to have fundamental algebraic skills prior to enrolling in the course.
### GEOG 310
**Human Geography:**
**Exploring Earth’s Cultural Landscapes**

3 Units  
Formerly: GEOG 2  
Prerequisite: None  
Course Transferable to UC/CSU  
(CAN GEOG 4)  

**Hours:** 54 hours LEC  

This course investigates the diverse patterns of human settlement, development, and movement on earth, which evolved as a result of cultural and environmental factors. Emphasis is placed on understanding global population and migration patterns, language, religion, ethnicity, political and economic systems, development issues, agriculture and urbanization.

### GEOG 312
**Resources, Environment & People - Economic Geography**

3 Units  
Formerly: GEOG 5  
Prerequisite: None  
Course Transferable to UC/CSU  

**Hours:** 54 hours LEC  

This course investigates the diverse patterns of human settlement, development, and movement on earth, which evolved as a result of cultural and environmental factors. Emphasis is placed on understanding global population and migration patterns, language, religion, ethnicity, political and economic systems, development issues, agriculture and urbanization.

### GEOG 320
**World Regional Geography**

3 Units  
Formerly: GEOG 10  
Prerequisite: None  
Course Transferable to UC/CSU  

**Hours:** 54 hours LEC  

This course is a global survey of the world’s major geographic realms: their physical environments, cultures and economies; their origins, interactions and global roles. Basic geographic concepts and ideas are used to study and compare cultures, landscapes, resources, livelihood and land use across Earth. Explanation for the globalization of culture and economy, the widening gap between rich and poor countries, and ethnic diversity in the United States and abroad is stressed throughout the course. A major goal of this course is to improve each student’s “mental map of the world.”

### GEOG 322
**Geography of California**

3 Units  
Formerly: GEOG 21  
Prerequisite: None  
Course Transferable to UC/CSU  

**Hours:** 54 hours LEC  

This course investigates California’s physical, cultural, and economic environments, analyzing cardinal changes resulting from both natural and human interaction. The emphasis is on cultural diversity, human alteration of the landscape, and contemporary problems resulting from accelerated competition for natural, financial, and human resources.

### GEOG 331
**Introduction to Geographic Information Systems**

4 Units  
Formerly: GEOG 9  
Prerequisite: None  
Advisory: CISC 302 and GEOG 300.  
Course Transferable to CSU  

**Hours:** 54 hours LEC; 54 hours LAB  

A Geographic Information System (GIS) is a computer-based data processing tool used to manage and analyze spatial information. This course introduces students to the theory and techniques of GIS including spatial data capture, management and analysis, and cartographic output. Emphasis is placed on the use of technical analysis and software in order to provide students with skills and a conceptual base on which they can build further expertise in GIS. This course is especially useful for Geography, Environmental Science, Economics, and land-use planning majors. This course is the same as ENV 302, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

### GEOG 335
**Introduction to Desktop Geographic Information Systems Applications**

3 Units  
Formerly: GEOG 19  
Prerequisite: None  
Course Transferable to CSU  

**Hours:** 30 hours LEC; 72 hours LAB  

Geographic Information Systems (GIS) are systems of computers and people used to integrate spatial data in order to make a decision. Through the use of ArcView GIS software, this course provides a practical introduction to basic functionality of desktop GIS. Students will learn GIS skills including identifying zones, measuring distances, calculating areas, integrating spatial data and displaying output. The types of information analyzed in GIS may include environmental, economic, political, social, health care, and transportation. This course is the same as ENV 330, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

### GEOG 335.1
**Fundamentals of Geographic Information Systems**

1 Unit  
Formerly: GEOG 19A  
Prerequisite: None  
Course Transferable to CSU  

**Hours:** 12 hours LEC; 18 hours LAB  

Geographic Information Systems (GIS) are computer mapping programs that allow rapid and sophisticated analysis of spatial data. This course provides a basic introduction to geographical information systems. Students will be introduced to basic concepts and techniques of map analysis and the way these are used in geographical information systems in general and desktop GIS in particular. The major areas of practical application of GIS will be discussed. The use of data and principles of sampling and modeling will be presented. The basic computer skills necessary to use a desktop GIS will be taught. This course is useful to students interested in the analysis of economic, political, health care and natural resource data. This course is the same as ENV 330.1, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.
GEOG 335.2
Introduction to Using Desktop GIS 1 Unit
Formerly: GEOG 19B
Prerequisite: None
Advisory: GEOG 335.1/ENVT 330.1.
Course Transferable to CSU
Hours: 12 hours LEC ; 18 hours LAB
Geographic Information Systems (GIS) are systems of computers and people used to generate spatial data in order to make a decision. Through the use of ArcView GIS software, this course builds on the foundation of GIS techniques learned in Geography 335.1. Students will learn techniques for GIS data input, spatial analysis, methods of ArcView customization, and database management. The basics of spatial data models will be discussed. Students will learn how to input spatial data, normalize spatial data, perform spatial analysis, measure distances, and output GIS based maps. This course is the same as ENVT 330.2, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

GEOG 335.3
Projects Using Desktop GIS 1 Unit
Formerly: GEOG 19C
Prerequisite: None
Advisory: GEOG 335.1/ENVT 330.1.
Course Transferable to CSU
Hours: 6 hours LEC ; 36 hours LAB
Geographic Information Systems (GIS) are increasingly being used by business, industry, and research institutions in place of other analyses of spatial data. This course is designed to allow students to produce projects using desktop GIS. The students will work in groups to plan and produce a project including data selection and input, spatial data analysis, production of output materials, and presentation of results. The types of information analyzed may include political, social, health, environmental, or economic data. The final grade will be partly based on the project produced. This course is the same as ENVT 330.3, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

GEOG 354
Introduction to the Global Positioning System (GPS) 1 Unit
Formerly: GEOG 14
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
The Global Positioning System (GPS) is transforming mapping and navigating in the same way the telephone transformed communications. This course will introduce students to the concepts and hands-on operation of GPS technology, including computer interfaces, GIS software, and real-world applications. Recommended for anyone needing to acquire, process, or display location information.

GEOG 370
Introduction to GIS Programming 2 Units
Formerly: GEOG 27A
Prerequisite: GEOG 335.2. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 30 hours LEC ; 18 hours LAB
This course introduces students to programming skills in Geographic Information Systems. Fundamentals of Object Oriented Programming Languages, programming techniques in ArcView’s Avenue and introduction to GIS application development will be covered. Students will learn how to customize the ArcView interface and create and modify commands. Students will use Avenue to integrate GIS with existing software, automate GIS operations and customize methods of GIS analysis.
Geology

DEGREE  A.S.—Geology

CERTIFICATE  Applications of Desktop GIS (Earth Science emphasis)
(see page 202)

Geology is the study of the origin and evolution of the earth, utilizing the principles of mathematics, chemistry, physics and biology. The concept of geologic time and the principles of uniformitarianism help geologists to understand the processes that shape the earth and its environments. Geologists study rocks, minerals and fossils in an effort to draw conclusions about both the earth's observable surface processes that meet the eye, and the earth's interior.

All CRC Geology courses satisfy lower division General Education requirements for the A.A., A.S., B.A., and B.S. degrees. For transfer students earning a Baccalaureate Degree in Geology, satisfactory completion of the CRC Geology curriculum provides a solid foundation and the standard prerequisites for upper division coursework. Geology majors planning to transfer to four-year institutions should take Geology 300, 301, 310, and 311.

Career Options

Geologist (for private industry or the government); Environmental planner or consultant; Earth Science Educator (middle school through university); Paleontologist; Petrologist; Natural Resource Management; Cartographer/Stratigrapher; Park Naturalist

Some career options require more than two years of college study.

Highlights

Comprehensive lower division course offerings, including a Physical Laboratory, Mineral Laboratory and Field Course

Dynamic geologic environment near the Sierra Nevada, San Andreas Fault, and Sacramento Delta

Internships available with State of California, County of Sacramento, and Federal Land Management Agencies

A Mathematics, Engineering and Science Achievement (MESA) program

Field Study Classes at Cosumnes River College

Nature is often the best classroom! Come learn outside in Cosumnes River College's field study courses. These classes consist of short classroom sessions followed by extended trips to some of the most unique and beautiful environments in California, including Big Sur, Monterey Bay, Mt. Lassen, Point Reyes, Yosemite and more! These short-term classes are offered by several departments, including Biology, Geography, Geology, Photography, and Physical Education. For more information about specific classes, consult the class schedule or visit the Los Rios Field Study Consortium website at: www.losrios.edu/fieldstudy.

Note to Transfer Students:

If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.
This degree is designed to meet common lower division requirements for a major in geology.

**REQUIRED PROGRAM**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 400 (1A)</td>
<td>General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 401 (1B)</td>
<td>General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>GEOL 300 (1)</td>
<td>Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 301 (2)</td>
<td>Physical Geology Laboratory</td>
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</tr>
<tr>
<td>GEOL 310 (3)</td>
<td>Historical Geology</td>
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<tr>
<td>GEOL 311 (4)</td>
<td>Historical Geology Laboratory</td>
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<tr>
<td>MATH 400 (9A)</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 401 (9B)</td>
<td>Calculus II</td>
<td>5</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED**: 28

Associate of Science Degree (A.S.) may be obtained by completion of the Required Program, plus General Education requirements, plus sufficient electives to meet a 60-unit total.

**General Education Graduation Requirements** - See page 18.

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### Geology (GEOL)

**GEOL 300**
**Physical Geology** 3 Units
Formerly: GEOL 1
Prerequisite: None
Advisory: Concurrent enrollment in GEOL 301.
Course Transferable to UC/CSU (Together with GEOL 301, CAN GEOL 2)
Hours: 54 hours LEC

Physical geology is an introduction to the composition and dynamics of the earth from the atomic scale of minerals to the global scale of plate tectonics. Topics include the composition of minerals and rock, volcanism, earth structures, earthquakes, erosion and surface processes, geologic time, geologic hazards, and plate tectonics. In this course, attention will focus on the rocks, landscapes, and scenic areas of the American West. Emphasis is placed on how humans affect the environment. Successful completion of physical geology prepares the student to recognize, understand, and appreciate processes which continually change our earth.

**GEOL 301**
**Physical Geology Laboratory** 1 Unit
Formerly: GEOL 2
Prerequisite: None
Corequisite: GEOL 300 (may be taken previously). Grade of “C” or better required to meet corequisite.
Course Transferable to UC/CSU (Together with GEOL 300, CAN GEOL 2)
Hours: 54 hours LAB
This course provides “hands-on” experience with the tools and skills discussed in Physical Geology (GEOL 300). Lab topics include mineral and rock identification, map and air photograph interpretation and landform identification, and introduction to the study of geologic maps and cross-sections.

**GEOL 305**
**Earth Science** 3 Units
Formerly: GEOL 8
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This course is an introductory course covering major topics in geology, oceanography, meterology, astronomy, scientific method, and philosophy of science. This course is designed for non-science majors.

**GEOL 306**
**Earth Science Laboratory** 1 Unit
Formerly: GEOL 8L
Prerequisite: None
Corequisite: GEOL 305. Grade of “C” or better required to meet corequisite.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LAB
This course emphasizes scientific methods and systematic laboratory procedures. Topics include weather analysis, rock and mineral identification, study of geologic concepts by means of topographic maps, and exercises in astronomy and oceanography. One field trip is required.

**GEOL 310**
**Historical Geology** 3 Units
Formerly: GEOL 3
Prerequisite: None
Advisory: An introductory geology or earth science course.
Course Transferable to UC/CSU (together with GEOL 311, CAN GEOL 4)
Hours: 54 hours LEC
This course covers the origin and geologic history of the Earth and the evolution of its plant and animal inhabitants. Plate tectonic theory is used to explain changes in composition and structure of rocks of the Earth’s crust from the formation of the Earth to the present. Emphasis is placed on the formation of sedimentary rocks for the purpose of understanding how they and the fossils contained within them record changes in earth environment and processes. Evolution and extinction are studied to understand how they reflect environmental changes in the earth’s ocean, atmosphere, and surface.

**GEOL 311**
**Historical Geology Laboratory** 1 Unit
Formerly: GEOL 4
Prerequisite: None
Corequisite: GEOL 310 (may be taken previously). Grade of “C” or better required to meet corequisite.
Advisory: GEOL 300.
Course Transferable to UC/CSU (Together with GEOL 310, CAN GEOL 4)
Hours: 54 hours LAB
Laboratory studies will accompany and complement GEOL 310, Historical Geology. Use of sedimentary rocks, fossils, geologic maps, and cross sections will aid in interpreting ancient environments, tectonic settings, and geologic history. Other concepts addressed include age relations and correlation of rock and time units, and introduction to fossil identification and biostratigraphy. At least one field trip or an appropriate alternative activity will be required as an introduction to sedimentary environments and field methods in geology.

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Geology 207
GEOL 330
Introduction to Oceanography 3 Units
Formerly: GEOL 5
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
The course will provide an introduction to the basic principles and practices of oceanography. Topics will be presented in terms of the applications of physics, geology, chemistry, and biology to a study of the world's oceans. Specific topics will include planetary science and earth origin, the geologic timescale, geography and location systems, matter, marine provinces, sediments, seismology, plate tectonics, seawater composition, geochemical distributions, deep ocean circulations, winds and surface circulation, waves, tides, estuarine environment, biological production, nekton, plankton, and benthic organisms.

GEOL 342
Geology of the National Parks 3 Units
Formerly: GEOL 18
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course introduces students to Earth’s geologic story as revealed by the rocks and landscapes in our State and National parklands. Attention will focus on how natural Earth processes have formed our State and National parklands. This course addresses surface shaping processes such as volcanism, plutonism, deformation, sedimentation, glaciation and fluvial activity as displayed in our parks and monuments.

GEOL 345
Geology of California 3 Units
Formerly: GEOL 12
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course provides a survey of the physical and historical aspects of California’s geology, emphasizing the linkage between humans and geology through socio-economic impacts. This course is recommended for non-majors and majors in geology and is of particular value to science, engineering, environmental studies, education, and economic majors.

GEOL 347
Geologic Mining History of the Mother Lode 3 Units
Formerly: GEOL 9
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This is an introductory course covering the mining and geologic history of California’s Mother Lode region. Emphasis is on understanding the formation of the area’s gold deposits, past and present mining methods, and the legacy left by the early miners.

GEOL 351
Introduction to Mineralogy 3 Units
Formerly: GEOL 6
Prerequisite: None
Advisory: An introductory geology course and an elementary chemistry course.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
The properties, relationships and origins of minerals, crystallography and determinative mineralogy; economic importance of minerals in California and on a world-wide basis.

GEOL 390
Field Studies in Geology .5-4 Units
Formerly: GEOL 24
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
This course covers the study of geologic principles and processes of specific areas (mountains, deserts, great valley, coastal region, etc.). For specific details, see the course description(s) listed in the schedule. Students will be responsible for providing their own lodging (or camping equipment) and meals. This course may be taken up to four times for credit under a new topic or destination.

GEOL 495
Independent Studies in Geology 1-3 Units
Formerly: GEOL 491
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

GEOL 499
Experimental Offerings in Geology .5-4 Units
Formerly: GEOL 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC ; 54 hours LAB
(See catalog page 21)
Health Education

Red Cross Certification:
- **Standard First Aid** (includes First Aid and Adult CPR)
- **Community CPR** (includes Adult, Infant and Child CPR)
- **CPR for the Professional Rescuer**

This CRC program in Health Education is designed to provide students the essential information for the evaluation, protection and maintenance of individual health as well as providing for Red Cross Certification in several emergency response courses.

The Health Education curriculum fulfills a portion of the General Education graduation requirement for Living Skills and is transferrable to all four-year colleges and universities.

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

---

**Health Education (HEED)**

**HEED 300**  
Health Science  
3 Units  
Formerly: HEED 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC  
The aim of this course is to help people achieve a high level of wellness and prevent disease by assisting them to maximize both their personal lifestyles and their environments. This course will help you to identify the various factors influencing your current and future levels of wellness. Information presented will include, but not be exclusive to: mental health, stress management, nutrition, weight control, fitness, sexuality, addictive substances, and disease.

**HEED 312**  
Community CPR - (Cardiopulmonary Resuscitation - Basic Life Support)  
1 Unit  
Formerly: HEED 11  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course includes information essential for first aid knowledge, skill ability, and personal judgment in basic life support and CPR (cardiopulmonary resuscitation) for an adult, child and infant. Instruction includes adult, child and infant CPR, choke rescues and recognizing symptoms of heart attack. Students successfully completing this course and qualifying tests will be eligible to receive an American Red Cross certificate in adult, child and infant CPR. This course may be taken four times for credit.
HEED 313
Standard First Aid  1 Unit
Formerly: HEED 10
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC
This course includes first aid procedures such as how to deal with cuts, bruises, bone/muscle injuries, shock, bleeding, other first aid emergencies, and also adult one-rescuer CPR (cardiopulmonary resuscitation). These instructional methods and techniques meet the requirements from the American Red Cross in Standard First Aid and CPR. This course is recommended for lifeguards, ski patrol, recreation workers, teachers and Physical Education majors.
Students successfully completing this course and qualifying tests are issued American Red Cross certificates in Standard First Aid and Adult CPR. This course may be taken four times for credit.

HEED 314
Community First Aid and Safety  2 Units
Formerly: HEED 12
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 36 hours LEC
This course includes lecture and practice in Community CPR (Cardiopulmonary resuscitation), including adult, infant and child CPR. Also included are choke rescue and how to recognize symptoms of a heart attack. There will also be lecture and practice in First Aid Procedures such as how to deal with cuts, bruises, bone/muscle injuries, shock, bleeding and other first aid emergencies. These instructional methods and techniques meet the requirements from American Red Cross in adult, infant and child CPR and First Aid. Students successfully completing course and qualifying tests are issued American Red Cross certificates in adult, child, and infant CPR and in First Aid. Course may be taken four times for credit.

HEED 320
CPR: BLS for the Professional Rescuer  2 Units
Formerly: HEED 14
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC
This course is designed to meet the special needs of people who are expected to respond in emergency situations. Includes adult, child, and infant CPR as well as performing two-rescuer CPR and using rescue-breathing devices. Teaches the skills a professional rescuer needs to act as a crucial link in the Emergency Medical Services (EMS) system. Satisfactory completion of this course results in American Red Cross certificate in CPR for the Professional Rescuer. The course may be taken four times for credit.

HEED 342
Contemporary Problems of Student Athletes  1 Unit
Formerly: HEED 25
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
This class addresses the concerns and issues of the student athlete. The course covers the following topics: marketing yourself to the 4-year school, developing your sport and academic résumé, developing a recruiting video; NCAA Rules and Regulations; nutrition and weight control; anabolic steroid use, effects of alcohol on athletic performance. Drug testing and effects of other drugs such as marijuana, cocaine and tobacco; academic information and use of CRC support services; prevention and treatment of injuries.

HEED 350
Personal Wellness  3 Units
Formerly: HEED 2
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course takes a personal approach to lifetime healthy habits. The students will relate their own lives to topics that include: fitness, weight management, relationships, nutrition, stress management, sexual health, risky behaviors, and prevention of diseases. Assessment, plans for change and reinforcement will be applied through the use of journals, projects, written assignments and tests. This course is the same as PET 301, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

HEED 360
Weight Management  3 Units
Formerly: HEED 4
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course includes all aspects relating to managing your weight, including causes, health risks, assessment, prevention and treatment strategies. It also includes communication, basic health behavior changes, basic nutrition, program planning and implementation. This course is the same as PET 380, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

HEED 495
Independent Studies in Health Education  1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

HEED 499
Experimental Offering in Health Education  .5-4 Units
Formerly: HEED 49
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Health Information Technology

**DEGREE**  A.S.—Health Information Technology

**CERTIFICATE**  Health Information Coding Specialist

The CRC Health Information Technology program is designed to train health information professionals with the knowledge and skills to process, analyze, disseminate and maintain health care information. A career as a health information professional offers a unique opportunity to combine an interest in health information, business, and computer information science. Employment opportunities are available in long-term care, ambulatory care, and acute care facilities; state and federal health agencies; and private industry.

**Career Options**
- Health Information Analyst;
- Health Information Abstractor;
- Release of Information; Supervisor,
- Health Information; Consultant;
- Data Quality Manager; ICD/CPT Coder;
- Quality Improvement Coordinator;
- Medical Staff Coordinator

**Employment Opportunities Possible in the Following Settings**
- Ambulatory Care
- Long-Term Care/Rehabilitation
- State and Federal Health Agencies
- Professional Review Organizations
- Insurance Companies
- Educational Settings
- Consulting Firms
- Mental Health/Chemical Dependency
- Acute Care

Some career options may require experience in addition to two years of college study.

**Highlights**
- Training in a field rated as the nation’s tenth most employable career
- Program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the Council on Accreditation of the American Health Information Management Association
- Preparation for the national R.H.I.T. (Registered Health Information Technician) examination upon graduation with associated degree
- Non-paid clinical experience in applying classroom-based knowledge at affiliated health-related agencies
- Short-term certificate options for immediate employment opportunities in coding, medical insurance billing, legal and health information clerical support
# A.S. — Health Information Technology

**CODE #1252**

The CRC Health Information Technology program is designed to train health information professionals with the knowledge and skills to process, analyze, disseminate and maintain health care information. The program is accredited by the Commission on Accreditation for Health Information and Information Management Education (CAHIIM) in cooperation with the Council on Accreditation of the American Health Information Management Association.

<table>
<thead>
<tr>
<th>REQUIRED PROGRAM</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1 - Spring</strong></td>
<td></td>
</tr>
<tr>
<td>AH 110 (54) Medical Language for Health Care Providers</td>
<td>3</td>
</tr>
<tr>
<td>AH 124 (62) Pharmacology for the Health Care Professional</td>
<td>2</td>
</tr>
<tr>
<td>BIO102 Introduction to Concepts of Human A &amp; P</td>
<td>4</td>
</tr>
<tr>
<td>COMM 361 (9) The Communication Experience</td>
<td>3</td>
</tr>
<tr>
<td><strong>Semester 2 - Fall</strong></td>
<td></td>
</tr>
<tr>
<td>AH 120 (63) Human Disease</td>
<td>3</td>
</tr>
<tr>
<td>CISC 302 (CIS 1X) Computer Familiarization</td>
<td>2</td>
</tr>
<tr>
<td>HIT 100 (62) Introduction to HIT: Hospital Setting</td>
<td>3</td>
</tr>
<tr>
<td>HIT 120 (64) Basic ICD Coding</td>
<td>3</td>
</tr>
<tr>
<td><strong>Semester 3 - Spring</strong></td>
<td></td>
</tr>
<tr>
<td>CISA 315 (CIS 12AX) Introduction to Electronic Spreadsheets</td>
<td>2</td>
</tr>
<tr>
<td>CISA 320 (CIS 13A) Introduction to Database Management</td>
<td>1</td>
</tr>
<tr>
<td>HIT 122 (68B) Advanced ICD Coding</td>
<td>4</td>
</tr>
<tr>
<td>HIT 130 (65) Health Statistics</td>
<td>2</td>
</tr>
<tr>
<td>HIT 140 (66) Computerized Health Information Systems</td>
<td>2</td>
</tr>
<tr>
<td>HIT 170 (70A) HIT Directed Practice I</td>
<td>3</td>
</tr>
<tr>
<td><strong>Semester 4 - Fall</strong></td>
<td></td>
</tr>
<tr>
<td>HIT 110 (60) Medical Legal Aspects of Health Information</td>
<td>2</td>
</tr>
<tr>
<td>HIT 150 (67) Continuous Quality Improvement</td>
<td>2</td>
</tr>
<tr>
<td>HIT 172 (70C) Directed Practice: HIT Coding Specialist</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL UNITS REQUIRED:</strong></td>
<td><strong>49</strong></td>
</tr>
</tbody>
</table>

**General Education Graduation Requirements.** - See page 18.

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# CERTIFICATE

**Health Information Coding Specialist**

**CODE #1372**

The Health Information Coding Specialist Certificate prepares the student to apply medical coding classifications to healthcare encounters using industry standards through both theory and practical (internship) applications for the purpose of meeting health care industry needs, preparing students for appropriate certification exams, and providing career ladder opportunities for healthcare workers.

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<td><strong>TOTAL UNITS REQUIRED:</strong></td>
<td><strong>35</strong></td>
</tr>
</tbody>
</table>

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**Health Information Technology (HIT)**

**HIT 100**

**Introduction to Health Information Technology:**

**Hospital Settings**

Formerly: HIT 62

**Prerequisite:** None

**Hours:** 45 hours LEC; 27 hours LAB

This course is an introduction to health records systems in the acute care setting focusing on procedures for completion, maintenance, and preservation of health information. The relationship between health information management and the health care delivery system will also be discussed. Students will become familiar with the concept of accreditation, certification, and licensing of health care facilities with emphasis on the accreditation survey process. Automated medical record functions will be introduced including optical disk storage systems, electronic medical records, computerized master patient index, and incomplete record and chart tracking systems.
HIT 102
Introduction to Health Information Technology: Alternative Care Settings 2 Units
Formerly: HIT 52
Prerequisite: None
Hours: 36 hours LEC
This course in alternate health information systems and settings exposes the health information technology student to nontraditional roles and settings in the field of health information. Emphasis will be placed on long-term care, mental health, cancer registry, and ambulatory care settings. Current trends, accreditation and licensing standards and employment opportunities will be discussed.

HIT 110
Medical Legal Aspects of Health Information 2 Units
Formerly: HIT 60
Prerequisite: HIT 100. Grade of “C” or better required to meet prerequisite.
Hours: 36 hours LEC
This course explores the legal basis for the control, use and release of health information. This concept of consent for treatment and other procedures, as well as medical-moral issues (abortion, euthanasia, sterilization, artificial insemination and surrogacy) will be discussed. Federal and state laws and regulations governing the handling of special health information (psychiatric, substance abuse and HIV/AIDS) will be reviewed. Emphasis will be placed on procedures used in responding to requests for health information. The concept of risk management will also be discussed.

HIT 120
Basic ICD-CM Coding 2 Units
Formerly: AH 122
Prerequisite: None
Corequisite: AH 120 and 124. Grade of “C” or better required to meet corequisite.
Hours: 27 hours LEC ; 27 hours LAB
This introductory course covers the basic principles of coding diseases and procedures using the INTERNATIONAL CLASSIFICATION OF DISEASES, Current Edition, Clinical Modification and the coding handbook for entry-level coders. Only the current ICD edition will be utilized in this course. The impact of coding for reimbursement will be discussed.

HIT 122
Advanced ICD Coding 4 Units
Prerequisite: HIT 120. Grade of “C” or better required to meet prerequisite.
Hours: 54 hours LEC ; 54 hours LAB
This course will address more complex issues related to ICD-9-CM coding. Class lectures and labs will focus on using actual health records, and learning and applying higher level coding skills. The Prospective Payment System and Diagnosis Related Groups (DRGs) will be introduced as well as coding for prospective payment. Computer encoders and groupers will be emphasized.

HIT 123
Formerly: HIT 61
Prerequisite: AH 120. Grade of “C” or better required to meet prerequisite.
Hours: 27 hours LEC ; 27 hours LAB
The principles and mechanics of coding procedures according to current procedural terminology and its relationship to the Health Care Financing Administration Common Procedure Coding System are taught in this course.

HIT 130
Health Statistics 2 Units
Formerly: HIT 65
Prerequisite: HIT 100. Grade of “C” or better required to meet prerequisite.
Hours: 27 hours LEC ; 27 hours LAB
This course will introduce the principles of health care statistics including the process of abstracting data from medical records, the preparation of administrative and medical reports, the use of statistics in medical research, the applications of automated systems, the interpretation of reports and the registration of vital statistics. Automated abstracting and vital statistics systems, as well as the use of spreadsheet packages for data display will be introduced.

HIT 140
Computerized Health Information Systems 2 Units
Formerly: HIT 66
Prerequisite: CISC 302. Grade of “C” or better required to meet prerequisite.
Hours: 27 hours LEC ; 27 hours LAB
This course will provide practical experience in the use of software programs commonly used in health information including master patient index, chart tracking, abstracting, encoders and groupers, release of information, birth registration, and incomplete health record management systems. Emphasis will also be placed on the use of spreadsheet and database programs in the manipulation and use of health information.

HIT 150
Continuous Quality Improvement 2 Units
Formerly: HIT 67
Prerequisite: HIT 130 with a grade of “C” or better.
Hours: 36 hours LEC
This course will provide an overview of Continuous Quality Improvement inherent in the health care industry. Students will explore the history and development of Continuous Quality Improvement (CQI) efforts in health care. Students will also discuss quality and process improvement techniques applicable to health care. The roles and responsibilities of individuals involved in medical staff peer review, utilization review and risk management will be presented to students. The concept of an organized medical staff will be discussed, as well as the role of the medical staff office. The variety of computer applications available for CQI and Medical Staff Organization (MSO) functions will also be presented to students.
HIT 160
Supervision for the Allied Health Professional 2 Units
Formerly: HIT 69
Prerequisite: None
Corequisite: HIT 170. Grade of “C” or better required to meet corequisite.
Hours: 36 hours LEC
This core course is designed to prepare allied health professionals for supervisory positions. Basic management principles as well as inservice education and dealing with difficult behavior in the workplace will be included. Emphasis will be placed on developing organizational charts, policies and procedures, job descriptions, and inservice education materials for the healthcare environment. In addition, students will be exposed to numerous healthcare-related case studies which deal with communication, conflict resolution, motivation, and interviewing.

HIT 170
Health Information Technology
Directed Practice I 3 Units
Formerly: HIT 70A
Prerequisite: HIT 100, 130, and 160. Grade of “C” or better required to meet prerequisite.
Hours: 6 hours LEC ; 144 hours LAB
Students will experience supervised clinical practice in a health-related institution. They will gain practical experience in data content and structure; collection, storage and retrieval of health information; analysis, interpretation, and presentation of health data; information technology and systems; and various registries and ancillary departments. Students shall have the status of learner and shall not be considered agency employees, nor shall they replace agency staff. Directed Practice is conducted as a non-paid laboratory experience. Students are required to attend the facility eight hours per week during daytime hours.

HIT 171
Health Information Technology
Directed Practice II 3 Units
Formerly: HIT 70B
Prerequisite: HIT 170. Grade of “C” or better required to meet prerequisite.
Hours: 6 hours LEC ; 144 hours LAB
Students will experience supervised clinical practice in a healthcare-related agency. Students will gain hands-on experience in data integrity; management; supervision; legal and regulatory issues; release of information; and coding/classification systems. Students will have the status of learner and shall not be considered agency employees, nor shall they replace agency staff. Directed Practice is conducted as a non-paid laboratory experience and the student is required to attend the facility eight hours per week during daytime hours.

HIT 172
Directed Practice:
Health Information Coding Specialist 1 Unit
Formerly: HIT 70C
Prerequisite: HIT 122. Grade of “C” or better required to meet prerequisite.
Hours: 54 hours LAB
This course is a supervised clinical experience in performing coding and abstracting. Students must be available during regular business hours. Students shall have the status of learner and shall not be considered agency employees, nor shall they replace staff. Directed Practice is conducted as a non-paid laboratory experience.

HIT 295
Independent Studies in Health Information Technology 1-3 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

HIT 298
Work Experience in Health Information Technology 1-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

HIT 299
Experimental Offering in Health Information Technology .5-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
History

This CRC program offers a study of history contributes to cultural literacy and develops critical thinking and other useful skills while helping students understand today and plan for tomorrow.

Career Options
- Administrator;
- Archivist;
- Business Consultant;
- Foreign Service;
- Government Service;
- Historian;
- Journalist;
- Librarian;
- Museum Curator;
- Pre-Law/Lawyer;
- Researcher/Research Analyst;
- State Park Historian;
- Teacher;
- Writer

Some career options may require more than two years of college study.

Highlights
- Overview of Western Civilization and American History;
- African-American History;
- Women in American History;
- Study Abroad in such locations as London, Paris, Florence and Salamanca;
- Faculty includes widely traveled scholars, authors and active historians

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

History (HIST)

HIST 301
History of Western Civilization 3 Units
Formerly: HIST 4
Prerequisite: None
Advisory: ENGWR 101 or eligibility for ENGWR 300.
Course Transferable to UC/CSU
(CAN HIST 2) (with HIST 302, CAN HIST SEQ A)
Hours: 54 hours LEC
This course investigates the manner in which the institutions that comprise our “Western Civilization” developed, from pre-historic times to 1660. It constitutes a survey of the various “strands” that make up that civilization: political, economic, social and cultural.

HIST 302
History of Western Civilization 3 Units
Formerly: HIST 5
Prerequisite: None
Advisory: ENGWR 101 or eligibility for ENGWR 300.
Course Transferable to UC/CSU
(CAN HIST 4) (with HIST 301, CAN HIST SEQ A)
Hours: 54 hours LEC
This course reviews the course of Western Civilization from 1660 to the present, concentrating on the history of Western Europe. It provides a general account of those forces and events that have shaped developments in the Twentieth Century.
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Formerly</th>
<th>Prerequisite</th>
<th>Advisory</th>
<th>Course Transferable</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 307</td>
<td>History of World Civilizations to 1500</td>
<td>3</td>
<td>HIST 11</td>
<td>None</td>
<td>ENGWR 101 or eligibility for ENGWR 300</td>
<td>UC/CSU</td>
<td>54</td>
<td>This course is a survey of the development of world civilizations from antiquity to 1500, with particular emphasis on the dynamic interaction and comparison of peoples and cultures. The focus is on the role played by social, political, economic, cultural and religious forces in shaping the major world civilizations and the legacy of these civilizations for subsequent civilizations and our world today.</td>
</tr>
<tr>
<td>HIST 308</td>
<td>History of World Civilizations, 1500 to Present</td>
<td>3</td>
<td>HIST 12</td>
<td>None</td>
<td>ENGWR 101 or eligibility for ENGWR 300</td>
<td>UC/CSU</td>
<td>54</td>
<td>This course is a survey of the development of the major civilizations of the world from the 16th century to the present, with particular emphasis on the dynamic interaction of peoples and cultures. The focus is on the role played by social, political, economic, cultural and religious forces in shaping the major world civilizations and the legacy of these civilizations and our world today.</td>
</tr>
<tr>
<td>HIST 312</td>
<td>History of the United States (to 1865)</td>
<td>3</td>
<td>HIST 17</td>
<td>None</td>
<td>ENGWR 101 or eligibility for ENGWR 300</td>
<td>UC/CSU</td>
<td>54</td>
<td>History of the United States (to 1865) portrays the growth of America, its institutions and ideals, from their beginning through the Civil War period, examining the decisions and developments that shaped our national heritage. The U.S. Constitution and the establishment of American government institutions are also covered.</td>
</tr>
<tr>
<td>HIST 313</td>
<td>History of the United States (1865-1945)</td>
<td>3</td>
<td>HIST 18</td>
<td>None</td>
<td>ENGWR 101 or eligibility for ENGWR 300</td>
<td>UC/CSU</td>
<td>54</td>
<td>History of the United States portrays America’s development from the period of Reconstruction following the Civil War in 1865 through the end of the Second World War in 1945, examining the significant ideals, decisions, forces, institutions, individuals, events, and processes that affected continuity and change during this time. Includes coverage of state and local government.</td>
</tr>
<tr>
<td>HIST 314</td>
<td>Recent United States History</td>
<td>3</td>
<td>HIST 21</td>
<td>None</td>
<td>ENGWR 101 or eligibility for ENGWR 300</td>
<td>UC/CSU</td>
<td>54</td>
<td>Recent U.S. History reviews those events that constitute our country’s history from 1945 to the present, ensuing against the backdrop of a “world setting.” While the emphasis tends to be on political developments, the course also covers broad economic, social and cultural patterns. It includes coverage of California state and local government.</td>
</tr>
<tr>
<td>HIST 320</td>
<td>History of the United States: African-American Emphasis</td>
<td>3</td>
<td>HIST 14</td>
<td>None</td>
<td>ENGWR 101 or eligibility for ENGWR 300</td>
<td>UC/CSU</td>
<td>54</td>
<td>U.S. History from the founding of Jamestown in 1607, through the Civil War. The course begins with a brief overview of the Black American’s African heritage. It continues with the role played by African-American women as well as men in the growth and development of the nation. The U.S. Constitution and the establishment of American government institutions are also covered.</td>
</tr>
<tr>
<td>HIST 321</td>
<td>History of the United States: African-American Emphasis</td>
<td>3</td>
<td>HIST 15</td>
<td>None</td>
<td>ENGWR 101 or eligibility for ENGWR 300</td>
<td>UC/CSU</td>
<td>54</td>
<td>U.S. History from 1865 to the present, including coverage of the state and local government, with an increased emphasis on the role of black women as well as men, spelling out their specific contributions in the growth and development of the nation. It includes coverage of California state and local government.</td>
</tr>
<tr>
<td>HIST 331</td>
<td>Women in American History</td>
<td>3</td>
<td>HIST 35</td>
<td>None</td>
<td>ENGWR 101 or eligibility for ENGWR 300</td>
<td>UC/CSU</td>
<td>54</td>
<td>Survey history of the United States from 1607 to the present, emphasizing the economic and social conditions that gave women more actual respect and some public power. Course includes the roles of women in Native American tribes, the English heritage of the colonists, the contributions of women in creating new homes and farms, and the role of women in times of war. Emphasis on the role of women in the three major social issues of the 19th century: labor, abolition, and women’s rights. Includes present-day issues and the legacy of how women in the past dealt with similar issues.</td>
</tr>
</tbody>
</table>
HIST 344
Survey of California History: A Multicultural Perspective 3 Units
Formerly: HIST 28
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is a general historical survey of the social, political and economic developments of California from its origin to the present time. Emphasis is placed on the state's multicultural heritage and on significant local history.

HIST 360
History of African Civilizations 3 Units
Formerly: HIST 7
Prerequisite: None
Advisory: ENWR 101 or eligibility for ENWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introductory survey of the history of Africa from earliest times to the present. Major topics will include origins of humanity and society, civilizations of the Nile Valley, the peopling of Sub-Saharan Africa, African societies to 1500 A.D., precolonial Saharan and Sub-Saharan Africa, colonial Africa and the emergence of modern state in Africa.

HIST 370
History of the Americas through the 19th Century Wars of Independence 3 Units
Formerly: HIST 8
Prerequisite: None
Advisory: ENWR 101 or eligibility for ENWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is a general historical survey of North, Central, and South America from the earliest civilizations through the 19th century wars of independence. The focus is on the roles played by political, economic, cultural, and religious forces in shaping the western hemisphere.

HIST 371
History of the Americas from the 19th Century Wars of Independence to the Present 3 Units
Formerly: HIST 9
Prerequisite: None
Advisory: ENWR 101 or eligibility for ENWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is a general historical survey of North, Central, and South America from the wars of independence to the present day. Special emphasis is placed on a review of the North American colonies, the road to revolution, independence from England, and the constitutional period as well as subsequent Latin American - United States relations. This course satisfies the state requirements in United States history.

HIST 373
History of Mexico 3 Units
Formerly: HIST 10
Prerequisite: None
Advisory: ENWR 101 or eligibility for ENWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is a general historical survey of Mexico from the earliest civilizations to the contemporary period. Emphasis is placed on the Spanish conquest, the War of Independence, the roles played by various leaders of Mexico, the Revolution of 1910, Reconstruction, and Mexico today.

HIST 402
Critical Reasoning and Composition 3 Units
Formerly: HIST 2
Prerequisite: ENWR 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course will study critical thinking techniques found in historical methodology and apply those techniques to written historical arguments and interpretations. The course will employ as a principal subject for critical analysis the experiences of Native Americans, African-Americans, Hispanics, and Asian-Americans in the United States, although other topics will be discussed from time to time. Emphasis will be placed upon extensive and progressively more difficult written assignments.

HIST 495
Independent Studies in History 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

HIST 499
Experimental Offering in History .5-4 Units
Formerly: HIST 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC; UC - See Counselor
(See catalog page 21)
Honors

HONORS SCHOLAR PROGRAM

A course of study for academically accomplished students

Prerequisite: Admission to Honors Program
Acceptable for credit: CSU, UC — See Counselor

For more information, see page 21 of the college catalog.

Designed specifically for academically accomplished students, or those with the potential for high academic achievement. CRC’s Honors program provides opportunities for intellectual growth beyond those generally found in most undergraduate programs.

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

Honors courses are special intensive courses in which students will confront and attempt to resolve difficult questions that arise in a careful study of the issues found in the discipline(s).

Honors students are expected to research aspects of these questions and present their findings to the class in written form for seminar discussion. Field trips to attend events or to do research may be an integral part of the Honors course experience. Students who successfully complete units from Honors courses may be able to count these units as part of the Transfer Breadth Requirements (see page 23).

The Honors Program now offers three-unit seminars. These courses are modeled on the freshman and sophomore seminars at the University of California. They provide the same opportunities for CRC students: experience in a small, rigorous seminar that challenges them to do bold, original, and creative thinking, confront recent theory and primary research, and express themselves in classroom exchanges and critical papers. The seminars are often interdisciplinary in nature and present advanced topics outside or beyond the general curriculum. These courses are also created to satisfy specific general education requirements at CRC, California State University campuses, and the University of California.

The Honors Program encourages applications from all interested students and enrolls individuals into the program based on evidence of their potential to benefit from the Honors Seminars. We ask that students provide us with information that demonstrates their interest, motivation, preparation and potential for this form of study. Students interested in applying for membership in the Honors Program will find applications available from area offices, program faculty, or online at http://crc.losrios.edu/%7Ehonors/honorsindex.html.

HONORS SCHOLAR PROGRAM
(see next page)
HONORS SCHOLAR PROGRAM

Students who complete 15 units or more in honors-designated courses will earn special recognition as an Honors Scholar, a distinction that may entitle the student to guaranteed transfer and scholarship opportunities at select transfer colleges and universities. Interested students should contact their counselor, the Honors Director, or the Vice President of Instruction and Student Learning. Courses that qualify as part of the program are listed below.

REQUIRED PROGRAM ........................................... Units
Select 15 units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HONOR 320</td>
<td>Honors Seminar: Creative Writing &amp; Culture</td>
<td>3</td>
</tr>
<tr>
<td>BUS 480</td>
<td>Honors Seminars in Business</td>
<td>1</td>
</tr>
<tr>
<td>HONOR 340</td>
<td>Honors Seminar: Political Campaign</td>
<td>3</td>
</tr>
<tr>
<td>COMM 480</td>
<td>Honors Seminar: Communication</td>
<td>3</td>
</tr>
<tr>
<td>HONOR 350</td>
<td>Honors Seminar: Intro to Critical Theory</td>
<td>3</td>
</tr>
<tr>
<td>FMS 488</td>
<td>Honors Seminar: Films of Alfred Hitchcock</td>
<td>3</td>
</tr>
<tr>
<td>HONOR 360</td>
<td>Honors Seminars in Humanities:</td>
<td>3</td>
</tr>
<tr>
<td>HUM 486</td>
<td>• Modern Drama Live</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>• Shakespeare Live</td>
<td>1</td>
</tr>
<tr>
<td>HONOR 370</td>
<td>Honors Seminars in Social Science</td>
<td>3</td>
</tr>
<tr>
<td>SO CSC 480</td>
<td>Honors Seminar: Nature and Culture</td>
<td>3</td>
</tr>
<tr>
<td>HONOR 382</td>
<td>Honors Seminar: Biology and Culture</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 481/HUM 484</td>
<td>Honors Seminar: History of Civilization</td>
<td>3</td>
</tr>
<tr>
<td>HONOR 390</td>
<td>Honors Seminars in Mathematics:</td>
<td>3</td>
</tr>
<tr>
<td>MATH 480</td>
<td>• Number Theory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 420</td>
<td>Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 421</td>
<td>Organic Chemistry</td>
<td>5</td>
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<tr>
<td>MATH 402</td>
<td>Calculus III</td>
<td>5</td>
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<tr>
<td>MATH 420</td>
<td>Differential Equations</td>
<td>4</td>
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<tr>
<td>MATH 410</td>
<td>Introduction to Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 421</td>
<td>Electricity and Magnetism</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 431</td>
<td>Heat, Waves, Light and Modern Physics</td>
<td>4</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED ........................................ 15

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Honors (HONOR)

HONOR 320
Honors Seminars in Business 1 Unit

Formerly: HONOR 47D

Prerequisite: None

Course Transferable to CSU

Hours: 18 hours LEC

Honors Seminars in Business are special one-unit intensive courses for academically accomplished students or those with the potential for high academic achievement. These seminars will study topics in the movements, trends, and philosophies found in the business. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as BUS 480. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

HONOR 340

Honors Seminar:

Political Campaign Communication 3 Units

Formerly: HONOR 20H

Prerequisite: None

Course Transferable to UC/CSU

Hours: 54 hours LEC

What do pundits, politicians and the public have in common? The ability to impact political campaign communication. This seminar-style course will introduce students to the effects of political campaign communication on public opinion and election results. Using timely data, students will evaluate news media, debate presidential debates, and analyze campaign messages using qualitative and quantitative political communication, rhetorical criticism, and techniques for writing for academic audiences. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as COMM 480, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

HONOR 350

Honors Seminar:

Introduction to Critical Theory 3 Units

Formerly: HONOR 22H

Prerequisite: None

Course Transferable to UC/CSU

Hours: 54 hours LEC

This course investigates questions of interpretation and representation in film, literature, media, and culture. Students examine contemporary critical and cultural theory, then apply these theories in analyzing a variety of texts from the Shakespearean play to the science-fiction horror film. Theories introduced include, but are not limited to, semiotics, psychoanalysis, rhetorical criticism, gender theory, and postmodernism. Students intending to transfer into arts, film, literature, humanities, and cultural studies programs will find this course particularly useful in understanding the critical language of the university. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as FMS 488, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

HONOR 352

Honors Seminar:

The Films of Alfred Hitchcock 3 Units

Prerequisite: None

Course Transferable to UC/CSU

Hours: 54 hours LEC

This seminar studies the work of Alfred Hitchcock from the perspective of the key concepts in film theory. Students will investigate the films and criticism of one of the greatest and strangest directors, the self-styled master of suspense. This seminar takes a close reading of Hitchcock's most important films and the most significant writing on the director's work. This seminar-style course will introduce students to the effects of political campaign communication on public opinion and election results. Using timely data, students will evaluate news media, debate presidential debates, and analyze campaign messages using qualitative and quantitative political communication, rhetorical criticism, and techniques for writing for academic audiences. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as COMM 480, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

HONOR 370

Honors Seminar:

Nature and Culture 3 Units

Formerly: HONOR 22H

Prerequisite: None

Course Transferable to UC/CSU

Hours: 54 hours LEC

This course investigates questions of interpretation and representation in film, literature, media, and culture. Students examine contemporary critical and cultural theory, then apply these theories in analyzing a variety of texts from the Shakespearean play to the science-fiction horror film. Theories introduced include, but are not limited to, semiotics, psychoanalysis, rhetorical criticism, gender theory, and postmodernism. Students intending to transfer into arts, film, literature, humanities, and cultural studies programs will find this course particularly useful in understanding the critical language of the university. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as FMS 488, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.
HONOR 360
Honors Seminars in Humanities 1 Unit
Formerly: HONOR 47A
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC
Honors Seminars in Humanities are special one-unit intensive courses for academically accomplished students or those with the potential for high academic achievement. In these seminars, students will study topics in the movements, trends and philosophies found in the humanities. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as HUM 486. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

HONOR 370
Honors Seminars in Social Science 1 Unit
Formerly: HONOR 47B
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
Honors Seminars in Social Science are special one-unit intensive courses for academically accomplished students or those with the potential for high academic achievement. In these seminars, students will study topics in the movements, trends and philosophies found in the Social Sciences. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as SOCS 480. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

HONOR 382
Honors Seminar: Nature and Culture 3 Units
Formerly: HONOR 21H
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This seminar examines multicultural interpretations and use of the environment from the Native American era to modern day using various geographic regions as case studies. Interdisciplinary in approach, this course draws upon the natural sciences, humanities, and social sciences to explain how the physical environment has been interpreted, utilized, and impacted differently by various cultures through time. Two field trips are required as part of this seminar. This course is intended for academically-accomplished students, regardless of major. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as GEOG 481 and HUM 484, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

HONOR 383
Honors Seminar in Biology 1 Unit
Prerequisite: None
Course Transferable to CSU
Hours: 9 hours LEC; 27 hours LAB
Honors Seminars in Biology are special one-unit intensive courses for academically accomplished students or those with the potential for high academic achievement. In these seminars, students will study advanced topics from the area of biology. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as BIOL 481. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

HONOR 384
Honors Seminar in Geography 1 Unit
Prerequisite: None
Course Transferable to CSU
Hours: 9 hours LEC; 27 hours LAB
Honors Seminars in Geography are special one-unit intensive courses for academically accomplished students or those with the potential for high academic achievement. In these seminars, students will study advanced topics from the area of Geography. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as GEOG 482. This course, under either name, may be taken up to four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

HONOR 390
Honors Seminar in Mathematics 1 Unit
Formerly: HONOR 47E
Prerequisite: MATH 370 with a grade of “C” or better.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC
Honors Seminars in Mathematics are special one-unit intensive courses for academically accomplished students or those with the potential for high academic achievement. In these seminars, students will study advanced topics from the area of mathematics and will be expected to do independent problem solving and present their solutions to the class. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as MATH 480. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

HONOR 499
Experimental Offering in Honors .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)
Horticulture

DEGREES
A.S.—Horticulture, Landscape Design
A.S.—Horticulture, Landscape Industry
A.S.—Horticulture, Nursery Industry

CERTIFICATES
Landscape Design
Landscape Industry
Nursery Operations

These CRC programs offer students the opportunity to blend the disciplines of horticulture, construction, drafting and business into a unique professional opportunity. A wide variety of employment opportunities are available in the Sacramento area for students completing the Associate Degree or one of the certificate programs. The continued growth of the area and the need for specialized training are creating a demand for qualified individuals.

A student majoring in a degree option program should, upon completion, be able to meet the standards imposed by local industries for proper placement within the selected job area of the student’s choice. It should, however, be noted that each employment situation may require that additional standards be met.

Career Options
- Nursery Management and Operations;
- Park Maintenance; Landscape Design,
- Contracting & Maintenance; Fertilizer & Insecticide Application; Research;
- Retail/Wholesale; Estimator; Consultant;
- Government Agency employee

Highlights
- Hands-on experience in greenhouse operations
- Field trips for appreciation and evaluative study
- Practical design opportunities

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.
DEGREE
A.S.—Horticulture, Landscape Industry

CODE #1146

A diversity of professional career opportunities are available to those who complete the associates degree in Landscape Industry. The degree in Landscape Industry program is designed to provide students with a comprehensive resume of skills and knowledge for employment in the horticulture industry. Students who complete the associates degree in Landscape Industry find employment in a wide range of areas including landscape contracting, construction, installation, and maintenance, turf management, parks and recreation, golf course maintenance, golf course management and supervision, landscape irrigation, landscape design and consulting, nurseries and garden centers, pest management, horticulture supply, and power equipment servicing.

REQUIRED PROGRAM ............................................................... Units
HORT 100 (55) Plant Diseases and Pests ...................................... 3
HORT 122 (57B) Landscape Practices:
  Pesticide Qualified Applicator's Certificate ............................ 2
HORT 300 (1) Introduction to Horticulture .................................. 3
HORT 302 (2) Soils and Plant Nutrition (3) or
  PLTS 310 (2) Soils and Plant Nutrition (3) ................................. 3
HORT 305 (51) Plant Materials I ................................................ 3
HORT 306 (52) Plant Materials II ............................................... 3
HORT 320 (75) Landscape Construction ....................................... 3
HORT 322 Landscape Graphics ................................................... 3
HORT 324 (81) Landscape Maintenance ....................................... 3
HORT 325 Landscape Irrigation .................................................. 3
HORT 326 (86) Landscape Design ............................................... 3
HORT 498 (48) Work Experience in Horticulture .......................... 4
AMT 306 (67) Small Engine Repair ............................................. 3
TOTAL UNITS REQUIRED .......................................................... 39

Suggested Electives:
AGB 300 (1) Introduction to Agriculture Business (3)
AGB 310 (2) Agriculture Computer Applications (3)
AGB 320 (3) Agriculture Accounting (3)
AGB 330 (5) Agriculture Sales and Communication (3)
AGB 331 (6) Agriculture Marketing (3)
CMT 300 (50) Intro to Construction Plans and Specifications (3)

General Education Graduation Requirements - See page 18.

CERTIFICATE
Landscape Industry

CODE #1146

REQUIRED PROGRAM ............................................................... Units
HORT 100 (55) Plant Diseases and Pests ...................................... 3
HORT 300 (1) Introduction to Horticulture .................................. 3
HORT 302 (2) Soils and Plant Nutrition (3) or
  PLTS 310 (2) Soils and Plant Nutrition (3) ................................. 3
HORT 305 (51) Plant Materials I ................................................ 3
HORT 306 (52) Plant Materials II ............................................... 3
HORT 324 (81) Landscape Maintenance ....................................... 3
HORT 498 (48) Work Experience in Horticulture .......................... 4
AMT 306 (67) Small Engine Repair ............................................. 3
TOTAL UNITS REQUIRED .......................................................... 25

Suggested Electives:
AGB 300 (1) Introduction to Agriculture Business (3)
AGB 310 (2) Agriculture Computer Applications (3)
AGB 320 (3) Agriculture Accounting (3)

General Education Graduation Requirements - See page 18.
CERTIFICATE
Landscape Design
CODE #1113
The certificate in Landscape Design provides a strong horticulture foundation, along with the specialized skills and technical knowledge to prepare students for entry-level employment opportunities in the landscape industry. Students who complete the Landscape Design certificate find employment in landscape design, planning, and construction, turf management, parks and recreation, nurseries and garden centers, or other areas in horticulture.

REQUIRED PROGRAM ................................................................................................................. Units
HORT 300 (1) Introduction to Horticulture ............................................................... 3
HORT 302 (2) Soils and Plant Nutrition (3) or PLTS 310 (2) Soils and Plant Nutrition (3) 3
HORT 305 (51) Plant Materials I ............................................................ 3
HORT 306 (52) Plant Materials II .......................................................... 3
HORT 322 Landscape Graphics ........................................................... 3
HORT 325 Landscape Irrigation ............................................................ 3
HORT 326 (86) Landscape Design ......................................................... 3
HORT 498 (48) Work Experience in Horticulture .................................. 4
TOTAL UNITS REQUIRED .......................................................................................... 25

Suggested Electives:
AGB 300 (1) Introduction to Agriculture Business (3)
AGB 310 (2) Agriculture Computer Applications (3)
AGB 320 (3) Agriculture Accounting (3)
CMT 300 (50) Introduction to Construction Plans and Spec. (3)

DEGREE
A.S.—Horticulture, Nursery Industry
CODE #1147
A diversity of professional career opportunities are available to those who wish to work in the nursery industry or related field. Nurseries produce and provide the plant materials used to create outdoor spaces in which people live, work, and play. The Associate Degree in Nursery Industry provides a strong horticulture foundation, along with the specialized skills and technical knowledge to prepare students for employment opportunities in wholesale and retail nurseries, garden centers, plant propagation and production, landscape contracting and construction, grounds maintenance and management, or other areas in horticulture. Students may also choose to transfer to a state college or university level horticulture or nursery program.

REQUIRED PROGRAM ................................................................................................................. Units
HORT 100 (55) Plant Diseases and Pests ...................................................... 3
HORT 120 (57B) Landscape Practices: Pesticide Qualified
HORT 300 (1) Introduction to Horticulture ............................................................... 3
HORT 302 (2) Soils and Plant Nutrition (3) or PLTS 310 (2) Soils and Plant Nutrition (3) 3
HORT 305 (51) Plant Materials I ............................................................ 3
HORT 306 (52) Plant Materials II .......................................................... 3
HORT 310 Nursery Practices .............................................................................. 3
HORT 312 (70) Plant Propagation .................................................................... 3
HORT 322 Landscape Graphics ........................................................... 3
HORT 324 (81) Landscape Maintenance ................................................... 3
HORT 326 (86) Landscape Design ......................................................... 3
HORT 498 (48) Work Experience in Horticulture .................................. 4
TOTAL UNITS REQUIRED .......................................................................................... 36

Suggested Electives:
ADT 310 (66) Intro Computer-Aided Design Drafting (3)
AGB 300 (1) Introduction to Agriculture Business (3)
AGB 310 (2) Agriculture Computer Applications (3)
AGB 320 (3) Agriculture Accounting (3)
AGB 330 (5) Agriculture Sales and Communication (3)
AGB 331 (6) Agriculture Marketing (3)
ART 325 (30A) Intro to Graphic Design (3)
CMT 300 (50) Intro to Construction Plans and Spec. (3)

General Education Graduation Requirements - See page18.

CERTIFICATE
Nursery Operations
CODE #1115
The certificate in Nursery Operations is designed to provide a well-rounded base of skills and knowledge to prepare students for entry-level employment opportunities in the nursery industry. Students who complete the Nursery Operations certificate find employment in wholesale and retail nurseries, garden centers, plant propagation and production, landscape contracting and construction, grounds maintenance and management, or other areas in horticulture.

REQUIRED PROGRAM ................................................................................................................. Units
HORT 100 (55) Plant Diseases and Pests ...................................................... 3
HORT 120 (57B) Landscape Practices: Pesticide Qualified
HORT 300 (1) Introduction to Horticulture ............................................................... 3
HORT 302 (2) Soils and Plant Nutrition (3) or PLTS 310 (2) Soils and Plant Nutrition (3) 3
HORT 305 (51) Plant Materials I ............................................................ 3
HORT 306 (52) Plant Materials II .......................................................... 3
HORT 310 Nursery Practices .............................................................................. 3
HORT 312 (70) Plant Propagation .................................................................... 3
HORT 322 Landscape Graphics ........................................................... 3
HORT 324 (81) Landscape Maintenance ................................................... 3
HORT 326 (86) Landscape Design ......................................................... 3
HORT 498 (48) Work Experience in Horticulture .................................. 4
TOTAL UNITS REQUIRED .......................................................................................... 25

Suggested Electives:
AGB 300 (1) Introduction to Agriculture Business (3)
AGB 310 (2) Agriculture Computer Applications (3)
AGB 320 (3) Agriculture Accounting (3)
HORT 122 (57B) Landscape Practices: Pesticide Qualified
Advisor's Certificate (2)

Horticulture (HORT)

HORT 100
Plant Diseases and Pests 3 Units
Formerly: HORT 55
Prerequisite: None
Advisory: HORT 300.
Hours: 36 hours LEC ; 54 hours LAB
This course provides a study of the insects, diseases, and weeds encountered in the landscape and nursery environment. It will focus on pest identification, principles of pest management, and state and federal laws and regulations with regard to pest control and pesticide use.

HORT 120
Landscape Practices: Equipment & Safety 2 Units
Formerly: HORT 57A
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
This course is a study of the large and small equipment used in nursery and landscape operations, including discussion of mainte-

COSUMNES RIVER COLLEGE  2005 - 2006
Horticulture  223
HORT 122
Landscape Practices: Pesticide Qualified Applicator’s Certificate 2 Units
Formerly: HORT 57B
Prerequisite: None
Hours: 36 hours LEC
Laws, regulations, and safety concerns for pesticide applicators preparing to obtain (QAC) Qualified Applicator’s Certificate or (QAL) Qualified Applicator’s License. Environmental concerns regarding groundwater and other exposures will be discussed.

HORT 299
Experimental Offering in Horticulture .5-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

HORT 300
Introduction to Horticulture 3 Units
Formerly: HORT 1
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course is a general, entry level course into environmental horticulture with an emphasis on basic plant science, plant use and care, and the landscape and nursery industries. Topics include basic botany, cultural practices, propagation, structures and layout, pest management, planting, container gardening, plant identification, turfgrass installation and care, and a survey of career opportunities.

HORT 302
Soils and Plant Nutrition 3 Units
Formerly: HORT 2
Prerequisite: None
Advisory: HORT 300 or PLTS 300.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course provides a basic knowledge of the physical, chemical, and biological properties of soils. The course topics include: fundamental soil properties, soil and plant relationships, principles of soil formation, fertilizers and soil management, salinity, pH, erosion management, and non-agricultural uses. This course is the same as PLTS 310, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

HORT 305
Plant Materials I 3 Units
Formerly: HORT 51
Prerequisite: None
Advisory: HORT 300.
Course Transferable to UC/CSU: UC - See Counselor
Hours: 54 hours LEC ; 18 hours LAB
This course is the identification and study of the growth habits, cultural practices, and ornamental uses of landscape and indoor plants adapted to climates of California. Plants emphasized will come from the current California Association of Nurserymen (CAN) and California Landscape Contractors Association (CLCA) certification exams plant lists. The focus will be on those plants best observed and studied during California’s fall and/or winter seasons.

HORT 306
Plant Materials II 3 Units
Formerly: HORT 52
Prerequisite: None
Advisory: HORT 300.
Course Transferable to UC/CSU: UC - See Counselor
Hours: 54 hours LEC ; 18 hours LAB
This course is the identification and study of the growth habits, cultural practices, and ornamental uses of landscape and indoor plants adapted to climates of California. Plants emphasized will come from the current California Association of Nurserymen (CAN) and California Landscape Contractors Association (CLCA) certification exams plant lists. The focus will be on those plants best observed and studied during California’s spring and/or summer seasons.

HORT 310
Nursery Practices 3 Units
Formerly: PLTS 200
Prerequisite: None
Advisory: HORT 300.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course introduces the practices and management of both wholesale and retail nurseries including marketing, propagation and cultural practices of herbaceous and woody plants, and business management practices required in establishing and operating a nursery.

HORT 312
Plant Propagation 3 Units
Formerly: HORT 70
Prerequisite: None
Advisory: HORT 300 (may be taken concurrently).
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is the study and practice of the sexual and asexual reproduction of landscape plant species. The emphasis will be on the preparation and use of propagating and planting mediums, planting, transplanting, fertilizing, propagation facility pest and disease control, propagation structure utilization and site layout. Additional topics include the maintenance of common tools and equipment, and the laws and regulations pertaining to plant propagation and nursery production.

HORT 320
Landscape Construction 3 Units
Formerly: HORT 75
Prerequisite: None
Advisory: HORT 300.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course covers the fundamentals of landscape construction, including soil preparation, paving and construction materials, hand and power tool use, turf and plant installation, plan reading, estimating, and bid preparation. It will emphasize approved industry construction methods, local codes and state requirements. This course is an initial step in preparation for the California State C-27 Landscape Contractor License exam.
HORT 322
Landscape Graphics 3 Units
Formerly: ARCH 302
Prerequisite: None
Advisory: HORT 300.
Course Transferable to CSU
Hours: 54 hours LEC
This course is the study of technical drafting skills and freehand graphics including line quality, lettering and organization as it relates to landscape design. The use of a variety of graphic skills and media will be developed along with an introduction to basic landscape design theory and practice.

HORT 324
Landscape Maintenance 3 Units
Formerly: HORT 81
Prerequisite: None
Advisory: HORT 300.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course prepares students to enhance the function and aesthetic value of public and private landscapes by applying appropriate maintenance techniques. Topics include planting, pruning, watering, soil fertility, pest management, weed control, power equipment operation and maintenance, and landscape maintenance business practices.

HORT 325
Landscape Irrigation 3 Units
Formerly: PLTS 340
Prerequisite: None
Advisory: HORT 300.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course prepares students to design, install and maintain a water efficient landscape irrigation system. Topics include water supply, basic hydraulics, component identification and terminology, system layout, pipe sizing, water application head types, valves, and controllers.

HORT 326
Landscape Design 3 Units
Formerly: HORT 86
Prerequisite: HORT 322. Grade of “C” or better required to meet prerequisite.
Advisory: HORT 300, 305 and/or 306.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is the study and implementation of the art and science of landscape design. It covers the principles of design, the design process, advanced drafting techniques, and advanced graphics and presentation methods. Course and project emphasis is placed upon utilization of various landscape themes, unique design styles, and the problem solving process regarding residential and small commercial site landscape design.

HORT 495
Independent Studies in Horticulture 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

HORT 498
Work Experience in Horticulture 1-4 Units
Formerly: HORT 98
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

HORT 499
Experimental Offering in Horticulture .5-4 Units
Formerly: HORT 49
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Human/Career Development

Human/Career Development courses are designed to assist students with recognizing their full potential through developing self awareness, educational management and lifelong independent career planning skills. Instruction includes obtaining skills necessary to succeed in college and make positive and productive work/life decisions.

- Courses scheduled in short-term segments
- Career exploration and research to assist with career planning and decision making

**Highlights**

- Understanding of how global changes in the workplace impact career change and lifelong transition
- Obtain knowledge and skills needed to succeed in life-long planning
- Tutor Training
- Awareness of skills and competencies required for effective and competitive workplace performance
- Addresses balanced lifestyle concepts and their relationship to job satisfaction and work/life success
- Support strategies for those with learning disabilities

**Note:**
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

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**Human Career Development (HCD)**

**HCD 81**
Diagnostic Assessment [.5 Units]
Formerly: HCD 252
Prerequisite: None
Hours: 9 hours LEC
Assessment of learning strengths and weaknesses to determine eligibility for Learning Disability Program services, using guidelines mandated by the California Community College system. Graded on a credit/no credit basis.

**HCD 89**
Study Strategies Lab [.5-1 Units]
Formerly: HCD 275
Prerequisite: None
Hours: 54 hours LAB
This course will provide non-traditional instructional support for students with disabilities who are enrolled in other college classes. Graded on a credit/no credit basis. This is an open-entry, open-exit class that can be taken for 0.5-1.0 units. May be taken four times for a maximum of 4 units cumulative.
HCD 112
College Survival 1 Unit
Formerly: HCD 51A
Prerequisite: None
Hours: 18 hours LEC
The purpose of this course is to help the entry level college student develop the confidence, knowledge, and skills necessary to become successful in college. Topics covered in College Survival include campus resources, academic planning, self-esteem and motivation, assertiveness and interpersonal relationships, as well as the principles of time and stress management.

HCD 122
Study Skills 1 Unit
Formerly: HCD 51B
Prerequisite: None
Hours: 18 hours LEC
The purpose of this course is to help the entry level college student develop the study skills necessary to become successful in college. Topics covered in Study Skills include note taking and listening, understanding learning style, SQ3R reading techniques, applied time management, test taking techniques, and basic library skills.

HCD 130
Individualized Career Development .5 Unit
Formerly: HCD 61
Prerequisite: None
Hours: 5.5 hours LEC ; 11 hours LAB
This course provides an opportunity for those who seek individualized career exploration and decision making assistance. Students will meet with a counselor to plan a 16 hour combination of lecture/lab activities that may include the following: 1) assessment of skills, interests and values, 2) utilization of Career Center resources, 3) participation in appropriate workshops, 4) connection to community resource network, 5) follow-up meetings with the counselor to develop a career goal and plan. Students may enter the course at any time during the first 12 weeks of the semester depending upon the availability of an instructor/counselor. This course is graded on a credit/no credit basis. To enroll, an interested student should see a counselor.

HCD 132
Career Exploration 1 Unit
Formerly: HCD 51C
Prerequisite: None
Hours: 18 hours LEC
The purpose of this course is to help the entry level college student gain insight into the career planning process. Topics covered include self-assessment of values, skills, and personality factors relevant to life planning. Students will learn how to balance career and personal life when making career decisions, become skilled in the use of career information resources, understand the nature of the changing labor market, and when appropriate, acquire job hunting skills.

HCD 156
Tutor Training in Learning Disabilities .5 Unit
Formerly: HCD 54
Prerequisite: None
Hours: 9 hours LEC
This course provides additional training for tutors interested in working with learning-disabled students at CRC on an individual and extended basis. Course content deals with awareness of the nature of learning disabilities, learning styles, and specific interventions available to tutors in working with learning-disabled students. This course is graded on a credit/no credit basis.

HCD 299
Experimental Offering in Human/Career Development .5-4 Units
Formerly: HD 99
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

HCD 310
College Success 3 Units
Formerly: HCD 2
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This intensive course is designed to assist students to obtain the skills and knowledge necessary to reach their educational objectives. Topics to be covered include: motivation and discipline, memory development, time management, communication skills, career planning, study skills and techniques, question-asking skills and personal issues that face many college students. It is recommended for new students and others who can benefit. The course may be offered for specific populations.

HCD 320
Skills for Online Student Success 1 Unit
Formerly: HCD 15
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
This course is designed to familiarize students with the skills required to succeed in an online course. Students will explore how to use various Internet tools to effectively learn in an online environment. Topics include online course equipment needs; using a word processor to support class assignments; sending email attachments; effective use of discussion groups, email, and synchronous chat sessions; researching on the Internet; evaluating Internet sources; working collaboratively online. This course is offered as credit/no-credit.

HCD 333
Career Re-Alignment 1 Unit
Formerly: HCD 4A
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
This is a course in advanced career planning for students who are re-careering, re-engineering, or are in career transition. Building on the concepts of career exploration studied in HCD 132 and 310, students will survey and analyze labor market trends and transition situations and establish successful strategies for conducting job searches in a rapidly evolving employment scene. Students will learn the concept of career resiliency.
HCD 334  
**Career Re-Alignment**  
1 Unit  
Formerly: HCD 4B  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course is a continuation of advanced career planning for students who are re-careering, re-engineering, or are in career transition. Students will build on the goal setting of HCD 333 and will learn to apply the career planning process to their own careers and how to cope with workforce transition and change. Students will formulate an “Individual Career Plan.”

HCD 340  
**Job Search Portfolio Development**  
1 Unit  
Formerly: HCD 5  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course is designed to assist students to develop successful job search strategies. Students in this course will develop a job search/career portfolio. This will include formulating job task samples, resume and cover letter construction, letters of recommendation, and employment applications. Exposure to competitive techniques will include individual interviews on video tape.

HCD 342  
**Workplace Transitions Seminar**  
1 Unit  
Formerly: HCD 8  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course is offered to students nearing the completion of their academic programs who are actively engaged in a graduate placement search. This course takes a group-interaction approach and will explore the school-to-career transition and build on individual potential for successful career entrance and change. Job search techniques, portfolio enhancement, and labor market scanning will assist students with the necessary budding tools for the transition from school to work.

HCD 344  
**Managing Your Internship**  
.5 Unit  
Formerly: HCD 9  
Prerequisite: None  
Course Transferable to CSU  
Hours: 9 hours LEC  
The course is designed to provide students with effective internship development skills that will assist in obtaining and keeping an internship in the student’s major area. Course content will include understanding the application of education to the workforce, the responsibilities of an internship, construction of an internship, evaluating an internship site, marketing skills and maximizing the internship experience.

HCD 350  
**Introduction to Tutor Training**  
1 Unit  
Formerly: HCD 43  
Prerequisite: None  
Advisory: Completion of, with a grade of “B” or better, the courses the student wishes to tutor.  
Course Transferable to CSU  
Hours: 18 hours LEC  
This course is for students who intend to be tutors at CRC and students who wish to gain basic skills in tutoring to use in settings other than CRC. The content deals with details of campus tutorial services, nature of learning processes, learning styles, techniques of tutoring, tutoring students with special challenges, and cultural awareness for tutors. The course will consist of 14 online computer-based sessions and 4 classroom meetings for a total of eighteen class sessions.

HCD 352  
**Beginning Peer Assistant Training**  
3 Units  
Formerly: HCD 44  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course fosters the student’s understanding of CRC regulations and procedures, campus resources, study skills, and career planning, while training students in basic communication and counseling skills, including goal setting, problem solving, time management, and decision making. This course encourages students to develop a sense of responsibility and commitment to help others while preparing students to participate as peer advisors in a college setting.

HCD 362  
**Work/Life Management**  
2 Units  
Formerly: HCD 6  
Prerequisite: None  
Course Transferable to CSU  
Hours: 36 hours LEC  
This course explores planning for personal work/life management. Includes training in life problem-solving with relationship to personal, educational, and workplace productivity. Topics include exploration of one’s own values, interests and abilities; stress reduction, wellness, and leisure; building family and social support; and educational and career management. The course will provide activities which will assist students with decision-making, goal setting, and learning to use tools for dealing with change.
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Description and Details</th>
</tr>
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<tbody>
<tr>
<td>HCD 495</td>
<td>Independent Studies in Human/Career Development</td>
<td>1-3</td>
<td>Prerequisite: None</td>
</tr>
<tr>
<td></td>
<td>Formerly: HCD 49I</td>
<td></td>
<td>Course Transferable to CSU</td>
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<td>Hours: 18 hours LEC ; 54 hours LAB</td>
<td></td>
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</tr>
<tr>
<td>HCD 499</td>
<td>Experimental Offering in Human/Career Development</td>
<td>.5-4</td>
<td>Prerequisite: None</td>
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<td></td>
<td>(See catalog page 21)</td>
</tr>
<tr>
<td>HCD 1000</td>
<td>Supervised Tutoring</td>
<td>0</td>
<td>Prerequisite: None</td>
</tr>
<tr>
<td></td>
<td>Formerly: HCD 300</td>
<td></td>
<td>This course offers individualized tutoring designed to assist students to increase their success in college courses. Students may enroll for support of more than one college course per semester. Content will vary depending upon the adjunct course. Attention will be given to essential study skills and utilization of campus learning resources. May be repeated in subsequent semesters.</td>
</tr>
</tbody>
</table>
Human Services

**DEGREE** A.A.—Human Services, General

**CERTIFICATE** Human Services, General

This CRC program prepares students for employment as para-professionals with agencies such as youth group homes, youth and family services agencies, schools, probation, welfare, and mental health departments.

**Career Options**
- Peer Support Group Facilitator
- Youth Group Home Worker
- Family, Welfare, and Health Agencies Worker
- Consumer Consultant
- County or State Eligibility Worker
- Conflict Containment Worker

**Highlights**
- Individual and group counseling
- Interviews with employers
- Employment training including resumes, cover letters, and interviews

**Note to Transfer Students:**
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

**DEGREE**

**A.A.—Human Services, General**

**CODE #1152**

This degree is designed for persons who are seeking careers as youth group home workers, family welfare and health agencies workers, county or state eligibility workers, and other para-professional positions. Graduates will have a broad range of human services skills, including group counseling, client interviewing, communication, problem solving, and employment.

**REQUIRED PROGRAM**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tr>
<td>HSER 300 (14)</td>
<td>Introduction to Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HSER 302 (21)</td>
<td>Introduction to Psychology of Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>HSER 350 (39)</td>
<td>Employment Skills in Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HSER 360 (41)</td>
<td>Techniques of Interviewing and Counseling</td>
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<tr>
<td>HSER 362 (40)</td>
<td>Practices in Human Services</td>
<td>3, 3</td>
</tr>
<tr>
<td>HSER 364 (42)</td>
<td>Techniques in Group Counseling</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 300 (1)</td>
<td>General Principles</td>
<td>3</td>
</tr>
<tr>
<td>Plus six (6) units selected from:</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>PSYC 320 (3)</td>
<td>Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SO C 301 (1A)</td>
<td>Introductory Sociology (3)</td>
<td></td>
</tr>
<tr>
<td>SO C 321 (5)</td>
<td>Race, Ethnicity and Inequality in the U.S.</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED** 31

**Suggested Electives:**
- BUS 100, 310; CISA 305, 315, 330, 340;
- COMM 301, 325; FCS 312; HEED 300, 312, 313;
- PSYC 330, 360, 372; SO C 301, 310

**CERTIFICATE**

**Human Services, General**

**CODE #1152**

This certificate is designed for persons who are seeking careers as youth group home workers, family welfare and health agencies workers, county or state eligibility workers, and other para-professional positions. Completers will have a foundation in human services skills, including group counseling, client interviewing, and employment.

**REQUIRED PROGRAM**

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**TOTAL UNITS REQUIRED** 31

**General Education Graduation Requirements** - See page 18.
### Human Services (HSER)

**HSER 300**  
**Introduction to Human Services**  3 Units  
Formerly: HSER 14  
**Prerequisite:** None  
**Course Transferable to CSU**  
**Hours:** 54 hours LEC

A comprehensive overview of the field of Human Services in private and public agencies. Includes learning of agency functions and worker activities through reading, class discussion, and class speakers. Emphasis is on the roles and skills of associate professionals such as health workers, activity directors for the elderly, and adolescent and child welfare assistants.

**HSER 302**  
**Introduction to Psychology of Human Relations**  3 Units  
Formerly: HSER 21  
**Prerequisite:** None  
**Course Transferable to CSU**  
**Hours:** 54 hours LEC

Introduction to attitudes, values, and methods that enhance communication skills in human relations. Required course for the Human Services major. Open to all students.

**HSER 304**  
**Introduction to Counseling Children**  3 Units  
Formerly: HSER 22  
**Prerequisite:** None  
**Course Transferable to CSU**  
**Hours:** 54 hours LEC

A study of the tools children use daily to cope with feelings, adjust to changes, overcome disappointment and trauma, make sense out of the world around them and grow in their various relationships. Children’s play medium will be experienced, with special emphasis on the importance of imagination and the use of fantasy. Assignments will require association with children.

**HSER 340**  
**Introduction to Chemical Dependency**  3 Units  
Formerly: HSER 35  
**Prerequisite:** None  
**Course Transferable to CSU**  
**Hours:** 54 hours LEC

A survey course that examines the psychological and physiological effects of chemical dependency on the individual. Also included is an analysis of the effects of substance abuse on the family; the sociological and economic conditions contributing to substance abuse, and a description of communication efforts at prevention and treatment.

**HSER 350**  
**Employment Skills in Human Services**  3 Units  
Formerly: HSER 39  
**Prerequisite:** None  
**Course Transferable to CSU**  
**Hours:** 54 hours LEC

Information in interviewing and counseling with parents, family system dynamics, family and drug intervention, crisis training, court mandated reporting, legislative mandates required of counselors, and laws pertaining to counseling minors and other client populations within Human Services Agencies.

**HSER 360**  
**Techniques of Interviewing and Counseling**  3 Units  
Formerly: HSER 41  
**Prerequisite:** HSER 302. Grade of “C” or better required to meet prerequisite.  
**Advisory:** HSER 300 and concurrent enrollment in HSER 362.  
**Course Transferable to CSU**  
**Hours:** 54 hours LEC

Exploration of the effectiveness of these techniques as applied to para-professional experiences as counselor and group counselor aides, mental health workers, social service technicians and other new careers on all academic levels in people-to-people services. This course is an integral part of the Human Services curriculum.

**HSER 362**  
**Practices in Human Services**  3 Units  
Formerly: HSER 40  
**Prerequisite:** None  
**Corequisite:** HSER 360. Grade of “C” or better required to meet corequisite.  
**Course Transferable to CSU**  
**Hours:** 18 hours LEC ; 108 hours LAB

This course provides advanced study and supervised field experience in public and/or private agencies providing mental health, corrections, chemical dependency, and child/adolescent treatment services. Students apply concepts, values and skills acquired in other core courses to the process of helping others. Student evaluation is competency-based. This course may be taken four times for credit.

**HSER 364**  
**Techniques of Group Counseling**  4 Units  
Formerly: HSER 42  
**Prerequisite:** HSER 302, 360, and 362. Grade of “C” or better required to meet prerequisite.  
**Course Transferable to CSU**  
**Hours:** 54 hours LEC ; 54 hours LAB

Techniques of counseling in groups with people of a variety of ages. Group exploration and sharing of feelings about problems presented. Recognition of unique and common problems and participation in understanding and behavior change.
HSER 494
Topics in Human Services .5-4 Units
Formerly: HSER 47
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
Exploration of those topics and issues which are most relevant for future and present workers in human services. Emphasis will be on those issues which are not consistently covered by other required human services courses. These issues may include: chemical dependency, interventions in poverty, stress management, child neglect and abuse, patient rights, and organization for advocacy.

HSER 495
Independent Studies in Human Services 1-3 Units
Formerly: 49I
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

HSER 498
Work Experience in Human Services 1-4 Units
Formerly: HSER 48
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

HSER 499
Experimental Offering in Human Services .5-4 Units
Formerly: HSER 49
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Humanities

This CRC program offers a study of classical, modern, American and non-Western humanities. In each course, cultural literacy is fostered by examining arts, philosophy, religion, politics and historical movements.

Career Options
- Administrator; Artist; Communication;
- Human Service Careers; Journalism;
- Law; Museum Curator; Politics;
- Public Relations; Religious Service;
- Teacher; Writer

Some career options may require more than two years of college study.

Highlights
- Talented faculty includes widely traveled scholars.

Hands-on experience in various fields relating to above career options

Excellent foundation for transfer or interdisciplinary study (American Studies, Ethnic Studies, Humanities, Women's Studies)

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

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Humanities (HUM)

**HUM 300**
Classical Humanities 3 Units

Formerly: HUM 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC

The course focuses upon Western culture in its attempt to interpret human experience and identity. The course examines basic human values as exemplified in the arts, philosophy and history. Emphasis is on the Greeks, the Romans, and the Judeo-Christian tradition up to the end of the Middle Ages.

**HUM 310**
Modern Humanities 3 Units

Formerly: HUM 2
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC

This course focuses upon Western culture in its attempt to interpret human experience and identity. The course examines basic human values as exemplified in the arts, philosophy, and history. Emphasis is on the Renaissance, the Baroque period, and the Modern World.

**HUM 320**
Asian Humanities 3 Units

Formerly: HUM 3
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC

The focus of the course is on Far Eastern culture in its attempts to interpret human experience and identity. The quest for truth is traced in a variety of forms of humanistic self-expression—literature, art, music, philosophy and history. The course concentrates especially on India, China and Japan.

**HUM 324**
Global Islam: Culture and Civilization 3 Units

Formerly: HUM 4
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC

The course is an introduction to global Islamic cultures from the 7th century to contemporary times, with emphasis on religious/philosophic concepts, and their expression in literature and the arts. Focus is placed upon Arab, Persian, African, Asian and American contributions.
HUM 332
American Humanities 3 Units
Formerly: HUM 7
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course examines ideas and values about the American experience in the 20th century by analyzing the literature, art, music, philosophy and history of the past 100 years. The course draws upon the arts of African American, Native American, Asian American, Anglo and Latino cultures as avenues for understanding issues of race, ethnicity, class, and gender as they intersect with mainstream American values in the past 100 years.

HUM 334
California Cultures 3 Units
Formerly: HUM 13
Prerequisite: None
Advisory: ENGWR 101 or eligibility for ENGWR 300.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course examines California cultural development in the arts, literature, music and philosophy of the early indigenous people through the Spanish, Mexican and Anglo presences of the 19th century. The course will inspect the development of values and the manifestation of those values in politics and culture today, including the contributions of immigrant groups to the social milieu of the 20th century. Field trips are required.

HUM 340
African American Humanities 3 Units
Formerly: HUM 12
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course examines the African American experience in the United States from an historical and political perspective by experiencing and analyzing the arts and artistic expressions. The course draws upon music, art, literature and philosophy as avenues for understanding the influences and challenges to African American identity both historically and contemporarily.

HUM 484
Honors Seminar: Nature & Culture 3 Units
Formerly: HUM 21H
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This seminar examines multicultural interpretations and use of the environment from the Native American era to modern day using various geographic regions as case studies. Interdisciplinary in approach, this course draws upon the natural sciences, humanities, and social sciences to explain how the physical environment has been interpreted, utilized, and impacted differently by various cultures through time. Two field trips are required as part of this seminar. This course is intended for academically-accomplished students, regardless of major. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as GEOG 481 and HONOR 382, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

HUM 486
Honors Seminar in Humanities 1 Unit
Formerly: HUM 47A
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC
Honors Seminars in Humanities are special one-unit intensive courses for academically-accomplished students or those with the potential for high academic achievement. In these seminars, students will study topics in the movements, trends and philosophies found in the humanities. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as HONOR 360. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

HUM 495
Independent Studies in Humanities 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

HUM 499
Experimental Offering in Humanities .5-4 Units
Formerly: HUM 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Interdisciplinary Studies

DEGREE

A.A.—American Studies
A.A.—Ethnic Studies
A.A.—Humanities
A.A.—Women's Studies

This CRC major is intended for students who wish a general background in the areas of humanities or social science at the community college level. Several options are offered in specific interest areas but all are intended to give the student an interdisciplinary foundation for further study or an overview of the area chosen. Students who also wish to transfer to a four-year college should plan their programs to meet general education and lower division major requirements. All students are encouraged to consult with a counselor.

Career Options
Religious Service; Human Service Careers; Research; Teacher; Law; Administrator; Attorney; Historian; Foreign Service; Archivist; Social Worker; Public Relations Consultant; Employment Counselor; Probation Officer; Counselor

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights
A valuable foundation for a variety of career or transfer opportunities
Diversified and talented faculty
Overview of theoretical and cultural principles

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.

DEGREE
A.A.—Interdisciplinary Studies, American Studies
CODE #1158

REQUIRED PROGRAM ............................................................... Units
15 units selected from:
(no more than one course selected from each group)
(a.) Anthropology 334 (SOC 338);
(b.) English Literature 320 (30), 321 (ENGL 31), 330 (ENGL 40);
(c.) History 312 (17), 313 (18), 314 (21), 320 (14), 321 (15), 331 (35);
(d.) Humanities 332 (7);
(e.) Political Science 301 (1);
(f.) Psychology 360 (28);
(g.) Social Science 325 (44), 330 (42);
(h.) Sociology 300 (1A), 301 (1B), 321 (5) ......................... 15

Six (6) units selected from:
(no more than one course selected from each group)
(a.) Business 300 (20);
(b.) History 301 (4), 302 (5);
(c.) Humanities 310 (2);
(d.) Philosophy 300 (6), 338 (8) ......................... 6

TOTAL UNITS REQUIRED ......................................................... 21

General Education Graduation Requirements - See page 18.
**DEGREE**

A.A.—Interdisciplinary Studies, Ethnic Studies  
CODE #1159

REQUIRED PROGRAM ............................................................... Units  
Sociology 321 (5)  Race, Ethnicity and Inequality in the U.S. ........... 3
Nine (9) units selected from:  
(no more than one course from each group)  
(a.) Anthropology 334 (SOCSC 338)  
(b.) English Literature 300 (ENGL 40)  
(c.) History 320 (14), 321 (15)  
(d.) Social Science 325 (44), 330 (42)  
Nine (9) units selected from:  
(no more than one course from each group)  
(a.) Business 300 (20);  
(b.) English Literature 320 (ENGL 30), 321 (ENGL 31);  
(c.) History 312 (17), 313 (18), 314 (21),  
320 (14), 321 (15), 331 (35)  
(d.) Humanities 332 (7);  
(e.) Philosophy 350 (10);  
(f.) Political Science 301 (1);  
(g.) Psychology 360 (28);  
(h.) Sociology 300 (1A), 301 (18)  
TOTAL UNITS REQUIRED ............................................................. 21

General Education Graduation Requirements - See page 18.

**DEGREE**

A.A.—Interdisciplinary Studies, Humanities  
CODE #1160

REQUIRED PROGRAM ............................................................... Units  
Nine (9) units selected from:  
Humanities 300 (1), 310 (2);  
Philosophy 300 (6)  
Twelve (12) units selected from:  
(no more than one course from each group)  
(a.) Art History 300 (Art 10);  
(b.) English Creative Writing 400 (ENGL 15),  
English Literature 310 (ENGL 35), 311 (ENGL 36),  
320 (ENGL 30), 321 (ENGL 31), 330 (ENGL 40),  
340 (ENGL 33), 341 (ENGL 34);  
(c.) Humanities 320 (3), 324 (4), 332 (7);  
(d.) Music - MUFHL 300 (6), 310 (10), 311 (11);  
(e.) Philosophy 310 (5), 320 (4), 338 (8), 350 (10);  
(f.) Theatre Arts 300 (1);  
Communications Media 305 (14)  
TOTAL UNITS REQUIRED ............................................................. 21

General Education Graduation Requirements - See page 18.

**DEGREE**

A.A.—Interdisciplinary Studies, Women's Studies  
CODE #1161

This program is designed for both men and women, focusing on women and their:  
- Achievements  
- Behavior, Feelings and Experience  
- Historical Significance  
- Cultural and Social Contribution  
- Roles in Society and the Political System  
- Literary Significance, and  
- Positions in the Business World

REQUIRED PROGRAM ............................................................... Units  
Nine (9) units selected from:  
English Literature 360 (ENGL 27)  
History 331 (35)  
Psychology 356 (25), 360 (28)  
Twelve (12) units selected from:  
(no more than one course from each group)  
(a.) Anthropology 334 (SOCSC 338)  
(b.) Business 300 (20);  
(c.) English Literature 310 (ENGL 35), 311 (ENGL 36),  
320 (ENGL 30), 321 (ENGL 31), 330 (40),  
340 (ENGL 33), 341 (ENGL 34), 360 (ENGL 27);  
(d.) History 312 (17), 313 (18), 314 (21),  
320 (14), 321 (15), 331 (35);  
(e.) Humanities 332 (7);  
(f.) Philosophy 310 (5), 320 (4), 338 (8);  
(g.) Political Science 301 (1);  
(h.) Psychology 356 (25), 360 (28) 372 (34);  
(i.) Social Science 325 (44), 330 (42);  
(j.) Sociology 300 (1A), 301 (1B), 321 (5)  
TOTAL UNITS REQUIRED ............................................................. 21

General Education Graduation Requirements - See page 18.
Interdisciplinary Studies (INDIS)

INDIS 110
Computer Applications for the Environmental, Natural and Physical Sciences 2 Units
Formerly: INDIS 58
Prerequisite: None
Advisory: CISC 302 and completion of or concurrent enrollment in a transfer-level science or in a mathematics majors course.
Hours: 36 hours LEC
This course will focus on essential computer skills for students who are majoring and/or working in the natural sciences (biology, botany, natural resources), the environmental sciences (environmental science/technology), engineering, or the physical sciences (astronomy, physics, chemistry, geography, geology). Students will be introduced to wordprocessing software, presentation software, spreadsheets, databases, and the world wide web to analyze and represent mathematical/scientific information.

INDIS 310
Math, CIS, Engineering and Science Achievement .5 Units
Formerly: INDIS 4A
Prerequisite: None
Course Transferable to CSU
Hours: 9 hours LEC
This course introduces the student to MESA and to the skills needed for academic success in mathematics, computer information science, engineering, and science. The course covers study skills, learning styles, SCANS skills, college logistics, and transfer processes as they relate to the study of math and science. The course is intended for students who will transfer to universities in a math-based major (computer science, chemistry, biology, physics, etc.). This is the first 1/2 unit of a 1 unit combination of courses that will provide academic and career support to MESA students and other students in math-based majors who wish to study specific courses in those disciplines. (INDIS 311 or 312 complete the combination.) This course is graded on a credit/no-credit basis only.

INDIS 311
Academic Skills for a Career in Engineering, CIS, Math, Physics and Related Disciplines .5 Units
Formerly: INDIS 4B
Prerequisite: None
Advisory: INDIS 310.
Course Transferable to CSU
Hours: 9 hours LEC
This course introduces the MESA student to academic skills and career exploration needed for advanced study toward a career in Mathematics, Engineering, and Physics. The course will cover advanced academic skills including literature searches, data analysis, technical terminology, and mathematics problem solving as applied to engineering, computer information science, mathematics, and physics. It will also provide an overview of careers in engineering, math, computer information science, and physics including the education, type of work conducted by professionals, and employment opportunities in these fields. The course is the second 1/2 unit of a 1 unit package of courses (see INDIS 310) that will provide academic and career support to MESA students and other student in math-based majors. This course is graded on a credit/no-credit basis only.

INDIS 312
Academic Skills for a Career in Chemistry, Biology and Related Disciplines .5 Units
Formerly: INDIS 4C
Prerequisite: None
Advisory: INDIS 310.
Course Transferable to CSU
Hours: 9 hours LEC
This course introduces the MESA student to academic skills and career exploration needed for advanced study toward a career in Chemistry, Biology, Biochemistry, Medicine, Environmental Studies, and similar fields. The course will cover advanced academic skills including literature searches, data analysis, technical terminology, and problem solving as applied to chemistry or biology related fields of study. It will also provide an overview of careers in these disciplines including necessary education, type of work conducted by professionals in these fields, and employment opportunities in these fields. The course is the second 1/2 unit of a 1 unit package of courses (see INDIS 310) that will provide academic and career support to MESA students and other students in chemistry or biology related based majors. This course is graded on a credit/no-credit basis only.

INDIS 499
Experimental Offering in Interdisciplinary Studies .5-4 Units
Formerly: INDIS 49
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)
Journalism

DEGREE A.A.—Communications Media, Journalism

CERTIFICATE Desktop Publishing (see Computer Information Science - page 114)

The Journalism program is designed to train students in the writing, reporting and critical thinking skills required for jobs in the news media or for transfer to a journalism program at a four-year institution.

Career Options
Script Writer; Copy Writer; Journalist; Newspaper Reporter; Magazine Editor; Editor; Columnist; Desktop Publishing Specialist; Public Information Officer; On-Line Writer/Editor

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights
Hands-on experience publishing the college's award-winning newspaper, The Connection. The newspaper showcases students' work in writing, photography, editing, graphic illustration and publication design

Instruction and practice in desktop publishing, digital photography and graphics applications in the department's Macintosh laboratory or in the campus PC computer laboratory

Opportunities to attend state journalism conferences, compete for awards in writing, photography, editing and graphic art, and qualify for scholarships

Opportunities for internships on newspapers, magazines, and in public relations firms

New worldwide web newspaper on which students can experiment and showcase work.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE A.A.—Communications Media, Journalism
CODE #1058

REQUIRED PROGRAM ............................................................... Units
CMED 300 (5) / JOUR 310 (10) Mass Media & Society ................. 3
JOUR 300 (20A) Newswriting & Reporting............................ 3
JOUR 400 (30) College Newspaper Production .................. 2-3 / 2-3
JOUR 404 (33) Editing & Production .................................... 3
CMED 498 (98) Work Experience ........................................ 1-4
PHOTO 301 (40) Beginning Photography ............................. 3

Core Electives—nine (9) units selected from: .......................... 9
CISC 305 (CIS 21A) Introduction to the Internet (1)
CISC 306 (CIS 21B) Introduction to Web Page Creation (1)
CMED 380 (73) Broadcast Journalism (3)
JOUR 330 /CISC 302 (CIS 1X) Computer Familiarization (2)
JOUR 320 (12) Race and Gender in the Media (3)

JOUR 335 (35A)/
CISA 330 (CIS 17A) Introduction to Desktop Publishing (2)
JOUR 336 (35B)/
CISA 331 (CIS 17B) Intermediate Desktop Publishing (2)
JOUR 340 (40) Writing for Publication (3)
JOUR 405 (47) Publications Production Skills Lab (.5-3)
PHOTO 400 (57) Digital Imaging (3)

TOTAL UNITS REQUIRED ..................................................... 26-31

Suggested Electives:
CMED 331 (64, 63); ECON 302 (1A); ENGR 300 (ENGL 1A);
PHOTO 310 (41), 320 (42); POLS 310 (10)

General Education Graduation Requirements - See page 18.
**Journalism (JOUR)**

**JOUR 150**  
Public Relations Media Techniques  
Formerly: JOUR 54  
Prerequisite: None  
Hours: 54 hours LEC  
A study of the practice of public relations; planning PR campaigns; preparing promotional messages for newspapers, magazines, radio and television; using public relations techniques in business, education, entertainment, social service and other fields.

**JOUR 299**  
Experimental Offering in Journalism  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

**JOUR 300**  
Newswriting and Reporting  
Formerly: JOUR 20A  
Prerequisite: None  
Advisory: Eligibility for ENGWR 300.  
Course Transferable to CSU  
(CAN JOUR 2)  
Hours: 54 hours LEC  
Introductory course in basic newswriting and reporting. Course concentrates on fundamental writing techniques for mass media. Course also emphasizes the legal and ethical responsibilities of the news media with critical analysis of current news report practices.

**JOUR 301**  
Advanced Newswriting and Reporting  
Formerly: JOUR 20B  
Prerequisite: None  
Advisory: ENGWR 300 or JOUR 300.  
Course Transferable to CSU  
Hours: 54 hours LEC  
Interpreive newswriting with emphasis on public affairs, specialized reporting, mastery of fundamental reporting techniques, and an introduction to feature and editorial writing.

**JOUR 310**  
Mass Media and Society  
Formerly: JOUR 10  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC  
Survey of the mass media: history, philosophy, structure and trends, as well as theories which help to explain effects and the importance of mass communications as a social institution. Exploration of economics, technology, law, ethics, and social issues, including cultural and ethnic diversity. This course is the same as CMED 300, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

**JOUR 320**  
Race and Gender in the Media  
Formerly: JOUR 12  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC  
This course examines the roles of ethnic minorities and women in American society as depicted, documented and distorted in the mass media. Students will study ethnic, racial and gender issues in mass media content, development, policy, and professions, including media stereotypes, contributions of diverse groups to the media and mass communications as an agent of social change.

**JOUR 330**  
Computer Familiarization  
Formerly: JOUR 1  
Prerequisite: None  
Advisory: BUSTEC 302.  
Course Transferable to CSU  
Hours: 36 hours LEC  
This is an introductory course to provide general knowledge on how computers work, computer terminology and the impact of computers on society and the work environment. Beginning level hands-on instruction using an operating system, wordprocessing software, spreadsheet software, and the Internet will be emphasized. Students will be reading and interpreting written and oral instructions of a technical nature. This course is the same as CISC 302, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

**JOUR 335**  
Introduction to Desktop Publishing  
Formerly: JOUR 35A  
Prerequisite: None  
Advisory: CISC 302 or 310; or JOUR 330.  
Course Transferable to CSU  
Hours: 27 hours LEC ; 27 hours LAB  
This course will cover the introductory elements of desktop publishing. The course is taught in three modules with a project attached to each module. The course covers hardware and software, elements of design, computer graphics, text composition, page layout, and integration of text and graphics. Projects may include, but are not limited to: business cards, stationery, logos, covers, flyers, brochures, and newsletters. Recommended courses: CISA 305; ARCH 330 or ART 320; CISA 340. This course is the same as CISA 330. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.
JOUR 336
Intermediate Desktop Publishing 2 Units
Formerly: JOUR 35B
Prerequisite: CISA 330 or JOUR 335. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 27 hours LEC ; 27 hours LAB
This course will cover the intermediate elements of desktop publishing. The course is taught in three modules with a project attached to each module. The course covers intermediate hardware and software, elements of intermediate design, graphics and text composition, multi-page layout, design for publishing presentations, project management, and single- and multi-page documents. Projects may include, but are not limited to: reports, slicks, slides, overheads, posters, transparencies, billboards, brochures, and newsletters. Recommended supplemental courses: CISA 305; ARCH 330 or ART 320; and CISA 340. This course is the same as CISA 331. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

JOUR 340
Writing for Publication 3 Units
Formerly: JOUR 40
Prerequisite: ENGW 300 or JOUR 300.
Course Transferable to CSU
Hours: 54 hours LEC
Writing nonfiction for publication with emphasis on developing writing style. The course covers writing for specific audiences, writing magazine and feature articles, researching and interviewing and developing an effective prose style. Students will learn how to write reviews, profiles, personal narratives and longer articles and how to sell them. This course is the same as ENGW 330, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

JOUR 355
Media Writing 1 Unit
Formerly: JOUR 25
Prerequisite: None
Advisory: ENGW 101 or 300.
Course Transferable to CSU
Hours: 18 hours LEC
An introduction to writing copy for advertising, public relations and publications. This course covers writing techniques and copy preparation for brochures, newsletters, in-house publications, press releases, display advertising and other visual presentations.

JOUR 400
College Newspaper Production 2-3 Units
Formerly: JOUR 30
Prerequisite: None
Advisory: Completion of or concurrent enrollment in one of the following: JOUR 300, 335, 340, 400, PHOTO 301.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course provides instruction and experience in the principles and practice of newspaper production. The course offers instruction in writing, editing, photography, graphics, design and computerized layout for publications. Students work as writers, editors, graphic artists and photographers for the college newspaper. This course may be taken four times for credit.

JOUR 404
Editing and Production 3 Units
Formerly: JOUR 33
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
Instruction and practice in editing and designing newspapers, magazines, technical reports, and other publications. Topics include copy editing, headline writing, photo editing, page make-up and design, and production methods. Editorial writing, press ethics and press law are also discussed.

JOUR 405
Publications Production Skills Lab .5-3 Units
Formerly: JOUR 47
Prerequisite: Concurrent enrollment in JOUR 400 or 404.
Course Transferable to CSU
Hours: 54 hours LAB
This lab course helps students improve their writing, editing, and computer skills as an addition to their enrollment in Editing and Production or College Newspaper Production. Students may earn up to three units per semester, and repeat the class until they reach a maximum of six units.

JOUR 495
Independent Studies in Journalism 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

JOUR 498
Work Experience in Journalism 1-4 Units
Formerly: JOUR 98
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

JOUR 499
Experimental Offering in Journalism .5-4 Units
Formerly: JOUR 49
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Library

The CRC Library courses are designed to equip students with vital research skills, enabling their success in college classes and on the job. The student will gain "research survival skills" to cope with the information rich environment in which we live and work.

Students interested in a career as a librarian will need to earn a bachelor's degree and a graduate library degree. Students interested in becoming a school (K-12) librarian can obtain a library credential through CSUS once they have completed their bachelor's degree and basic credential program. Paraprofessional library careers are available by completing a Library Technology program at a community college.

Career Options
Librarian
School (K-12) Librarian
Library Technicians
Archivist
Research Analyst

Some career options may require more than two years of college study.

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

Library (LIBR)

LIBR 318
Library Research and Information Literacy 1 Unit
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC
This course will help students acquire the information competency skills necessary to conduct academic or personal research. It provides a step-by-step guide to the research process that is applicable to term papers, course work and life-long learning.

LIBR 325
Introduction to Internet and Searching Strategies 3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
An introduction to the use and evaluation of electronic information sources focusing on the Internet. Course will discuss Internet resources, functions and options for Internet access. Course will emphasize evaluation and comparision of information sources.

LIBR 495
Independent Studies in Library 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

LIBR 499
Experimental Offering in Library .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Management

DEGREE A.A.—Management
CERTIFICATE Retail Management

This broad-based management program offers introductory courses as well as more specialized ones ranging from studies of the standard corporate organization to analyzing the small business.

Managers help organizations achieve their objectives through effective planning, organizing, directing, and controlling. The management program attempts to develop an understanding of the importance and diversity of its related fields.

This program prepares students for entry into a company management training program and upgrades the skills of those already working in industry, allowing them to advance to supervisory positions. Students planning vocations in personnel services or analyst positions in state or federal government service should also consider this degree program.

For SMALL BUSINESS MANAGEMENT/ENTREPRENEURSHIP, see Business, page 93.

Career Options
Branch Manager; Department Manager;
First-line Supervisor; Office Manager;
Plant Manager; Project Manager;
Entrepreneur; Shift Supervisor;
Small Business Owner/Manager;

Some career options may require more than two years of college study.

Highlights
Additional training in courses acceptable as electives for civil service professional occupations
Hands-on experience in the use of computers for business purposes
Opportunities for work experience in local industry, business, and government
A lab with tutorial assistance

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.
Management (MGMT)

MGMT 132
Facilitating Teams and Facilitating Tools 1 Unit
Formerly: MGMT 74
Prerequisite: None
Hours: 18 hours LEC
This short course is designed to give potential and practicing facilitators and understanding of the theories, practices, and tools of facilitation. The use of numerous checklists and experiential exercises are designed to allow immediate application of the tools and techniques in the work environment. Upon completion of this course, the student will be capable of identifying problems, delivering feedback, and coaching for continuous improvement.

MGMT 142
Project Management
Techniques and Software 3 Units
Formerly: MGMT 75
Prerequisite: None
Advisory: CIS 302 or 310.
Hours: 54 hours LEC
This is an introductory course covering the responsibilities of a project manager. It includes the knowledge needed to manage project resources. The course will also introduce the student to the use of project management software to track project resources, tasks and milestones. This course is the same as CIS 160, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

MGMT 150
Organization Management 3 Units
Formerly: MGMT 80
Prerequisite: None
Hours: 54 hours LEC
This course gives managers the tools to organize workers in ways that will best meet the needs of a business at a particular time. Decision-making skills for various situations will be taught. Analysis of the business, its competition, and the need for change on an on-going basis will be stressed. Students will be using mathematical concepts, as well as reading and interpreting written and oral instructions.

MGMT 160
Labor-Management Relations 3 Units
Formerly: MGMT 73
Prerequisite: None
Hours: 54 hours LEC
This course analyzes the dynamics between labor and management. The course emphasis is placed on the need for mutual satisfaction to have a good working relationship. Students will be made aware of special considerations necessary in collective bargaining to ensure a “win-win” collaborative contract. Students will be using mathematical concepts, as well as reading and interpreting written and oral instructions.
MGMT 176
Introduction to Supervision 3 Units
Formerly: MGMT 81
Prerequisite: None
Hours: 54 hours LEC
This introductory course in supervision is designed to meet the needs of students making the transition from employee to supervisor. Employee motivation, morale, working conditions, communications with employee groups, counseling and interviewing workers, group dynamics, and case studies from business are used to prepare the new supervisor. Students will be using mathematical concepts as well as reading and interpreting written and oral instructions.

MGMT 240
How to Build Employee Morale and Motivate Employees .5 Units
Formerly: MGMT 93A
Prerequisite: None
Hours: 9 hours LEC
Motivation is one of the key ingredients in employee performance and productivity. When workers have clear work objectives, the right skills, and a supportive work environment, they won’t get the job done without sufficient motivation to achieve those work objectives. This course introduces a series of motivational theories that the manager can use to successfully meet the needs of individual workers and improve productivity on the job. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 242
Applied Motivational Practices .5 Units
Formerly: MGMT 93B
Prerequisite: None
Hours: 9 hours LEC
This is a class in advanced motivational practices that may be used to motivate employees to improve their productivity. Motivational theories are used as a tool to improve the performance of associates. A feeling of appreciation is critical in the increased productivity of employees and this unit provides instruction in how to accomplish these desired outcomes. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 244
Stress Management .5 Units
Formerly: MGMT 93C
Prerequisite: None
Hours: 9 hours LEC
An outline of stress and its causes and consequences will be discussed. Why it affects people differently will be explained. The physiological, psychological and behavior of stress will be examined. Five ways will be identified to manage stress in the workplace. This will give the manager the necessary tools to understand and better manage stress in the workplace. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 246
Improving Individual Performance, Perception and Personality .5 Units
Formerly: MGMT 93D
Prerequisite: None
Hours: 9 hours LEC
This course examines perception and the ways it influences decisions and attitudes in the workplace. An examination of social theory, stereotyping, the attribution process, personality traits and other related theories would be conducted. Diversity management training often communicates the value of diversity and increases awareness of perceptual biases, but does not correct deep-rooted prejudices. Personality may explain some of these differences as it is explored in more detail in this unit. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 248
Ethics, Values and Emotions in the Workplace .5 Units
Formerly: MGMT 93E
Prerequisite: None
Hours: 9 hours LEC
The ethics of a business are critical to its success. This unit discusses the values, ethics and behaviors exhibited in businesses and their impact on both the staff and profitability of the company. This unit will give each participant the skills to understand and monitor the emotions of themselves and their associates. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 250
Communicate Successfully in the Organization .5 Units
Formerly: MGMT 93F
Prerequisite: None
Hours: 9 hours LEC
This course explains how communications facilitates knowledge sharing, aids decision-making, coordinates work activities and fulfills the need for affiliation. The manner in which the communication process is used to form, encode and transmit the intended messages and provides feedback to the sender is discussed. This unit shows various ways to improve the communications. Individual and company-wide solutions are offered. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 252
Building Great Teams .5 Units
Formerly: MGMT 93G
Prerequisite: None
Hours: 9 hours LEC
All teams are groups because they consist of people with a unifying relationship, but some groups do not have the purpouse interaction of terms. This unit covers the dynamics of good groups decision-making. Many different techniques are discussed to improve team building. Managers who gain the skills discussed in this unit should be able to build teams that are successful in their operation. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.
MGMT 254
Getting Employees Involved in Management Decisions .5 Units
Formerly: MGMT 93H
Prerequisite: None
Hours: 9 hours LEC
Managers will learn the importance of having employees involved in the operations of the organization. They will learn that employee involvement may lead to higher quality decisions, employee satisfaction, empowerment, and development in decision-making skills. An emphasis on the importance of quality is covered. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 256
How to Make Great Decisions .5 Units
Formerly: MGMT 93I
Prerequisite: None
Hours: 9 hours LEC
The importance of good decision-making and the techniques to achieve the same are discussed. The four stages of creativity are learned by the participants to improve their decision-making potential. How managers can improve the organizational creativity is discussed along with a variety of management techniques to bring this about in the workplace. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 258
Power and Politics in the Business and How to Use Them .5 Units
Formerly: MGMT 93J
Prerequisite: None
Hours: 9 hours LEC
Power is the capacity to influence others. The five basis of power are discussed and then it is shown how to leverage this power. Sexual harassment is an abuse of power and the offender may not be aware of the result of their actions on others. Ways to abuse power are discussed. The tactics used to attempt to abuse power are discussed. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 260
What is Conflict? .5 Units
Formerly: MGMT 93K
Prerequisite: None
Hours: 9 hours LEC
Being able to successfully handle conflict management is the objective of this unit. Techniques to be used in conflict management will be discussed. The process of negotiation is explained. A variety of different approaches and outcomes to handling conflict are discussed. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 262
Steps to Being a Great Leader .5 Units
Formerly: MGMT 93L
Prerequisite: None
Hours: 9 hours LEC
The characteristics of good leaders are explained. Leadership is divided into two clusters. Contingency leadership techniques theories are explained. Path-goal and other theories are used to improve productivity. Leadership practiced by women is different than men. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 264
Using Change to Improve an Organization .5 Units
Formerly: MGMT 93M
Prerequisite: None
Hours: 9 hours LEC
There are several different ways to manage change in the organization. Leadership techniques are used in different situations. Care should be taken to understand the need for a change agent. Change is important to the long-term success of all companies. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 266
The Culture of Organizations .5 Units
Formerly: MGMT 93N
Prerequisite: None
Hours: 9 hours LEC
The corporate culture that exists in a business serves as a guide for all business decisions. The three main functions will be covered. Companies with a strong corporate culture are more likely to be more successful. It is important that all publics observe a clear and consistent culture. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 268
Making Employees Feel at Home .5 Units
Formerly: MGMT 93O
Prerequisite: None
Hours: 9 hours LEC
A psychological contract between managers and employees that contains a set of perceived mutual obligations exists. Trust is a critical element of this contract. In the work force of today, many different worker classifications exist in a firm. If workers are made to feel a part of the organization they are more likely to have a higher level of productivity and techniques to accomplish this will be taught. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.
MGMT 270  
Design a Winning Organizational Structure .5 Units  
Formerly: MGMT 93P  
Prerequisite: None  
Hours: 9 hours LEC  
This class deals with the organizational structure and the division of labor. It discusses the basic elements of element structure and includes span of control, centralization, formalization, and departmentalization. Different styles of structures to meet new and changing working conditions will be discussed. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 272  
Interview, Select and Retain Good Employees .5 Units  
Formerly: MGMT 93Q  
Prerequisite: None  
Hours: 9 hours LEC  
This unit deals with the hiring, firing, training and retention of good employees. Emphasis is on determining what the job description and job specification will be for the best employee and then the steps necessary to secure that employee. A variety of techniques to accomplish these goals are discussed. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 274  
Day Trading-Investing on the Internet 1 Unit  
Formerly: MGMT 93R  
Prerequisite: None  
Hours: 18 hours LEC  
This is an opportunity to engage in day trading of stocks in a controlled environment. A basic knowledge of securities is taught. Then the experience of buying and selling stocks on a continuous basis over a limited period of time is engaged in on a controlled basis. This virtual experience does not involve real money, but brings the reality of winning and losing into the class setting. All work must be completed, turned in, and the final exam completed prior to the first day of the regularly scheduled semester finals.

MGMT 299  
Experimental Offering in Management .5-4 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

MGMT 308  
Personnel and Human Resources Management 3 Units  
Formerly: MGMT 22  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course presents the student with the materials necessary to begin the complex study and analysis of such areas as civil rights, labor law, the personnel “Human Resources” organization and various management theories currently found in both public and private sector organization.

MGMT 360  
Management Communication 3 Units  
Formerly: MGMT 21  
Prerequisite: None  
Advisory: MGMT 362.  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course provides skill training in coping with communication problems in organizations and includes the study of the communication process, the analysis of the barriers to effective oral and written communication, and the development of guidelines to improve interpersonal relations within an organization through the effective methods of oral and written communication.

MGMT 362  
Techniques of Management 3 Units  
Formerly: MGMT 24  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
This is a basic course in management that introduces a variety of modern management concepts. This course includes the basic management functions of planning, organization, staffing, leadership, and control. In addition, such concepts as team development, communication, business ethics, and global management perspectives will be discussed.

MGMT 372  
Human Relations and Organizational Behavior 3 Units  
Formerly: MGMT 23  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
Effective human interaction principles that build confidence, competence and positive attitudes in work organizations are learned in this course. Topics that include the basis for human behavior, perception, communication, motivation, performance improvement, group behavior, ethics and social responsibility are major areas of emphasis. This course emphasizes the psychology of human relations management.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>MGMT 495</td>
<td>Independent Studies in Management</td>
<td>1-3 Units</td>
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<td>Prerequisite: None</td>
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<tr>
<td>MGMT 498</td>
<td>Work Experience in Management</td>
<td>1-4 Units</td>
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<td>Formerly: MGMT 98</td>
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<td>Prerequisite: None</td>
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<tr>
<td>MGMT 499</td>
<td>Experimental Offering in Management</td>
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<td>Prerequisite: None</td>
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Marketing

**DEGREE**    A.A.—Marketing

**CERTIFICATE**  Applications of Desktop GIS (Business/Marketing emphasis)
(see page 202)

Marketing is a dynamic area of study that provides immediate job and career opportunities after one course or the completion of a degree. The skills learned are easily converted into well-paying careers by many students. There is no limit to your success when these areas of study are utilized successfully. The skills learned are essential for international and domestic business and for companies large and small. Please refer to the Business section for additional marketing courses.

A rewarding future awaits those who are motivated and enjoy working in one of the following marketing areas:

**Career Options**
- Buyer; Account Executive; Entrepreneur; Investment Counselor; Marketing Services; Stockbroker; Purchasing Agent; Salesperson; Shipping Clerk; Marketing Manager; Export / Import

Some career options may require more than two years of college study.

**Highlights**
- Additional training in courses acceptable as electives for civil service professional occupations
- Opportunities for Work Experience in local industry and business
- Training in a career where one third of the presidents of Fortune 500 corporations have marketing backgrounds
- Coursework in international marketing
- A lab with tutorial assistance

See also
SMALL BUSINESS MANAGEMENT/ENTREPRENEURSHIP Certificate and Degree located in Business section, see page 93.

**Note to Transfer Students:**
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.
DEGREE
A.A.—Marketing
CODE #1177

REQUIRED PROGRAM ......................................................... Units
Business Core:
ACCT 301 (1A) Financial Accounting (4) or
ACCT 101 (60) Fundamentals of College Accounting (3) .. 3-4
BUS 300 (20) Introduction to Business ................................. 3
BUS 310 (8) Business Communication .................................. 3
BUS 330 (15) Managing Diversity in the Workplace ............... 3
BUS 340 (18A) Business Law ............................................... 3
BUS 302 (BUS 41) Computer Keyboarding ............................. 2
CISC 310 (CIS 3) Intro to Computer Information Science (3) or
Four (4) units to include: ................................................... 3-4
CISC 302 (CIS 1X)/JOUR 330 (JOUR 1) Computer Familiariz. (2) and
Any two (2) additional units selected from:
CISA 305 (CIS 11A), 315 (CIS 12A), 320 (CIS 13A),
330 (CIS 17A), 340 (CIS 15A), 350 (CIS 18A);
CISC 320 (CIS 14A), 355 (CIS 16AX)
ECON 302 (1A) Principles of Macroeconomics or
BUS 320 (14)/ECON 320 (14) Concepts of Personal Finance .. 3
MGMT 362 (24) Techniques of Management ............................ 3
Marketing Option:
MKT 300 (20) Principles of Marketing .................................... 3
MKT 310 (22) Selling Professionally or
MKT 330 (21) Internet Marketing ......................................... 3
MKT 312 (24) Retailing (3) or
BUS 350 (25) Small Business Mgmt/Entrepreneurship (3) or
Three (3) units selected from: ............................................ 3
BUS 210 (71A), 212 (71B), 214 (71C), 216 (71D), 218 (71E), 220 (71F),
222 (71G), 224 (71-I).
MKT 314 (26)/CMED 376 (60) Advertising ............................... 3
Three (3) units selected from: ............................................. 3
BUS 498 (98); HCD 130 (61), 132 (51C), 310 (2), 320, 333 (4A),
334 (4B), 340 (5), 342 (8), 344 (9), 350 (43), 362 (6),
TOTAL UNITS REQUIRED ........................................ 41-43

Suggested Electives:
CISA 330 (CIS 17A), 340 (CIS 15A); MKT 120 (50), 122 (51);
MGMT 240, 242, 243, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, (MGMT 93 series); RE 300 (19)

General Education Graduation Requirements - See page 18.

MARKETING A.A. (MKT)

MKT 120
Survey of International Business ................................. 3 Units
Formerly: MKT 50
Prerequisite: None
Hours: 54 hours LEC
This course is a comprehensive overview of international business designed to provide both beginners and experienced business people with a global perspective on international trade including foreign investments, impact of financial markets, and the operation of multinational corporations.

MKT 122
International Marketing ........................................ 3 Units
Formerly: MKT 51
Prerequisite: None
Hours: 54 hours LEC
This course presents the problems of marketing in the international marketplace and how marketers approach and solve them. The course focuses on concepts and principles by teaching the theory and practice of international marketing through the use of practical examples and actual case studies of international, both United States and foreign, marketing organizations. Studies include: international marketing position of the United States, market entry strategies, analysis of foreign markets, culture and marketing, product design, pricing, distribution, promotion and sales.

MKT 132
Basics of Exporting .................................................. 1.5 Units
Formerly: MKT 54A
Prerequisite: None
Hours: 27 hours LEC
This course covers the different aspects of exporting and affords the student a working knowledge of the various terms and techniques essential to exporting. Studies include marketing, organization, regulation, terms of access, documentation, shipment and financing involved with international movement of merchandise, trade patterns by countries and commodities.

MKT 134
Basics of Importing ............................................. 1.5 Units
Formerly: MKT 54B
Prerequisite: None
Hours: 27 hours LEC
This course is an overview of the steps involved in importing a product or service from beginning to end. Course includes an introduction to the United States Customs Service, what customs brokers do, duty rate structure and determination, basic laws affecting imports, currency exchange and letters of credit. Practical advice about storage and transportation of shipments after they have cleared customs will also be shared.

MKT 295
Independent Studies in Marketing .......................... 1-3 Units
Prerequisite: None
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
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<tbody>
<tr>
<td>MKT 299</td>
<td>Experimental Offering in Marketing</td>
<td>.5-4</td>
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<td><strong>Prerequisite:</strong> None</td>
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<tr>
<td>MKT 300</td>
<td>Principles of Marketing</td>
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<td><strong>Formerly:</strong> MKT 20</td>
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<td><strong>Hours:</strong> 54 hours LEC</td>
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<td>This course is a general overview of marketing principles. The course covers the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational goals. Elements of the marketing environment such as government regulation, environmental protection, competition, and consumer behavior will be analyzed.</td>
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<tr>
<td>MKT 310</td>
<td>Selling Professionally</td>
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<td><strong>Formerly:</strong> MKT 22</td>
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<td><strong>Hours:</strong> 54 hours LEC</td>
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<td>This course shows the importance of good selling techniques and the personal qualifications required for effective selling. It emphasizes the development of a business personality and its application to the approach direction, and closing of a sale. It also examines various kinds of selling experience: direct, industrial, wholesale and retail. This course is recommended for men and women preparing for various technical fields as well as all business majors.</td>
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<tr>
<td>MKT 312</td>
<td>Retailing</td>
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<td><strong>Formerly:</strong> MKT 24</td>
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<td><strong>Hours:</strong> 54 hours LEC</td>
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<td>Retailing is a business that provides goods and services to customers for their personal use. This course will study modern retail operations with emphasis on consumer behavior, store location and layout, sourcing of goods, pricing, organization, promotion, management and other pertinent factors of retail operations.</td>
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<td>MKT 314</td>
<td>Advertising</td>
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<td><strong>Formerly:</strong> MKT 26</td>
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<td><strong>Hours:</strong> 54 hours LEC</td>
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<td>This course is an introduction to the field of advertising, its history, purpose, institutions, and functions. Studies are made of the various media used in general advertising, as well as the effective use of these media. Students will produce ads and advertising campaigns. This course is the same as CMED 376, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.</td>
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<tr>
<td>MKT 330</td>
<td>Internet Marketing</td>
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<td><strong>Formerly:</strong> MKT 21</td>
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<td><strong>Hours:</strong> 54 hours LEC</td>
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<td>This course is designed to provide both the novice and skilled business person with a working knowledge of how to use Internet marketing. We will teach students to interact with specialists to devise strategies that build customer relations through technological strategies. These specialists may include network specialists, systems analysts, graphic designers, or web masters. Students will have a good understanding of how this technology can be used to help his/her business be more successful.</td>
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<tr>
<td>MKT 495</td>
<td>Independent Studies in Marketing</td>
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<td><strong>Prerequisite:</strong> None</td>
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<tr>
<td>MKT 498</td>
<td>Work Experience in Marketing</td>
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<td><strong>Formerly:</strong> MKT 98</td>
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<td><strong>Hours:</strong> 18 hours LEC</td>
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<tr>
<td>MKT 499</td>
<td>Experimental Offering in Marketing</td>
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<td><strong>Formerly:</strong> MKT 49</td>
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<td><strong>Hours:</strong> 18 hours LEC</td>
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Mathematics & Statistics

DEGREE A.S.—Mathematics

Mathematics is a multifaceted subject of great beauty and application. The study of mathematics explores some of the deepest puzzles that have ever been encountered and equips the student with a universal language used to study quantities and relationships in all fields. The study of mathematics provides students with the ability to think logically and abstractly and develop the problem-solving and computational skills necessary for success in any field of study.

Career Options
Actuary; Appraiser; Assessor; Auditor; Biometrician; Budget Analyst; Casualty Rater; Controller; Computer Programmer; Demographer; Econometrician; Engineering Analyst; Epidemiologist; Financial Analyst; Investment Analyst; Management Scientist; Mathematician; Operations Researcher; Statistician; Public Opinion Analyst; Surveyor; Systems Analyst; Teacher; Urban Planner

Most of these careers require education beyond the two-year college level.

Highlights
A professional and innovative staff committed to providing the best possible mathematics education, including the use of computers and videos in the teaching of mathematics
A comprehensive mathematics curriculum addressing the needs of both the transfer student and the non-transfer student
A program integrating “hands-on” use of the computer
A math center providing alternative modes of instruction and tutorial support for students
A program that uses assessment for proper placement of students
A Mathematics, Engineering and Science Achievement (MESA) program

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE A.S.—Mathematics
CODE #1404

This degree is designed to meet common lower division requirements for a major in mathematics.

REQUİRED PROGRAM ................................. Units
MATH 400 (9A) Calculus I ................................. 5
MATH 401 (9B) Calculus II ................................. 5
MATH 402 (9C) Calculus III .............................. 5
MATH 420 (11) Differential Equations .................... 4
MATH 410 (35) Introduction to Linear Algebra .......... 3

PLUS select one of the following courses: ........................... 3-4
CISP 340 (CIS 33) FORTRAN Programming (3)
CISP 360 (CIS 32A) Introduction to Structured Programming (4)
CISP 365 (CIS 31) Structured Programming with Pascal (4)
CISP 370 (CIS 38) Beginning Visual BASIC (4)
TOTAL UNITS REQUIRED ......................................... 25-26

Associate of Science Degree (A.S.) may be obtained by completion of the Required Program, plus General Education requirements, plus sufficient electives to meet a 60-unit total.

General Education Graduation Requirements - See page 18.

See page 257 for Mathematics Tree
Mathematics (MATH)

MATH 20
Arithmetic
5 Units
Formerly: MATH 200
Prerequisite: None
Hours: 90 hours LEC
This course provides instruction in the fundamentals of arithmetic with emphasis on computational skills. Topics include whole numbers, fractions, decimals, percents, ratios, proportions, problem solving, and applications.

MATH 21
Arithmetic - Part I
2.5 Units
Formerly: MATH 200A
Prerequisite: None
Hours: 45 hours LEC
This course presents the fundamentals of arithmetic with emphasis on computational skills. Topics include whole numbers, order of operations, primes, multiples, fractions, problem solving, and applications.

MATH 22
Arithmetic - Part II
2.5 Units
Formerly: MATH 200B
Prerequisite: MATH 21 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Hours: 45 hours LEC
This course presents the fundamentals of arithmetic with emphasis on computational skills. Topics include decimals, percents, ratios, proportions, problem solving and applications.

MATH 30
Pre-Algebra Mathematics
5 Units
Formerly: MATH 210
Prerequisite: MATH 20 or 22 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Hours: 90 hours LEC
This course in pre-algebra mathematics emphasizes fundamental operations on integers and decimals as well as in geometric figures, measurement, and algebra. Topics include: fractions; decimals; signed numbers; properties of exponents; scientific notation; conversions; metric system; square and cube roots; formula evaluation; solving equations; ratios; proportions; algebraic manipulations; descriptive statistics; rectangular coordinate system; elementary calculator use.

MATH 81
Academic Skills in Mathematics
.25-2 Units
Formerly: MATH 267A
Prerequisite: None
Hours: 54 hours LAB
This course is designed for students concurrently enrolled in MATH 20, 21, 22, 30, 100, 101, 102, 105, 106, 112 or 125; placement can be made through student request, instructor recommendation, or an assessment process. This laboratory course provides assistance in math skills to students enrolled in a non-transferable mathematics course. Students may enter the course at any time during the semester and earn .25 to 2 units. Students may take the course up to four times, earning a maximum of eight units. This course is graded on a credit/no credit basis. MATH 81 is recommended for students who are encountering difficulties in the areas of math anxiety, basic skills, algebraic concepts or manipulations, graphing, problem solving, etc.

MATH 82
Academic Skills in Mathematics
.25-2 Units
Formerly: MATH 267B
Prerequisite: None
Hours: 54 hours LAB
This course is designed for students concurrently enrolled in MATH 300, 310, 335, 341, 343, 344, 350, 351, 400, 401, 402, 410, 420, or STAT 300. This laboratory course provides assistance in math skills to students enrolled in a transferable mathematics or statistics course. Students may enter the course at any time during the semester and earn .25 to 2 units. Students may take the course up to four times, earning a maximum of eight units. This course is graded on a credit/no credit basis. MATH 82 is recommended for students who are encountering difficulties in the areas of math anxiety, basic skills, algebraic concepts or manipulations, graphing, statistics, problem solving, etc.

MATH 83
Self Study Mathematics Modules
.25-1 Units
Formerly: MATH 268
Prerequisite: None
Hours: 54 hours LAB
The course enables students to review specific math topics which are necessary for success in MATH 20, 30, 100, 105 or any course requiring the skills taught in these classes. Learning objectives and the course of study will be designed for each individual based on the needs of the student. A partial list of modules includes fractions, decimals, signed number arithmetic, percent, simplifying algebraic expressions, factoring, and solving linear equations. The course may be taken for credit a maximum of four times (with new learning objectives/activities each time). Modules cannot replace any existing mathematics course, and successful completion of MATH 83 currently does not satisfy any mathematics prerequisite. MATH 83 is a credit/no-credit class and students can enroll in the class at any time during the semester.
### MATH 100
**Elementary Algebra** 5 Units
Formerly: MATH 51
**Prerequisite:** MATH 30 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
**Hours:** 90 hours LEC
This course presents the fundamental concepts and operations of algebra with problem solving skills emphasized throughout. Topics include: properties of real numbers, linear equations and inequalities, integer exponents, polynomials, factoring polynomials, rational expressions and equations, radical expressions and equations, rational exponents, systems of linear equations and inequalities, the rectangular coordinate system, graphs and equations of lines, and solving quadratic equations. MATH 105 recommended for students who feel they need additional course work before taking MATH 100.

### MATH 101
**Elementary Algebra - Part I** 2 Units
Formerly: MATH 51A
**Prerequisite:** MATH 30 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
**Hours:** 36 hours LEC
This course presents the fundamental concepts and operations of algebra with problem solving and critical thinking skills incorporated throughout. Topics include: review of properties of real numbers and signed numbers; algebraic expressions, solving linear equations and inequalities; solving linear systems of equations; graphing, properties of exponents; operations on polynomials.

### MATH 102
**Elementary Algebra - Part II** 3 Units
Formerly: MATH 51B
**Prerequisite:** MATH 101 or MATH 105 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
**Hours:** 54 hours LEC
A continuation of MATH 101, this course presents the fundamental concepts and operations of algebra with problem solving and critical thinking skills incorporated throughout. Topics covered include: factoring and applications; operations on rational expressions and solving rational equations; rectangular coordinate system; graphing lines and linear inequalities; equation of lines; roots and radical expressions; solving quadratic equations; complex numbers; continued study of problem solving and applications.

### MATH 105
**Basic Algebra with Applications** 5 Units
Formerly: MATH 71
**Prerequisite:** MATH 30 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
**Hours:** 90 hours LEC
This course emphasizes understanding the basic concepts of algebra. Problem solving and critical thinking skills are incorporated throughout. Topics include the use of variables and equations to represent real situations, graphing and interpreting linear and quadratic relationships, solving linear and quadratic equations, solving systems of equations and understanding their relationship to graphs, rewriting algebraic expressions (such as polynomials or rational expressions) in more useful forms by using the properties of exponents, factoring, or the distributive property, and ratios and proportions.

### MATH 106
**Mathematics for Technical Fields** 3 Units
Formerly: MATH 81
**Prerequisite:** MATH 30 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
**Hours:** 54 hours LEC
This course develops basic concepts of algebra and geometry with emphasis on mathematical problem solving. Applications to technical fields will be used to motivate the study of mathematics. Technical applications will include (but are not limited to) electronics, auto mechanics, construction, landscaping, photography, fire science, welding and drafting. This course fulfills the AA/AS general education requirement for communication and analytical thinking; it does not fulfill the mathematics competency requirement, nor does it fulfill the prerequisite for MATH 120.

### MATH 112
**Elementary Geometry** 3 Units
Formerly: MATH 52
**Prerequisite:** MATH 100 or 102 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
**Hours:** 54 hours LEC
This course introduces Euclidean geometry. Topics include the axiomatic system, deductive and inductive reasoning, proof, triangles, quadrilaterals, congruence, similarity, constructions, the Pythagorean Theorem, area, and volume.

### MATH 120
**Intermediate Algebra** 5 Units
Formerly: MATH 53
**Prerequisite:** MATH 100 or 102 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
**Hours:** 90 hours LEC
This course reviews and extends the concepts of elementary algebra with problem solving skills emphasized throughout. Topics which are reviewed and extended include: linear and quadratic equations, factoring polynomials, rational expressions, exponents, radicals, equations of lines, and systems of equations. New topics include: graphs and their translations and reflections, functions, exponential and logarithmic functions, graphs of quadratic and simple polynomial functions, nonlinear systems of equations, quadratic inequalities, and an introduction to graph of circles.

### MATH 125
**Intermediate Algebra with Applications** 4 Units
Formerly: MATH 54
**Prerequisite:** MATH 100 or 102 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
**Hours:** 72 hours LEC
This course is designed for the intermediate algebra student who plans to continue into STAT 300, MATH 310 (Mathematical Discovery), or MATH 343 (Business Mathematics). The course topics include linear behavior, functions and graphs, exponential and logarithmic functions, systems, and polynomial, rational, exponential, logarithmic and radical expressions and equations. This course will feature discovery activities and applications to real data sets and problems which are current and relevant. This course does not fulfill the prerequisite for MATH 335.
MATH 295
Independent Studies in Mathematics 1-3 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

MATH 299
Experimental Offering in Mathematics .5-4 Units
Formerly: MATH 99
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

MATH 300
Introduction to Mathematical Ideas 3 Units
Formerly: MATH 1
Prerequisite: MATH 120 or 125 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to CSU
Hours: 54 hours LEC
This course allows liberal arts students to meet general education mathematics requirements while exploring concepts and objects of mathematics in a meaningful way. It is designed to show some of the essence and quality of mathematics, and to enhance precision in the evaluation and expression of ideas, thereby developing a student’s quantitative reasoning skills. It is recommended primarily for students who do not plan to major in a math-related field, but may be of interest to others as well. Course content may include topics from numberation systems, logic, geometry, probability, statistics, algebraic modeling, number theory, consumer mathematics, graph theory, voting and apportionment, and perhaps others; concepts of contemporary mathematics may be covered. Emphasis is placed on the deductive process.

MATH 310
Mathematical Discovery 3 Units
Formerly: MATH 2
Prerequisite: MATH 112 or Geometry AND MATH 120 or 125 with grades of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to CSU
Hours: 54 hours LEC
This course is designed to introduce students to the spirit of mathematics by involving them in the mathematical process of exploration, conjecture, and proof. Students will explore mathematical patterns and relations, formulate conjectures, and prove their conjectures. Areas of mathematics from which content may be derived include number theory, statistics, probability, geometry, and sequences and series. This course is recommended for students interested in a career in education.

MATH 315
Exploratory Field Experience in Mathematics 3 Units
Prerequisite: MATH 120 or MATH 125 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is an education-based field experience in mathematics designed to allow students to explore the possibility of teaching as a career choice. Students will be assigned to area schools to observe and/or assist in a mathematics classroom and to work with selected students in structured one-on-one group settings. Students will have the opportunity to learn and practice essential skills to assist younger students with their progress through the mathematics sequence. Students will also have the opportunity to learn about social, cultural, and educational issues related to mathematics and the school environment. Weekly seminars will allow students to share experiences and compare observations. This course is recommended for students considering a major in teaching preparation who may wish to pursue either a multiple subject credential or a single subject credential in mathematics. Prior to beginning work in the schools, students may be required to be fingerprinted and pass a TB test. This course may be taken two times for credit.

MATH 335
Trigonometry with College Algebra 5 Units
Prerequisite: MATH 112 AND MATH 120 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to CSU
Hours: 90 hours LEC
This is a full trigonometry course with algebra concepts reviewed, extended, and integrated when they are relevant to the trigonometric concepts. The trigonometric topics include right triangle trigonometry, unit circle trigonometry, graphs of trigonometric functions, proofs of trigonometric identities, solving trigonometric equations, applications of trigonometric functions (law of sines and cosines), and inverse trigonometric functions. The algebra topics include exponential and logarithmic functions, complex numbers, conic sections, the polar coordinate system, and solving equations, inequalities, and systems of equations.

MATH 341
Calculus for Business and Economics 4 Units
Formerly: MATH 43
Prerequisite: MATH 120 or 125 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to UC/CSU; UC - See Counselor
(CAN MATH 34)
Hours: 72 hours LEC
This course offers an introduction to the concepts and techniques of sets, functions, limits, analytic geometry and the differential and integral calculus. This course is intended for business students; it is not recommended for mathematics and physical science majors.

MATH 343
Modern Business Mathematics 4 Units
Formerly: MATH 44
Prerequisite: MATH 120 or 125 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to CSU
Hours: 72 hours LEC
This course is designed around applications of mathematics in an economic and business context. The major topics included are function, finance (interest and exponential models), rates of change, optimization, and linear programming. The content of the course is structured to incorporate tables, graphs and data sets collected from real-world situations. This course is not recommended for mathematics or physical science majors.
MATH 344
Finite Math 3 Units
Formerly: MATH 42
Prerequisite: MATH 120 or MATH 125 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to UC/CSU
(CAN MATH 12)
Hours: 54 hours LEC
Topics covered in this course include set theory, matrix algebra, simplex method of linear programming, Markov process, game theory, mathematics of finance including present value and annuities, and probability and statistics with application in the field of business, social science and biological sciences.

MATH 350
Calculus for the Life and Social Sciences I 3 Units
Formerly: MATH 16A
Prerequisite: MATH 335 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to UC/CSU: UC - See Counselor
(CAN MATH 30)
(With 351, CAN MATH SEQ D)
Hours: 54 hours LEC
This course is an introduction to calculus. Topics include functions, trigonometric functions, limits, analytic geometry, and differential calculus with applications to business, social, and biological sciences. This course is intended for students majoring in social and biological sciences.

MATH 351
Calculus for the Life and Social Sciences II 3 Units
Formerly: MATH 16B
Prerequisite: MATH 350 with a grade of “C” or better.
Course Transferable to UC/CSU: UC - See Counselor
(CAN MATH 32)
(With 350, CAN MATH SEQ D)
Hours: 54 hours LEC
This course is a continuation of MATH 350. Topics include: definite and indefinite integrals, power series, analytic geometry, multivariate calculus, and differential equations with applications to business, social, and biological sciences. Not open to students who have received credit for MATH 401 or higher level mathematics course. See “Cross-Listed Courses” in the catalog.

MATH 370
Pre-Calculus Mathematics 5 Units
Formerly: MATH 29
Prerequisite: MATH 335 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to UC/CSU: UC - See Counselor
(CAN MATH 16)
Hours: 90 hours LEC
This course is designed to prepare students for calculus, MATH 400, 401 and 402. Course content includes a brief review followed by an in-depth extension of the properties of polynomial, rational, exponential, logarithmic and trigonometric functions. Additional topics include systems of linear and non-linear equations and inequalities, conic sections, sequences and series, the binomial theorem, analytic geometry, vectors, parametric, and polar equations. A graphing calculator may be required for this course.

MATH 400
Calculus I 5 Units
Formerly: MATH 9A
Prerequisite: MATH 370 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to UC/CSU: UC - See Counselor
(CAN MATH 18)
(With 401, CAN MATH SEQ B; with 401 and 402, CAN MATH SEQ C)
Hours: 90 hours LEC
This course explores the basic concepts of analytic geometry, limits, derivatives, and integrals. Topics covered will include the graphs, derivatives, and integrals of algebraic, trigonometric, exponential, logarithmic, and hyperbolic functions, and indeterminate forms. Many applications will be covered, including those involving rectilinear motion, differentials, related rates, graphing, and optimization.

MATH 401
Calculus II 5 Units
Formerly: MATH 9B
Prerequisite: MATH 400 with a grade of “C” or better.
Course Transferable to UC/CSU: UC - See Counselor
(CAN MATH 20)
(With MATH 400, CAN MATH SEQ B; with 400 and 402, CAN MATH SEQ C)
Hours: 90 hours LEC
This course is a continuation of MATH 400. Topics covered include techniques of integration, numerical integration, improper integrals, infinite series, parametric equations, polar coordinates, and conic sections. Many applications will be covered including those involving areas between plane regions, volumes of revolution, work, moments and concepts of mass, average value, arc length, and surface area.

MATH 402
Calculus III 5 Units
Formerly: MATH 9C
Prerequisite: MATH 401 with a grade of “C” or better.
Course Transferable to UC/CSU: UC - See Counselor
(CAN MATH 22)
(With MATH 400 and 401, CAN MATH SEQ C)
Hours: 90 hours LEC
This course extends the concepts of limits, derivatives and integrals to vector-valued functions and functions of more than one variable. Topics covered will include three-dimensional analytic geometry and vectors, partial derivatives, multiple integrals, line integrals, surface integrals, and the theorems of Green, Gauss (Divergence), and Stokes. Many applications of the calculus will be included.

MATH 410
Introduction to Linear Algebra 3 Units
Formerly: MATH 35
Prerequisite: MATH 400 with a grade of “C” or better.
Advisory: MATH 402 (may be taken concurrently).
Course Transferable to UC/CSU
(CAN MATH 26)
Hours: 54 hours LEC
This course introduces linear algebra. Topics include matrices, determinants, systems of equations, vector spaces, linear transformations, eigenvectors, and applications. This course is intended for majors in mathematics, engineering, science, and related fields.
MATH 420
Differential Equations 4 Units
Formerly: MATH 11
Prerequisite: MATH 401 with a grade of “C” or better.
Advisory: MATH 402 (may be taken concurrently).
Course Transferable to UC/CSU
(CAN MATH 24)
Hours: 72 hours LEC
This course will cover the theory and the applications of the solutions of ordinary differential equations and systems of ordinary differential equations. The course will introduce students to various topics useful in the solution of these differential equations including power series, Laplace transforms, matrices, eigenvalues and eigenvectors, and numerical methods.

MATH 480
Honors Seminar in Mathematics 1 Unit
Formerly: MATH 47E
Prerequisite: MATH 370 with a grade of “C” or better.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC
Honors Seminars in Mathematics are special one-unit intensive courses for academically accomplished students or those with the potential for high academic achievement. In these seminars, students will study advanced topics from the area of mathematics and will be expected to do independent problem solving and present their solutions to the class. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as HONOR 390. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross-Listed Courses” in the catalog.

MATH 495
Independent Studies in Mathematics 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

MATH 499
Experimental Offering in Mathematics .5-4 Units
Formerly: MATH 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 36 hours LEC ; 54 hours LAB
(See catalog page 21)

Statistics (STAT)

STAT 300
Introduction to Probability and Statistics 4 Units
Formerly: STAT 1
Prerequisite: MATH 120 or 125 with a grade of “C” or better; or equivalent skills demonstrated through the assessment process.
Course Transferable to UC/CSU
(CAN STAT 2)
Hours: 72 hours LEC
This course is an introduction to probability and statistics. Topics include: elementary principles and applications of descriptive statistics, counting principles, elementary probability principles, probability distributions, estimation of parameters, hypothesis testing, linear regression and correlation, and ANOVA. Scientific calculators with two-variable statistics capabilities may be required.

STAT 495
Independent Studies in Statistics 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

STAT 499
Experimental Offering in Statistics .5-4 Units
Formerly: STAT 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

See next page for Mathematics Tree
**Note:** Numbers in parentheses ( ) are from previous catalog numbering system

**Math 106 (81)**
Math for Technical Fields (AA/AS applicable) (does not meet grad. competency)

**Math 100 (51)** (meets AA/AS competency)
Math 100 = Math 101 + Math 102

**Math 101 (51A)**
Elementary Algebra - Part I (does not meet AA/AS competency)

**Math 102 (51B)**
Elementary Algebra - Part II (meets AA/AS competency)

**Math 105 (71)**
Basic Algebra w/Applications (meets AA/AS competency)

**Math 120 (53)**
Intermediate Algebra (AA/AS applicable)

**Math 125 (54)**
Intermediate Algebra with Applications (AA/AS applicable)

**Math 300 (1)**
Math Ideas (CSU)

**Math 30 (210)**
Pre-Algebra (non degree applicable / non transferable)

**Math 310 (2)**
Math Discovery (CSU)

**Math 325**
Transferable math courses for other majors **

**Math 330**
Trigonometry with College Algebra (CSU)

**Math 335 (20)**
Trigonometry with College Algebra (CSU)

**Math 340**
Arithmetic (non degree applicable / non transferable)

**Math 341 (43)**
Calculus for Business & Economics (CSU/UC)

**Math 343 (44)**
Modern Business Mathematics (CSU)

**Math 344 (42)**
Finite Math (CSU/UC)

**Statistics 300 (1)**
Intro to Probability & Statistics (CSU/UC)

**Math 100 = Math 101 + Math 102**

**Math 101 = Math 102**
Elementary Algebra - Part I (does not meet AA/AS competency)

**Math 400 (9A)**
Calculus I (Engineering Calculus) (CSU/UC)

**Math 401 (9B)**
Calculus II (Engineering Calculus) (CSU/UC)

**Math 402 (9C)**
Calculus III (Engineering Calculus) (CSU/UC)

**Math 420 (11)**
Differential Equations (CSU/UC)

**Math 410 (35)**
Intro to Linear Algebra (CSU/UC)

**Math 420 (11)**
Differential Equations (CSU/UC)

**Math 410 (35)**
Intro to Linear Algebra (CSU/UC)

**Math 300 (1)**
Math Ideas (CSU)

**Math 300 (1)**
Math Ideas (CSU)

**Math 370 (29)**
Pre-Calculus Math (CSU/UC)

**Math 350 (16A)**
Calculus for the Life & Social Sciences I (CSU/UC)

**Math 351 (16B)**
Calculus for the Life & Social Sciences II (CSU/UC)

**Math 370 (29)**
Pre-Calculus Math (CSU/UC)

**Math 350 (16A)**
Calculus for the Life & Social Sciences I (CSU/UC)

**Math 351 (16B)**
Calculus for the Life & Social Sciences II (CSU/UC)

**Math 401 (9B)**
Calculus II (Engineering Calculus) (CSU/UC)

**Math 402 (9C)**
Calculus III (Engineering Calculus) (CSU/UC)

**Math 420 (11)**
Differential Equations (CSU/UC)

**Math 410 (35)**
Intro to Linear Algebra (CSU/UC)

**Math 300 (1)**
Math Ideas (CSU)

**Math 300 (1)**
Math Ideas (CSU)
Medical Assisting

DEGREE
A.S.—Medical Assisting

CERTIFICATES
Medical Assisting
Medical Assisting, Administrative
Medical Assisting, Medical Insurance Billing

The CRC Medical Assisting program is designed to prepare students for careers as Medical Assistants in private, state and federal medical offices. Upon completion of an AS degree or certificate in Medical Assisting, students may take the certification exam administered by the Commission on Accreditation of Allied Health Education programs (CAAHEP) on recommendation of the Committee on Accreditation on Medical Assistant Education.

Career Options
Administrative Medical Assistant; Clinical Medical Assistant; Insurance Billing Specialist

Highlights
According to the October 2002 New York Times, Medical Assisting is among the ten “Fastest Growing Occupations, 2000 to 2010” in the United States with a projected growth of nearly 60%.

Eligibility to become members of AAMA and CMAA and CSMA

Required Non-Medical Assisting Courses:
(These courses may be completed prior to or concurrently with the Medical Assisting Program.)
CISC 302 (CIS 1X) Computer Familiarization .......................... 2
COMM 301 (1) Introduction to Public Speaking or COMM 325 (14) Intercultural Communication .................. 3
HEED 320 (14) CPR: BLS for the Professional Rescuer or Current CPR for the Professional Rescuer Certification ... 0-2
PSYC 300 (1) General Principles or PSYC 351 (7) Human Behavior or PSYC 358 (40) Principles of Interpersonal Relationships .. 3

TOTAL UNITS REQUIRED ......................................................35-37

General Education Graduation Requirements - See page 18.
CERTIFICATE
Medical Assisting
 CODE #1184
The CRC Medical Assisting program is designed to prepare students for careers as Medical Assistants in private, state and federal medical offices. Upon completion of a certificate in Medical Assisting, students may take the certification exam administered by the National Board of Medical Examiners. The program is accredited by the Commission on Accreditation of Allied Health Education programs (CAAHEP) on recommendation of the Committee on Accreditation of Medical Assistant Education.

REQUIRED PROGRAM ..................................................... Units
Fall Semester
AH 108 Introduction to Allied Health ......................... 1
AH 110 (54) Medical Language for Health Care Providers ... 3
BIO/L 102 Introduction to Concepts of Human A & P ....... 4
MEDA 100 (50) Introduction to Medical Assisting ............. 3
MEDA 120 (68) Computer Applications for the Medical Office 1
MEDA 122 (69) Medical Office Administration & Insurance .... 3
Spring Semester
AH 120 (63) Human Disease ........................................... 3
MEDA 230 Basic Clinical Procedures ................................ 3
MEDA 240 Advanced Clinical Procedures ........................ 2
MEDA 140 Medical Assisting Practicum ....................... 4

Required Non-Medical Assisting Courses:
(These courses may be completed prior to or concurrently with the Medical Assisting Program.)
BUS 100 (50) English for the Professional (or higher level) .... 3
CISC 302 (CIS 1X) Computer Familiarization ..................... 2
COMM 301 (1) Introduction to Public Speaking or COMM 325 (14) Intercultural Communication .......... 3
HEED 320 (14) CPR: BLS for the Professional Rescuer or Current CPR for the Professional Rescuer Certification . 0-2
PSYC 300 (1) General Principles or PSYC 351 (7) Human Behavior or PSYC 358 (40) Principles of Interpersonal Relations ..... 3
TOTAL UNITS REQUIRED .................................................... 38-40

CERTIFICATE
Medical Assisting, Administrative
 CODE #1185
This curriculum is designed to prepare the individual with office management skills for employment in a physician’s office, laboratories, pharmaceutical companies, health and accident insurance companies, and to teach related duties essential to medical assisting.

REQUIRED PROGRAM ..................................................... Units
Fall Semester
AH 108 Introduction to Allied Health ......................... 1
AH 110 (54) Medical Language for Health Care Providers ... 3
BIO/L 102 Introduction to Concepts of Human A & P ....... 4
MEDA 100 (50) Introduction to Medical Assisting ............. 3
MEDA 120 (68) Computer Applications for the Medical Office 1
MEDA 122 (69) Medical Office Administration & Insurance .... 3
Spring Semester
AH 120 (63) Human Disease ........................................... 3
HEED 320 (14) CPR: BLS for the Professional Rescuer or Current CPR for the Professional Rescuer Certification . 0-2
MEDA 110 (67) Medical Insurance Coding ........................ 2
MEDA 141 Administrative Medical Assisting Practicum .... 3

Required Non-Medical Assisting Courses (These courses may be completed prior to or concurrently with the Medical Assisting Program.)
BUS 100 (50) English for the Professional ......................... 3
CISC 302 (CIS 1X) Computer Familiarization ..................... 2
TOTAL UNITS REQUIRED ..................................................... 28-30

CERTIFICATE
Medical Assisting, Medical Insurance Billing
 CODE #1550
The CRC Medical Insurance Billing Certificate program is designed to prepare students for careers in insurance billing in a medical office setting. The curriculum is designed to give students the desired skills for employment in a physician’s office, ambulatory clinic, or health and accident insurance company.

REQUIRED PROGRAM ..................................................... Units
Fall Semester
AH 110 (54) Medical Language for Health Care Providers .... 3
AH 124 Pharmacology for the Health Care Professional ... 2
BIO/L 102 Introduction to Concepts of Human A & P ....... 4
Spring Semester
AH 120 (63) Human Disease ........................................... 3
HIT 120 (AH 64) Basic ICD-CM Coding ............................. 2
MEDA 110 (67) Medical Insurance Procedures ................ 2
TOTAL UNITS REQUIRED ..................................................... 16

CERTIFICATE
Medical Assisting, Administrative
 CODE #1185
This curriculum is designed to prepare the individual with office management skills for employment in a physician’s office, laboratories, pharmaceutical companies, health and accident insurance companies, and to teach related duties essential to medical assisting.

REQUIRED PROGRAM ..................................................... Units
Fall Semester
AH 108 Introduction to Allied Health ......................... 1
AH 110 (54) Medical Language for Health Care Providers ... 3
BIO/L 102 Introduction to Concepts of Human A & P ....... 4
MEDA 100 (50) Introduction to Medical Assisting ............. 3
MEDA 120 (68) Computer Applications for the Medical Office 1
MEDA 122 (69) Medical Office Administration & Insurance .... 3
Spring Semester
AH 120 (63) Human Disease ........................................... 3
HEED 320 (14) CPR: BLS for the Professional Rescuer or Current CPR for the Professional Rescuer Certification . 0-2
MEDA 110 (67) Medical Insurance Coding ........................ 2
MEDA 141 Administrative Medical Assisting Practicum .... 3

Required Non-Medical Assisting Courses (These courses may be completed prior to or concurrently with the Medical Assisting Program.)
BUS 100 (50) English for the Professional ......................... 3
CISC 302 (CIS 1X) Computer Familiarization ..................... 2
TOTAL UNITS REQUIRED ..................................................... 28-30

CERTIFICATE
Medical Assisting, Medical Insurance Billing
 CODE #1550
The CRC Medical Insurance Billing Certificate program is designed to prepare students for careers in insurance billing in a medical office setting. The curriculum is designed to give students the desired skills for employment in a physician’s office, hospital, ambulatory clinic, or health and accident insurance company.

REQUIRED PROGRAM ..................................................... Units
Fall Semester
AH 110 (54) Medical Language for Health Care Providers .... 3
AH 124 Pharmacology for the Health Care Professional ... 2
BIO/L 102 Introduction to Concepts of Human A & P ....... 4
Spring Semester
AH 120 (63) Human Disease ........................................... 3
HIT 120 (AH 64) Basic ICD-CM Coding ............................. 2
MEDA 110 (67) Medical Insurance Procedures ................ 2
TOTAL UNITS REQUIRED ..................................................... 16

CERTIFICATE
Medical Assisting, Administrative
 CODE #1185
This curriculum is designed to prepare the individual with office management skills for employment in a physician’s office, laboratories, pharmaceutical companies, health and accident insurance companies, and to teach related duties essential to medical assisting.

REQUIRED PROGRAM ..................................................... Units
Fall Semester
AH 108 Introduction to Allied Health ......................... 1
AH 110 (54) Medical Language for Health Care Providers ... 3
BIO/L 102 Introduction to Concepts of Human A & P ....... 4
MEDA 100 (50) Introduction to Medical Assisting ............. 3
MEDA 120 (68) Computer Applications for the Medical Office 1
MEDA 122 (69) Medical Office Administration & Insurance .... 3
Spring Semester
AH 120 (63) Human Disease ........................................... 3
HEED 320 (14) CPR: BLS for the Professional Rescuer or Current CPR for the Professional Rescuer Certification . 0-2
MEDA 110 (67) Medical Insurance Coding ........................ 2
MEDA 141 Administrative Medical Assisting Practicum .... 3

Required Non-Medical Assisting Courses (These courses may be completed prior to or concurrently with the Medical Assisting Program.)
BUS 100 (50) English for the Professional ......................... 3
CISC 302 (CIS 1X) Computer Familiarization ..................... 2
TOTAL UNITS REQUIRED ..................................................... 28-30

Medical Assisting (MEDA)

MEDA 100
Introduction to Medical Assisting 3 Units
Formerly: MEDA 50
Prerequisite: None
Hours: 54 hours LEC
This course provides an introduction to Medical Assisting. The course covers administrative and clerical functions of a medical assistant including patient reception, scheduling appointments, telephone procedures, filing and medical records management, written communications, financial records, professional organizations, personal conduct, health insurance, and HIPAA regulations.

MEDA 110
Medical Insurance Procedures 2 Units
Formerly: MEDA 67
Prerequisite: AH 110. Grade of “C” or better required to meet prerequisite.
Hours: 36 hours LEC
Introduction to health insurance; coding for professional services using CPT, ICD-9-CM and CSN classification systems.
MEDA 120
Computer Applications for the Medical Office 1 Unit
 Formerly: MEDA 68
Prerequisite: None
Corequisite: MEDA 100 (may be taken previously). Grade of “C” or better required to meet corequisite.
Advisory: CISC 302.
Hours: 9 hours LEC ; 27 hours LAB
This course is designed to introduce the student to computer applications in the ambulatory health care setting. Emphasis is placed on building a patient database which can be used to maintain information necessary for billing, for patient contact, to monitor office operations and efficiency, and to generate end-of-period reports.

MEDA 122
Medical Office Administration and Insurance 3 Units
 Formerly: MEDA 69
Prerequisite: None
Corequisite: AH 110 (may be taken previously). Grade of “C” or better required to meet corequisite.
Hours: 45 hours LEC ; 27 hours LAB
This course provides an overview of the administrative duties of a medical assistant including administrative planning, management, supervision, and training of employees; state and federal laws and regulations including income and payroll taxes; principles of credit and collections, selection of collection agencies; procedure manual; personnel contracts and agreements; insurance, ICD-9 and CPT coding.

MEDA 140
Medical Assisting Practicum 4 Units
 Formerly: AH 140
Prerequisite: MEDA 122, 240; HEED 320 or equivalent. Grade of “C” or better required to meet prerequisite.
Hours: 216 hours LAB
This course consists of supervised experience in a health care setting performing the tasks and responsibilities of a medical assistant. Those duties include, but are not limited to, administering injections, performing electrocardiograms, obtaining patient history and chief complaints, scheduling appointments, answering telephones, basic clerical functions and other duties as requested by site physician and/or supervisor. Note: Students will be required to provide documentation of current immunizations or positive titer for: MMR, Varicella, Neg PPD or chest x-ray.

MEDA 141
Administrative Medical Assisting Practicum 3 Units
 Formerly: AH 141
Prerequisite: MEDA 100, 110 and 122. Grade of “C” or better required to meet prerequisite.
Advisory: AH 120.
Hours: 162 hours LAB
This course consists of supervised experience in a health care setting performing the tasks and responsibilities of an administrative medical assistant. Those duties include, but are not limited to, scheduling appointments; answering telephones; filing; preparing insurance claims; and other basic clerical functions as requested by site physician and/or supervisor.

MEDA 230
Basic Clinical Procedures 3 Units
Prerequisite: AH 110. Grade of “C” or better required to meet prerequisite.
Corequisite: MEDA 100. Grade of “C” or better required to meet corequisite.
Hours: 36 hours LEC ; 54 hours LAB
This course will instruct the Medical Assisting student in the following basic clinical procedures: universal precautions; infection control; obtaining vital signs; measuring height/weight on adults and height/weight/head circumference on pediatric patients; instruments and tray set-ups for minor office procedures; sterilization and disinfection techniques; audiometry; ear irrigation; spirometry and aerosol treatments; nutrition to include therapeutic diets; oxygen therapy; minor office emergencies; basic principles of pharmacology pertinent to the Medical Assistant.

MEDA 240
Advanced Clinical Procedures 2 Units
Prerequisite: MEDA 230. Grade of “C” or better required to meet prerequisite.
Hours: 18 hours LEC ; 54 hours LAB
This course will instruct the Medical Assisting student in the following advanced clinical procedures: minor office surgery procedures; suture removal and wound care; bandaging, splinting and wound dressings; electrocardiography; physical therapy modalities including body mechanics; basic radiology principles; intramuscular, subcutaneous and intraarteral injection techniques; basic phlebotomy. Note: Students will be required to provide proof of Hepatitis B vaccination prior to participation in this course.

MEDA 295
Independent Studies in Medical Assisting 1-3 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

MEDA 298
Work Experience in Medical Assisting 1-4 Units
Formerly: MEDA 98
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

MEDA 299
Experimental Offering in Medical Assisting .5-4 Units
Formerly: MEDA 49
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Music

DEGREE A.A.—Music, General

The CRC music program includes vocal and instrumental components as well as courses on music, history, theory, and electronic music. The two-year program in music is designed to provide students with a foundation in music theory and history, in addition to allowing a choice of instrumental, keyboard, or vocal performance areas in which they may specialize.

Career Options
- Music Education; Public and Private Teaching; Vocal Performance;
- Instrumental Performance;
- Music Store Employment & Management;
- Church Music Direction; Composer

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights
- Various avenues for vocal performance—college chorus, choir, chamber singers, contemporary gospel choir
- Various avenues for instrumental performance—college orchestra, jazz band, concert band
- Annual performance tours
- A very talented and highly motivated staff

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE A.A.—Music, General
CODE #1196

REQUIRED PROGRAM ............................................................... Units
MUFHL 310 (10) Survey of Music History and Literature .......... 3
MUFHL 311 (11) Survey of Music History and Literature .......... 3
MUFHL 400 (3A) Music Theory ................................................... 4
MUFHL 401 (3B) Music Theory ................................................... 4
MUFHL 410 (4A) Advanced Music Theory ................................. 4
MUFHL 411 (4B) Advanced Music Theory ................................. 4
MUIVI 340 (30A) Beginning Piano ............................................... 2
MUIVI 341 (30B) Beginning Piano ............................................... 2

Applied Music Study ........................................................................... 8

Eight (8) units from one selected field:
- Instrumental Majors: MUIVI 370 (42A), 371 (42B), 410 (38), 495 (39)
- Keyboard Majors: MUIVI 340 (30A), 341 (30B), 350 (31A), 351 (31B), 410 (38), 495 (39); MUP 418 (32)
- Voice Majors: MUIVI 310 (22A), 311 (22B), 320 (23A), 321 (23B), 410 (38), 495 (30)

Music Performance Group * .......................................................... 8
Eight (8) units from one selected field:
- Instrumental Major: MUP 310 (13), 320 (14), 330 (16), 350 (19), 357 (18), 360 (21); MUIVI 370 (42A), 371 (42B)
- Keyboard Major: MUP 320 (14), 330 (16), 350 (19), 357 (18)
- Voice Major: MUP 350 (19), 357 (18), 360 (21)

*NOTE: All music majors are required to enroll in at least one music performance course each semester they are enrolled.

TOTAL UNITS REQUIRED ............................................................. 42

Suggested Electives:
- ARTH 300 (Art 10); HUM 300 (1) or 310 (2); MUFHL 300 (6), MUSM 370 (9); any additional music courses; PHIL 300 (6); TA 300 (1), 350 (15A).

General Education Graduation Requirements - See page 18.
Music Fundamentals, History & Literature (MUFHL)

MUFHL 300
Introduction to Music 3 Units
Formerly: MUFHL 6
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
Learning to listen to and understand the music of many historic periods and cultures through the features they share: sound sources, time frame, rhythm and meter, pitch, and structure. Designed for the student with no previous musical study.

MUFHL 308
Introduction to Music: Rock & Roll 3 Units
Formerly: MUFHL 8
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course examines social, political, cultural and economic issues as they relate to the history of rock and roll music. Musical examples will develop listening skills and the ability to critique the music orally and in written form. This course is designed for students with no previous musical study.

MUFHL 310
Survey of Music History and Literature 3 Units
Formerly: MUFHL 10
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
A detailed study of the development of music from antiquity to 1750, emphasizing the relation of music to the social, cultural, economic and political factors which produced it. Required for music majors and designed for those particularly interested in the humanities or the arts.

MUFHL 311
Survey of Music History and Literature 3 Units
Formerly: MUFHL 11
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
History of music literature from the beginning of the classical period to music of today, emphasizing the relation of music to the social, cultural, economic and political factors which produced it. Required for music majors and designed for those particularly interested in the humanities or the arts.

MUFHL 315
Jazz History 3 Units
Formerly: MUFHL 12
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an historical, comprehensive, and comparative listeners survey of the traditions of Jazz music from around the world and in the United States, in which concepts of ethnicity, ethnocentrism, racism, ageism, class differences, and gender issues will be addressed. Guided listening presentations will show how African and early African-American musical traditions have led to the development of various improvisational forms and styles, including Ragtime, Swing, Bebop, Free Jazz, Fusion, and Acid Jazz. Jazz style of the Americas, Asia, Africa, India, and Europe will be covered.

MUFHL 321
Basic Musicianship 3 Units
Formerly: MUFHL 2
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
Learning to read and understand (visually, aurally, and kinesthetically) rhythmic, melodic, and harmonic notation, texture and form through keyboard and/or other instruments including voice as a window to music literacy and creativity. Recommended for students with limited musical experience or to those wishing a basic course prior to enrollment in MUFHL 400.

MUFHL 330
World Music 3 Units
Formerly: MUFHL 9
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is a comprehensive, comparative listeners’ survey of the folk ethnic, dance, and ceremonial music traditions around the world and in the United States, in which concepts of ethnicity, ethnocentrism, racism, ageism, class differences, and gender issues will be addressed. Guided listening presentations will show how traditional forms and styles have led to the urban, professional music popular in many countries today known as “World Beat.” Music of the Americas, Africa, Asia, Australasia and Europe will be covered.

MUFHL 400
Music Theory 4 Units
Formerly: MUFHL 3A
Prerequisite: None
Corequisite: MUIVI 340 with a grade of “C” or better (may be taken previously).
Course Transferable to UC/CSU
(with 401, CAN MUS SEQ A)
Hours: 54 hours LEC ; 54 hours LAB
This course is the study of scales, intervals, triads, diatonic harmonies, part writing, rhythms, sight singing, ear training, history and performances. Analysis and composition will be taught. Reading music is a requirement for this course. This course is required for music majors. Students may wish to challenge the corequisite on the basis of equivalent experience.
MUFHL 401
Music Theory 4 Units
Formerly: MUFHL 3B
Prerequisite: MUFHL 400 with a grade of “C” or better.
Course Transferable to UC/CSU
(CAN MUS 4)
(with 400, CAN MUS SEQ A)
Hours: 54 hours LEC; 54 hours LAB
Study of scales, intervals, triads, diatonic harmonies, part writing, rhythms, sight singing, ear training, dictation, history and performance. Includes analysis and composition. Required for music majors. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUFHL 410
Advanced Music Theory 4 Units
Formerly: MUFHL 4A
Prerequisite: MUFHL 401. Grade of “C” or better required to meet prerequisite.
Advisory: Concurrent enrollment in MUIVI 350.
Course Transferable to UC/CSU
Hours: 54 hours LEC; 54 hours LAB
This course is a continuation of MUFHL 400 and 401. Includes study of 16th through 18th century counterpoint, fugue, variation, altered chords, sonata allegro and rondo forms, and late 19th and 20th century writing techniques; practice in rhythmic, melodic, harmonic and contrapuntal sight singing, ear training and diction. Required for music majors. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUFHL 411
Advanced Music Theory 4 Units
Formerly: MUFHL 4B
Prerequisite: MUFHL 410. Grade of “C” or better required to meet prerequisite.
Advisory: Concurrent enrollment in MUIVI 351.
Course Transferable to UC/CSU
Hours: 54 hours LEC; 54 hours LAB
This course is a continuation of MUFHL 400 and 401. Includes study of 16th through 18th century counterpoint, fugue, variation, altered chords, sonata allegro and rondo forms, and late 19th and 20th century writing techniques; practice in rhythmic, melodic, harmonic and contrapuntal sight singing, ear training and diction. Required for music majors. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUFHL 420
Beginning Jazz Theory 2 Units
Formerly: MUFHL 3C
Prerequisite: MUFHL 401. Grade of “C” or better required to meet prerequisite.
Advisory: MUIVI 341.
Course Transferable to UC/CSU
Hours: 27 hours LEC; 27 hours LAB
This course introduces the elements of jazz theory including harmonic, melodic and formal analysis in the jazz idiom.

MUFHL 421
Advanced Jazz Theory 2 Units
Formerly: MUFHL 3D
Prerequisite: MUFHL 420. Grade of “C” or better required to meet prerequisite.
Advisory: MUIVI 341.
Course Transferable to UC/CSU
Hours: 27 hours LEC; 27 hours LAB
This course provides a continuation of jazz concepts presented in MUFHL 420. The emphasis will be advanced elements of jazz theory including harmonic, melodic and formal analysis in the jazz idiom.

MUFHL 495
Independent Studies in Music Fundamentals/History and Literature 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

MUFHL 499
Experimental Offering in Music Fundamentals/History and Literature .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

Instrumental/Voice Instruction (MUIVI)

MUIVI 310
Voice Class 2 Units
Formerly: MUIVI 22A
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC; 18 hours LAB
Training in the correct use of the singing voice, vocal techniques, and repertoire. Required for vocal majors, but open to all students desiring to begin the study of voice.

MUIVI 311
Voice Class 2 Units
Formerly: MUIVI 22B
Prerequisite: MUIVI 310. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 36 hours LEC; 18 hours LAB
Training in the correct use of the singing voice, vocal techniques, and repertoire. Required for vocal majors, but open to all students desiring the study of voice. Students may wish to challenge the prerequisite on the basis of equivalent experience.
MUIVI 320  
Voice Class, Intermediate  
Formerly: MUIVI 23A  
Prerequisite: MUIVI 311. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 18 hours LAB  
Vocal exercise and intellectual analysis for the development of efficient singing technique and skill in performing vocal literature. Performance in class and in recital is essential. Required for vocal majors. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUIVI 321  
Voice Class, Intermediate  
Formerly: MUIVI 23B  
Prerequisite: MUIVI 320. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 18 hours LAB  
Practical application of proper singing techniques with emphasis on English and Italian diction, and English and Italian literature. Performance in class and in recital is essential. Required for vocal majors. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUIVI 340  
Beginning Piano  
Formerly: MUIVI 30A  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 18 hours LAB  
Course is based on conceptual learning which is transferable to all areas of music study. Group activities include ear training, repertoire, sight reading and transposition, technique, improvisation, and written work. Goals are literacy and creativity in music through keyboard application. Recommended for all music majors, preschool and elementary teachers, and required for non-keyboard music majors. May be taken two times for credit.

MUIVI 341  
Beginning Piano  
Formerly: MUIVI 30B  
Prerequisite: MUIVI 340. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 18 hours LAB  
Course is based on conceptual learning which is transferable to all areas of music study. Group activities include ear training, repertoire, sight reading and transposition, technique, improvisation, and written work. Goals are literacy and creativity in music through keyboard application. Recommended for all music majors, preschool and elementary teachers, and required for non-keyboard music majors. May be taken two times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUIVI 350  
Intermediate Piano  
Formerly: MUIVI 31A  
Prerequisite: MUIVI 341. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 18 hours LAB  
Course is based on conceptual learning which is transferable to all areas of music study. Group activities include ear training, repertoire, sight reading and transposition, technique, improvisation, and written work. Goals are literacy and creativity in music through keyboard application. Recommended for all music majors, preschool and elementary teachers, and required for non-keyboard music majors. May be taken two times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUIVI 351  
Intermediate Piano  
Formerly: MUIVI 31B  
Prerequisite: MUIVI 350. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 18 hours LAB  
Course is based on conceptual learning which is transferable to all areas of music study. Group activities include ear training, repertoire, sight reading and transposition, technique, improvisation, and written work. Goals are literacy and creativity in music through keyboard application. Recommended for all music majors, preschool and elementary teachers, and required for non-keyboard music majors. May be taken two times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUIVI 370  
Beginning Guitar  
Formerly: MUIVI 42A  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 18 hours LAB  
Beginning instruction on the guitar with emphasis on the fundamentals of music as well as basic guitar chord technique and accompaniment figurations.

MUIVI 371  
Intermediate Guitar  
Formerly: MUIVI 42B  
Prerequisite: MUIVI 370. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 36 hours LEC ; 18 hours LAB  
A continuation of MUIVI 370 with emphasis on increased skills in chording, arpeggiation, accompaniment, improvisation, melodic reading, and development of personal style. Students may wish to challenge the prerequisite on the basis of equivalent experience.
MUIVI 385
Jazz Styles and Improvisation 2 Units
Formerly: MUIVI 43A
Prerequisite: None
Advisory: Ability to play a melodic instrument or ability to sing; ability to read music.
Course Transferable to UC/CSU
Hours: 27 hours LEC; 27 hours LAB
This course is the study of instrumental and vocal application of jazz improvisation. This course may be taken two times for credit.

MUIVI 386
Jazz Styles and Improvisation 2 Units
Formerly: MUIVI 43B
Prerequisite: MUIVI 385. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 27 hours LEC; 27 hours LAB
This course is the study of advanced instrumental and vocal applications of jazz improvisation. May be taken two times for credit.

MUIVI 400
Beginning Jazz Piano 2 Units
Formerly: MUIVI 33A
Prerequisite: MUFHL 420. Grade of “C” or better required to meet prerequisite.
Advisory: MUIVI 341.
Course Transferable to UC/CSU
Hours: 27 hours LEC; 27 hours LAB
This course is an introduction to the fundamentals of jazz piano. Topics include left-hand voicings, tritone substitution, and scale theory applications to the keyboard. Requires at least five hours per week outside preparation.

MUIVI 410
Applied Music 1 Unit
Formerly: MUIVI 38
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
This course involves off-campus instrumental or vocal study requiring a minimum of one-half hour per week of individual study with a private instructor (at student's expense) for a minimum of 18 weeks. The course meets one hour per week on campus for instruction and performance. The course may be taken four times for credit.

MUIVI 495
Independent Studies in Music/Instrumental/Voice Instruction .5-3 Units
Formerly: MUIVI 39
Prerequisite: None
Course Transferable to UC/CSU
Hours: 162 hours LAB
Independent study designed to provide instrumental training not offered in other CRC music classes. Components of the course may include private or group instruction, solo and ensemble work, accompanying experience, and programmed learning in music fundamentals and music technology. Also for students interested in developing tutorial and/or instructional skills. Each component may be repeated for a total of 3 units, up to a maximum of 9 units.

MUIVI 499
Experimental Offering in Music Instrumental/Voice Instruction .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

Music Performance (MUP)

MUP 310
Orchestra 2 Units
Formerly: MUP 13
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC; 54 hours LAB
This is a course in the study and performance of orchestral music. Public performances are required. Performance participation will be by audition. This course may be taken four times for credit.

MUP 320
Jazz Band 2 Units
Formerly: MUP 14
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC; 54 hours LAB
This course involves study and performance in stage band and stage routine, including performance from special arrangements. Public performances required. May be taken four times for credit.

MUP 321
Advanced Jazz Band 1-2 Units
Formerly: MUP 14A
Prerequisite: MUP 320. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 54 hours LAB
This course is in the continuing study and performance of Jazz Band repertoire. Additional topics include experience in conducting, rehearsal technique and section leading. Public performance and field trips are required. Performance participation will be by audition. This course may be taken four times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.
MUP 330
Concert Band 2 Units
Formerly: MUP 16
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 54 hours LAB
Open to all students who wish to continue their musical training. This course includes public performance and field trips, and meets requirements for all music majors and minors. Students study music literature composed for concert band and perform concert band music. This course is open to all students and may be taken four times for credit. Students may be required to provide their own instruments. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUP 350
College Choir 2 Units
Formerly: MUP 19
Prerequisite: MUP 357. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 72 hours LAB
Study and performance of standard vocal literature from 16th century to modern period. Students are urged to enter during the freshman year. The course is not limited to music majors and is open to all qualified students. Public performances required. May be taken four times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUP 353
Contemporary Gospel Choir 2 Units
Formerly: MUP 22
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 54 hours LAB
This course is designed for the college student who is interested in singing and performing contemporary gospel chorale repertoire. No previous musical experience is necessary. The course is open to all interested singers and musicians. Public performance of the repertoire rehearsed and learned is required. This course may be taken two times for credit.

MUP 357
College Chorus 2 Units
Formerly: MUP 18
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 54 hours LAB
Designed for the college student who is interested in a musical experience. Study and performance of standard choral literature. An all-college group. Public performances required. Musical background is not necessary. May be taken four times for credit.

MUP 360
Chamber Singers 2 Units
Formerly: MUP 21
Prerequisite: None
Advisory: MUP 350.
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 72 hours LAB
Study and performance of choral literature, especially written for chamber ensemble. Prospective members should have considerable previous choral experience. Public performances required. May be taken four times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUP 418
Piano Ensemble 1 Unit
Formerly: MUP 32
Prerequisite: MUIVI 341. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 36 hours LAB
Open to students who read music. Emphasis on ensemble playing and continuing development of Comprehensive Keyboard Musician-ship with emphasis on study and interpretation of piano literature from each historical and stylistic period. May be taken four times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.

MUP 422
Special Ensemble Participation .5-2 Units
Formerly: MUP 43
Prerequisite: None
Corequisite: MUP 310 or MUP 320 or MUP 330, or MUP 357, or the equivalent (may be taken previously). Grade of “C” or better required to meet corequisite.
Course Transferable to CSU
Hours: 54 hours LAB
This course is open to all students who sing, or play a musical instrument. Instrumentation of groups will vary, including jazz combo, piano quintet, guitar ensemble, and related music as well as choral groups. The course may be taken four times for credit.

MUP 495
Independent Studies in Music Performance 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

MUP 499
Experimental Offering in Music Performance .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Specializations in Music  
(MUSM)

MUSM 334  
Introduction to Musical Instrument Digital Interface (MIDI)  
2 Units  
Formerly: MUSM 62  
Prerequisite: None  
Advisory: MUFHL 310 or MUIVI 310.  
Course Transferable to CSU  
Hours: 9 hours LEC ; 81 hours LAB  
This course is an introduction to the rapidly evolving use of professional music software and MIDI electronic instruments. Various music hardware options, including keyboards, synthesizers, samplers, computers and drum machines, will be explored. Through a series of MIDI projects, students learn to use music sequencing, notation, and CAI (computer-assisted instruction) software.

MUSM 370  
Music for Children  
3 Units  
Formerly: MUSM 9  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
Experiences and materials for integrating music into pre-school, elementary, and recreational programs. Recommended for elementary and early childhood credential candidates, recreation leaders, and others who use music with children. Required for Teacher Assistant Program. (See Early Childhood Education)

MUSM 495  
Independent Studies in Music Specializations in Music  
1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

MUSM 499  
Experimental Offering in Music Specializations in Music  
.5-4 Units  
Formerly: MUSM 49  
Prerequisite: None  
Course Transferable to UC/CSU; UC - See Counselor  
(See catalog page 21)
Nutrition and Foods

**DEGREE**  A.S.—Nutrition and Foods; Dietetic Technician

**CERTIFICATES**  Nutrition and Foods, Community Nutrition
                  Nutrition and Foods, Dietetic Technician

CRC’s Department of Nutrition and Foods offers a Dietetic Technician Program that is challenging, accessible, and rewarding. The program provides opportunities to master the knowledge and skills required for professional success in dietetics. The program integrates online teaching with supervised clinical experience in the areas of food and nutrition therapy. The Dietetic Technician Program prepares students to function at the generalist level of dietetic care under the supervision of a registered dietitian. This program has been granted Developmental Accreditation by the Commission on Accreditation for Dietetic Education of the American Dietetic Association. Upon successful completion of the Dietetic Technician Program, students are qualified to take the national registration examination administered through the Commission of Dietetic Registration. Passing this examination certifies the individual as Dietetic Technician, Registered (DTR).

**Career Options**
- Hospitals/nursing homes, school food services, other health related facilities, college food service, industry, restaurant, public health agencies, nutrition program, WIC programs, Meals on Wheels, health clubs, weight management clinic, community wellness centers, food companies, contract food management companies, food distribution companies

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

**Highlights**
- Online courses
- Hands-on practicum experiences
- Job preparation

**Note to Transfer Students:**
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.
DEGREE:
A.S.—Nutrition and Foods, Dietetic Technician
CODE # 1524

Upon completion of an A.S. degree in this field, the student will be fully eligible to take the National Registration Examination to become a Registered Dietetic Technician.

REQUIRED PROGRAM ............................................................. Units
First Year (Fall)
CHEM 305/307  Introduction to Chemistry ......................... 4-5
NUTRI 300 (10) Nutrition ......................................................... 3
NUTRI 330 (16) Food Theory and Preparation or CAM 301 Food Theory and Preparation ..................... 4
BIO L 102  Intro to Concepts of Human A & P ..................... 4
First Year (Spring)
NUTRI 310 (12) Cultural Foods of the World or CAM 302 (64) Food and Culture in America ............. 3
BIO L 310 (16) General Biology ............................................. 4
Second Year (Fall)
PSYC 300 (1) General Principles ............................................. 3
NUTRI 351 (26A) Community Nutrition Practicum ................. 2
NUTRI 351 (26B) Community Nutrition Practicum .................. 2
NUTRI 340 (23) Advanced Nutrition ......................................... 3
NUTRI 322 (15) Nutrition Issues Throughout Life .................. 3
Second Year (Spring)
NUTRI 360 (28A) Medical Nutrition Therapy ......................... 2
NUTRI 361 (28B) Medical Nutrition Therapy Practicum ........... 2
NUTRI 380 (95) Clinical Experience in Health Care Food Serv. .... 2
NUTRI 497 (60) Internship in Nutrition and Foods ................. 3
TOTAL UNITS REQUIRED .......................................................... 9

Note: Course Transferable to UC/CSU
Prerequisite: None
Formerly: NUTRI 10
Hours: 54 hours LEC

CERTIFICATE
Nutrition and Foods, Dietetic Technician
CODE # 1524

The certificate program is designed for students who already have a bachelor's degree in dietetics and are seeking to meet the supervised practice hours (practicum hours) requirement. Upon completion of certificate requirement, students with a bachelor's degree in dietetics will also receive a Verification Statement and be eligible to take the National Registration Examination to become a Registered Dietetic Technician.

REQUIRED PROGRAM ............................................................. Units
NUTRI 351 (26B) Community Nutrition Practicum .................. 2
NUTRI 361 (28B) Medical Nutrition Therapy Practicum ........... 2
NUTRI 380 (95) Clinical Experience in Health Care Food Serv. .... 2
NUTRI 497 (60) Internship in Nutrition and Foods ................. 3
TOTAL UNITS REQUIRED .......................................................... 9

Note: NUTRI 351, 361, and 497 have a prerequisite of NUTRI 300. NUTRI 380 has a prerequisite of NUTRI 330.

Suggested Electives:
NUTRI 350 (26A) Community Nutrition (2)
NUTRI 360 (28A) Medical Nutrition Therapy (2)
NUTRI 370 (16) Culinary Management (2)
NUTRI 380 (95) Clinical Experience in Health Care Food Service (2)
NUTRI 497 (60) Internship in Nutrition and Foods ................. 3
TOTAL UNITS REQUIRED .......................................................... 15

Note: Course Transferable to UC/CSU
Prerequisite: None
Course Transferable to UC/CSU
(CAN FCS 2)
Hours: 54 hours LEC

CERTIFICATE
Nutrition and Foods, Community Nutrition
CODE # 1553

REQUIRED PROGRAM ............................................................. Units
NUTRI 300 (10) Nutrition ......................................................... 3
NUTRI 330 (16)/CAM 301 (52) Food Theory and Preparation or CAM 302 (64) Food and Culture in America (3) ............. 3
NUTRI 310 (12) Cultural Foods of the World (3) or CAM 302 (64) Food and Culture in America (3) ............. 3
NUTRI 351 (26A) Community Nutrition ......................................... 2
NUTRI 322 (15) Nutrition Issues Throughout Life .................. 3
OPTION:
PSYC 300 (1) General Principles ............................................. 3
TOTAL UNITS REQUIRED ......... 15 program units (18 with option)
NUTRI 310
Cultural Foods of the World  3 Units
Formerly: NUTRI 12
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC  
This course compares various western and non-western culture food customs and patterns including their social, religious, economic and aesthetic significance. Ethnocentrism, gender-related stereotypes, and racism as they relate to the availability, distribution, and preparation of food throughout the world will also be compared. The nutritional status of various cultures as it relates to geographic agricultural and socioeconomic factors will be studied. Students who have received credit for CAM 302 should consult with a counselor before enrolling in NUTRI 310.

NUTRI 320
Children's Health, Safety and Nutrition  3 Units
Formerly: NUTRI 14
Prerequisite: None
Advisory: NUTRI 300.
Course Transferable to CSU
Hours: 54 hours LEC  
This course examines basic nutrition, health, and safety needs of children from the prenatal period through school age. Students will identify the nutrients in foods as they affect a child's physical and mental development. The course emphasis is placed on maintaining the optimal health, safety, and nutritional status of children at home and in group care. Projects related to children's nutrition, health, and safety are required as part of the course. This course is the same as ECE 415, and only one may be taken for credit. See "Cross-Listed Courses" in the catalog.

NUTRI 322
Nutrition Issues Throughout Life  3 Units
Formerly: NUTRI 15
Prerequisite: NUTRI 300. Grade of "C" or better required to meet prerequisite.
Course Transferable to CSU
Hours: 54 hours LEC  
This course is a study of the nutritive needs of persons at various stages of the lifecycle with emphasis on special periods such as pregnancy, preschool, adolescence and aging. This course is particularly helpful to Physical Education, Early Childhood Education majors and those dealing with people in social agencies, such as nursing and gerontology.

NUTRI 330
Food Theory and Preparation  4 Units
Formerly: NUTRI 16
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC; 108 hours LAB  
This course provides a comprehensive study of food ingredients and the basic principles and techniques involved in food preparation. It will also examine the factors that influence foods and the changes that occur in foods during preparation. The laboratory emphasizes basic cooking skills and theory applications. The emphasis in this course is on the reasons for procedures and phenomena and prevention and/or correction of cooking failures. This is the foundation course for the beginning student in professional culinary management. Students must have an established Agency Agreement with a sponsoring site prior to the beginning of the first day of class. Contact the Careers and Technology Main Office for information about the Agency Agreement. Students who have received credit for CAM 301 should consult with a counselor before enrolling in NUTRI 330.

NUTRI 340
Advanced Nutrition  3 Units
Formerly: NUTRI 23
Prerequisite: NUTRI 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 54 hours LEC  
This course examines the structure and metabolism of carbohydrate, lipids, and proteins. Time will be spent on the discussion of the biological roles of vitamins and minerals. In addition, this course will help the student integrate the understanding of metabolic knowledge to contemporary and controversial issues in nutrition.

NUTRI 350
Community Nutrition  2 Units
Formerly: NUTRI 26A
Prerequisite: NUTRI 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC  
This course studies the theory, concepts, and philosophy affecting nutrition education and services in the community. Students will be introduced to techniques of interviewing and counseling clients and learn ways to use a variety of teaching methods to improve the nutritional status in a community and with various population groups.

NUTRI 351
Community Nutrition Practicum  2 Units
Formerly: NUTRI 26B
Prerequisite: NUTRI 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 108 hours LAB  
This course should be taken in conjunction with NUTRI 350, Community Nutrition, or the equivalent from transferring college/university. NUTRI 351 provides field study and fieldwork involving practical experiences in community nutrition programs. Students will be exposed to working in the community health field such as WIC, Senior Feeding sites, Head Start, Congregate Feedings sites, among others, and depending on field placement. Students will directly interact with clients and assist in the implementation of health programs. Students must have a TB clearance and any other immunization required by the clinical facility. Students must have an established Agency Agreement with a sponsoring site prior to the beginning of the first day of class. Contact the Careers and Technology Main Office for information about the Agency Agreement.
NUTRI 360
Medical Nutrition Therapy  2 Units
Formerly: NUTRI 28A
Prerequisite: NUTRI 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC
This course studies medical nutrition therapies as they are used in health care facilities. The emphasis will be on modification of diets for various dietary needs, nutritional screening, assessment, care plan, education, and medical charting. In addition, students will also examine the role of the Diet Technician and Registered Dietitian in the health care setting.

NUTRI 361
Medical Nutrition Therapy Practicum  2 Units
Formerly: NUTRI 28B
Prerequisite: NUTRI 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 108 hours LAB
This course should be taken in conjunction with NUTRI 360, Medical Nutrition Therapy, or the equivalent from transferring college/university. This course provides clinical experiences in dietary/nutrition departments of participating acute hospitals and/or long-term care facilities. The clinical experience is performed under the provision of a Registered Dietitian or authorized persons. Students must have a TB clearance and any other immunization required by the clinical facility. Students must have an established Agency Agreement with a sponsoring site prior to the beginning of the first day of class. Contact the Careers and Technology Main Office for information about the Agency Agreement.

NUTRI 370
Culinary Management  2 Units
Formerly: NUTRI 57
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC
This course will study the organization, planning, and control of production for a quantity culinary operation. This course also examines the process and importance of food service functions such as menu planning and pricing, scheduling of staff and production, portion and temperature control, recipe standardization and scaling, and elements of culinary layout and design. Students who have received credit for CAM 320 should consult with a counselor before enrolling in NUTRI 370.

NUTRI 380
Clinical Experience in Health Care Facilities Food Service  2 Units
Formerly: NUTRI 95
Prerequisite: NUTRI 330 or CAM 301. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 18 hours LEC ; 90 hours LAB
This course should be taken in conjunction with NUTRI 370 or the equivalent from transferring colleges/universities. The course is designed to provide students with the field study and field work involving practical experiences in food service facilities. This course includes 90 hours of clinical experience in the dietary departments of participating acute hospitals, long-term care facilities, and/or other large food production sites. The clinical experience is performed under professional supervision. Students must have a TB clearance and any other immunization required by the clinical facilities. Students must have an established Agency Agreement with a sponsoring site prior to the beginning of the first day of class. Contact the Careers and Technology Main Office for information about the Agency Agreement.

NUTRI 495
Independent Studies in Nutrition & Foods  1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

NUTRI 497
Internship in Nutrition and Foods  1-3 Units
Formerly: NUTRI 60
Prerequisite: NUTRI 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 162 hours LAB
This course is designed to provide the student with direct observation and supervised work experience in an approved site. Experiences are offered for the purpose of increasing knowledge and understanding in dietetics and nutrition services. Supervision is provided by Registered Dietitians or authorized persons in the cooperating agencies and collaborative supervision by Nutrition and Foods faculty. Students must have a TB clearance and any immunization required by the clinical facility. Students must have an established Agency Agreement with a sponsoring site prior to the beginning of the first day of class. Contact the Careers and Technology Main Office for information about the Agency Agreement.

NUTRI 499
Experimental Offering in Nutrition and Foods .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Philosophy

Philosophy is the logical examination of the fundamental issues people have pondered for over 2500 years. What is reality and what is beauty? What is knowledge and truth? What is good and just? Does human existence have meaning and does God exist? Philosophy courses are directed toward understanding these questions in their historical and cultural contexts and applying insights to contemporary life. Rigorous philosophical study will improve one’s critical thinking skills.

Career Options
Education; Ethics; Management; Law; Government; Publishing; Religious Service; Scientific Research; Social Work; Teaching; All Human Service Careers

Some career options may require more than two years of college study.

Highlights
Dedicated and enthusiastic instructional staff with expertise in critical thinking and ethics
Excellent transfer preparation by emphasizing critical writing and reading
Examination of traditional philosophical issues

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

Philosophy (PHIL)

PHIL 300
Introduction to Philosophy
3 Units
Formerly: PHIL 6
Prerequisite: None
Course Transferable to UC/CSU
(CAN PHIL 2)
Hours: 54 hours LEC
This course will focus on critical thinking techniques and apply them to the following philosophical areas: metaphilosophy, theory of knowledge, metaphysics, ethics, political philosophy, and philosophy of religion. In applying critical thinking techniques to philosophical problems, students are encouraged to develop their own philosophical perspective and world view. The quality and quantity of the courses required writing will reflect the standards of a second semester composition course.

PHIL 304
Introduction to Eastern Philosophy
3 Units
Formerly: PHIL 3
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course provides an introduction to the philosophical traditions of Hinduism, Buddhism, Taoism and Confucianism focusing on metaphysics, epistemology, and ethics.
PHIL 310
Introduction to Ethics 3 Units
Formerly: PHIL 5
Prerequisite: None
Course Transferable to UC/CSU
(CAN PHIL 4)
Hours: 54 hours LEC
The application of theories developed by traditional and contemporary moral philosophy to the ethical problems, dilemmas, and issues of today.

PHIL 320
Logic and Critical Reasoning 3 Units
Formerly: PHIL 4
Prerequisite: None
Course Transferable to UC/CSU
(CAN PHIL 6)
Hours: 54 hours LEC
An introduction to basic principles and frameworks of logic and critical thinking appropriately used in argument analysis: deduction, induction, fallacy recognition. Emphasis on developing analytical skills and applying principles of good reasoning to the arguments encountered in life. Argument topics from academic fields and textbooks, the electronic and print media, advertisements, politics and ethics may be considered. The quality and quantity of the courses required writing will reflect the standards of a second semester composition course.

PHIL 325
Symbolic Logic 3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course introduces sentential and predicate logic by introducing logical symbolism, truth tables, methods of formal analysis and methods of formal proof including natural deduction. It is recommended for students of the sciences, computer programming, mathematics, linguistics, law, and philosophy.

PHIL 328
Critical Reasoning and Composition 3 Units
Formerly: PHIL 2
Prerequisite: ENGWR 300. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC
Instruction in critical thinking, including traditional logic, and in advanced composition. A series of writing assignments will focus on increasing the sophistication of argumentative essay skills. Essays shall be evaluated for their quality in both critical thinking and composition. Theoretical models of critical thinking and composition shall be applied to academic fields and textbooks, electronic and print media, advertisements, ethics, politics, and multi-cultural issues.

PHIL 330
History of Classical Philosophy 3 Units
Formerly: PHIL 20
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is a survey of the origin and development of Western Philosophy from the period of the ancient Greeks and Romans, and continuing through the Middle Ages. This course is especially recommended for all philosophy, history and humanities majors.

PHIL 331
History of Modern Philosophy 3 Units
Formerly: PHIL 21
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is a survey of the development of Western Philosophy from the period of the Renaissance through the period of modern Europe and America. This course is especially recommended for all philosophy, history and humanities majors.

PHIL 338
Contemporary Philosophy 3 Units
Formerly: PHIL 8
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
A comprehensive study of the basic ideas of pragmatists, twentieth century metaphysicians, philosophers of language, and existentialists. Special attention will be given to relevance of their ideas to modern life.

PHIL 350
Philosophy of Religion 3 Units
Formerly: PHIL 10
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
A historical and topical survey of the questions, problems, and theories philosophers have developed in attempts to understand religion as a fundamental impulse within human experience and as a major cultural force. Rather than survey the different religions, this course considers the basic philosophical beliefs and concepts that seem auxiliary to religion. Topics explored include: the possibility of religious knowledge, faith versus reason, theistic arguments, conceptions of God, religious language, atheism, agnosticism, mysticism, the problem of evil, immortality, the challenge of science, and religion's influence on ethics and politics.
PHIL 352
Introduction to World Religions 3 Units
Formerly: PHIL 9
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course will introduce students to the major world religious traditions, including indigenous sacred ways, Hinduism, Buddhism, Taoism and Confucianism, Judaism, Christianity and Islam. Students will study the practices and beliefs of each tradition, and will read selected material from the sacred writings of each tradition. Also considered is the influence of world religions in contemporary United States society, focusing on ethnicity, ethnocentrism, racism, ageism, class differences, and gender issues.

PHIL 356
Introduction to the Bible 3 Units
Formerly: PHIL 16
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course surveys the literary, historical, ethical, theological and philosophical themes of the Bible. Students will read extensive passages from the Hebrew and Christian Scriptures with special focus on text criticism, the development of Monotheism, the social justice tradition of the Prophets, the Gospels and the “Jesus Problem,” and the early development of the Christian Church.

PHIL 360
Philosophy of Social Sciences 3 Units
Formerly: PHIL 7
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
A historical, methodological, and topical survey of significant themes of social and political philosophy from Plato to our present times: authority, freedom, government, justice, law, rights, society and the state.

PHIL 495
Independent Studies in Philosophy 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

PHIL 499
Experimental Offering in Philosophy .5-4 Units
Formerly: PHIL 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Photography

**DEGREE**
A.A.—Photography

**CERTIFICATES**
Photography
- Portraiture and Wedding Photography
- Commercial & Studio Photography
- Desktop Publishing (see page 114)

CRC’s program is designed to teach skills for entry-level positions in the photographic industry or for advanced students wishing more specialized skills. This program will also be of value to the student interested in photography as an avocation or an adjunct to a vocation.

Flexibility of the advanced program allows a student to concentrate upon a specific photographic career area.

Students planning to prepare for a four-year degree in Photography should consult the lower division requirements of the university to which they plan to transfer.

**Career Options**
- Commercial Illustration and Advertising
- Portrait & Wedding Photography
- Photographic Lab Technician
- Photojournalism; Industrial Photography
- Fashion & Glamour Photography
- Architectural Photography

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

**Highlights**
- Modern Lab and Studio Facilities
- Sixteen Color Enlargers
- Sixteen Black & White Enlargers
- Digital Imaging, Black/White Paper Processor
- Digital Printer
- 20” Ektaprint Rapid Access Processor
- Color Film Processor
- Digital Imaging Facility

- Field Trips to a variety of photographic businesses in the Sacramento, Bay Area, and Yosemite, Eastern Sierras, Special Seminars

**Note to Transfer Students:**
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

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**DEGREE**
A.A.—Photography

**CODE #1059**

<table>
<thead>
<tr>
<th>REQUIRED PROGRAM</th>
<th>Mass Media &amp; Society</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMED 300 (5)</td>
<td>310 (10)</td>
<td>3</td>
</tr>
<tr>
<td>CMED 330 (54)</td>
<td>Basic Film/Video Camera Techniques</td>
<td>3</td>
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<tr>
<td>PHOTO 300 (1)</td>
<td>Photography-Its Influence in Contemp. Society</td>
<td>1</td>
</tr>
<tr>
<td>PHOTO 301 (40)</td>
<td>Beginning Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHOTO 310 (41)</td>
<td>Intermediate Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHOTO 320 (42)</td>
<td>Color Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHOTO 340 (43)</td>
<td>Careers in Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHOTO 400 (57)</td>
<td>Digital Imaging</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 362 (24)</td>
<td>Techniques in Management</td>
<td>3</td>
</tr>
<tr>
<td>COMM 301 (1)</td>
<td>Introduction to Public Speaking or COMM 361 (9)</td>
<td>The Communication Experience</td>
</tr>
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</table>

**TOTAL UNITS REQUIRED** .................................................. 28

**Suggested Electives:**
- ACCT 101 (60), 301 (1A); ARTH 300 (Art 10); ART 300 (11A), 302 (11B); MKT 310 (22);
- CHEM 305/307 (2A); CMED 304 (70), 360 (80), 376 (60);
- PHOTO 330 (45), 360 (47), 362 (51), 370 (52), 375 (53).

**General Education Graduation Requirements** - See page 18.
CERTIFICATE
Photography
CODE #1059

REQUIRED PROGRAM ............................................................. Units
PHOTO 300 (1) Photography-Its Influence in Contemp. Society .... 1
PHOTO 301 (40) Beginning Photography .................................... 3
PHOTO 310 (41) Intermediate Photography ............................... 3
PHOTO 320 (42) Color Photography ......................................... 3
PHOTO 340 (43) Careers in Photography .................................... 3
PHOTO 390 (50) Studio Lighting Techniques ............................... 3
PHOTO 400 (57) Digital Imaging .............................................. 3
PHOTO 375 (53) Fashion-Glamour Photography ....................... 3
TOTAL UNITS REQUIRED .................................................... 22

CERTIFICATE
Portraiture and Wedding Photography
CODE #1214

REQUIRED PROGRAM ............................................................. Units
PHOTO 300 (1) Photography-Its Influence in Contemp. Society .... 1
PHOTO 301 (40) Beginning Photography .................................... 3
PHOTO 310 (41) Intermediate Photography ............................... 3
PHOTO 320 (42) Color Photography ......................................... 3
PHOTO 340 (43) Careers in Photography .................................... 3
PHOTO 390 (50) Studio Lighting Techniques ............................... 3
PHOTO 370 (52) Portraiture and Wedding Photography ............... 3
PHOTO 375 (53) Fashion-Glamour Photography ....................... 3
TOTAL UNITS REQUIRED .................................................... 22

CERTIFICATE
Commercial and Studio Photography
CODE #1060

REQUIRED PROGRAM ............................................................. Units
PHOTO 300 (1) Photography-Its Influence in Contemp. Society .... 1
PHOTO 301 (40) Beginning Photography .................................... 3
PHOTO 310 (41) Intermediate Photography ............................... 3
PHOTO 320 (42) Color Photography ......................................... 3
PHOTO 340 (43) Careers in Photography .................................... 3
PHOTO 330 (45) Advanced Color Photography or
PHOTO 400 (57) Digital Imaging .............................................. 3
PHOTO 360 (47) Large Format Photography ............................... 3
PHOTO 390 (50) Studio Lighting Techniques ............................... 3
PHOTO 362 (51) Zone System .................................................. 3
PHOTO 392 (56) Commercial & Advertising Photography ............. 3
TOTAL UNITS REQUIRED .................................................... 28

Field Study Classes
at Cosumnes River College

Nature is often the best classroom! Come learn outside in Cosumnes River College’s field study courses. These classes consist of short classroom sessions followed by extended trips to some of the most unique and beautiful environments in California, including Big Sur, Monterey Bay, Mt. Lassen, Point Reyes, Yosemite and more! These short-term classes are offered by several departments, including Biology, Geography, Geology, Photography, and Physical Education. For more information about specific classes, consult the class schedule or visit the Los Rios Field Study Consortium website at: www.losrios.edu/fieldstudy.

Photography (PHOTO )

PHOTO 260
The Eastern Sierra Landscape,
Yosemite Valley 2 Units
Formerly: PHOTO 90A
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
This course is designed to give students an opportunity to study topics not included in current course offerings. Students will participate in a landscape photography workshop in the Eastern Sierra emphasizing the Yosemite Valley. The course will include a variety of topics including black and white, infrared, color slide and negative, large format and low light photography. Students will be responsible for their own food, accommodations and photographic materials. Field trip fees may be applied to offset travel and accommodations. This course may be taken two times for credit.

PHOTO 262
The Eastern Sierra Landscape,
Mono Lake Basin 2 Units
Formerly: PHOTO 90B
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
This course is designed to give students an opportunity to study topics not included in current course offerings. Students will participate in a landscape photography workshop in the Eastern Sierra emphasizing the Mono Lake Basin. The course will include a variety of topics including black and white, infrared, color slide and negative, large format and low light photography. Students will be responsible for their own food, accommodations and photographic materials. Field trip fees may be applied to offset travel and accommodations. This course may be taken two times for credit.

PHOTO 264
The Pacific Coast Landscape 2 Units
Formerly: PHOTO 90C
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
This course is designed to give students an opportunity to study topics not included in current course offerings. Students will participate in a landscape photography workshop emphasizing the Pacific Coast. The course will include a variety of topics including black and white, infrared, color slide and negative, large format and low light photography. Students will be responsible for their own food, accommodations and photographic materials. Field trip fees may be applied to offset travel and accommodations. This course may be taken two times for credit.
PHOTO 280
Portfolio Development .5-3 Units
Formerly: PHOTO 90D
Prerequisite: PHOTO 301. Grade of “C” or better required to meet prerequisite.
Hours: 18 hours LEC ; 54 hours LAB
This course is designed for advanced students to develop their portfolios both for creative and professional purposes. Individual style, presentation methods, and forums for distribution and exhibition will be stressed. Topics of discussion will include: developing a personal visual style, self publishing, on-line promotion, and conferences and workshops. The format of the class includes lectures, lab time, fieldtrips, and critique sessions. This course may be taken two times for credit. A lab fee is charged for all studio classes.

PHOTO 294
Topics in Photography .5-4 Units
Formerly: PHOTO 90
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

PHOTO 295
Independent Studies in Photography 1-3 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

PHOTO 299
Experimental Offering in Photography .5-4 Units
Formerly: PHOTO 99
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

PHOTO 300
Photography - Its Influence in Contemporary Society 1 Unit
Formerly: PHOTO 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC
This course is a survey of important historical and contemporary photographers, designed to expose the student to various fields of photography. In our society, we are overwhelmed by visual information of all kinds. This course intends to increase visual literacy. The format of the class includes: slide presentations, discussions, written tests and a journal.

PHOTO 301
Beginning Photography 3 Units
Formerly: PHOTO 40
Prerequisite: None
Corequisite: PHOTO 300 (may be taken previously). Grade of “C” or better required to meet corequisite.
Course Transferable to UC/CSU
(CAN ART 18)
Hours: 36 hours LEC ; 54 hours LAB
This course combines lectures and hands-on experience in black and white photography. Instruction includes: camera function, exposure control, film processing, enlarging prints, low light photography, and print finishing. Creative control and elements of composition will also be stressed. The format of the class includes lectures, slide presentations, lab time, written tests and a portfolio. Students may wish to challenge the prerequisite on the basis of equivalent experience. A lab fee is charged for all studio classes. This course is the same as ART 410. This course, under either name, may be taken only one time for credit. See “Cross-Listed Courses” in the catalog.

PHOTO 302
Beginning Digital Photography 3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course introduces students to digital cameras through lectures, hands-on experience and computer use. Instruction includes digital camera function, technical and creative control, computer manipulation of images, and digital output options.

PHOTO 310
Intermediate Photography 3 Units
Formerly: PHOTO 41
Prerequisite: PHOTO 301. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is designed to expand on the concepts, both technical and creative, acquired in Beginning Photography. Topics of instruction include: exposure and development control, archival printing, introduction to medium and large format photography and studio lighting techniques, print toning, high contrast photography, and several alternative methods of black and white print manipulation. The class includes lectures, slide presentations, lab time, written tests, and a portfolio. This course may be taken two times for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience. A lab fee is charged for all studio classes.

PHOTO 320
Color Photography 3 Units
Formerly: PHOTO 42
Prerequisite: PHOTO 310. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course covers the fundamental principles of color photography. Topics of instruction include: correct exposure for color negative films, processing color negatives, printing from color negatives, use of color processors, techniques to determine correct color balance, and retouching color prints. The course includes lectures, slide presentations, lab time, written tests, a journal and a portfolio. A lab fee is charged for all studio classes.
PHOTO 330
Advanced Color Photography 3 Units
Formerly: PHOTO 45
Prerequisite: PHOTO 320. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course covers color slide processes and their practical applications. Topics of instruction include correct exposure for color slide film under a variety of lighting conditions, processing and mounting color slides, printing from color slides, use of Hope color processor, color densitometry and process control management, and production of color display materials. The course includes lectures, lab time, written tests, a journal and a portfolio. Students may wish to challenge the prerequisite on the basis of equivalent experience. A lab fee is charged for all studio classes.

PHOTO 340
Careers in Photography 3 Units
Formerly: PHOTO 43
Prerequisite: PHOTO 320. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is designed to give students an overview of different careers available in the photographic industry. Fields of study include portraiture, wedding photography, fashion, commercial and tabletop, photojournalism and fine-art photography. Students are encouraged to pursue their own area of interest through the production of a portfolio, and working with professionals in the field. The class includes lectures, studio visits, lab time, written tests, a journal, and completion of a resume, price list, and a portfolio geared towards clients. Students may wish to challenge the prerequisite on the basis of equivalent experience. A lab fee is charged for all studio classes.

PHOTO 350
Photojournalism 3 Units
Formerly: PHOTO 44
Prerequisite: PHOTO 310. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course provides instruction in camera and photojournalism techniques in black and white and color photography. Exposure control and darkroom techniques are emphasized. Digital photography will be covered as well. A print portfolio or digital portfolio will be completed. Students must provide their own single lens reflex camera and related materials. A lab fee is charged for all studio classes.

PHOTO 360
Large Format Photography 3 Units
Formerly: PHOTO 47
Prerequisite: PHOTO 310. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is designed to give students a thorough knowledge of view camera operation, both in the studio and in the field. Topics of instruction include view camera movements to obtain unlimited focus and perspective, correct techniques for exposing, and processing sheet film, adjustments necessary to print large format negatives, and presentation of the large format image. Students may work in black and white, color or both. The course includes lectures, lab time, studio time, written tests, a journal and a portfolio. Students are urged to provide their own large format camera. Students may wish to challenge the prerequisite on the basis of equivalent experience. A lab fee is charged for all studio classes.

PHOTO 362
Zone System 3 Units
Formerly: PHOTO 51
Prerequisite: PHOTO 310. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is an advanced study in the zone system in black and white, designed to give the student an in-depth understanding both in theory and practice. Topics include metering exposure for appropriate zone placement, processing control for accurate negative contrast, testing of photographic materials including densitometry. Students are encouraged to use a variety of formats. The course includes lectures, lab time, written tests, field trips, a journal and a portfolio. Students may wish to challenge the prerequisite on the basis of equivalent experience. A lab fee is charged for all studio classes.

PHOTO 370
Portraiture and Wedding Photography 3 Units
Formerly: PHOTO 52
Prerequisite: PHOTO 320. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is designed to provide students with an overview of the portraiture and wedding photography business. Topics include techniques of lighting, use of appropriate films and formats, and professional practices and strategies for beginning business. Students are urged to work in color. The course includes lectures, lab time, on-location field trips, written tests, a journal and a portfolio geared toward a professional presentation. Students may wish to challenge the prerequisite on the basis of equivalent experience. A lab fee is charged for all studio classes.
PHOTO 375
Fashion-Glamour Photography 3 Units
Formerly: PHOTO 53
Prerequisite: PHOTO 320. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is designed to provide students with a basic understanding of the fashion photography industry. Topics include advanced studio lighting techniques, basic styling for hair and make-up, posing models, and professional practices. Students may work in both black and white and color. The course includes lectures, slide presentations, field trips, lab time, written tests, a journal and a portfolio geared toward a professional presentation. Students may wish to challenge the prerequisite on the basis of equivalent experience. A lab fee is charged for all studio classes.

PHOTO 390
Studio Lighting Techniques 3 Units
Formerly: PHOTO 50
Prerequisite: PHOTO 320. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is a study in studio lighting techniques used in commercial photography. Topics of instruction include lighting ratios, correct exposure using strobe, basic portraiture and advertising, appropriate choice of camera formats and films, and studies in composition of commercial photographs. Students are encouraged to work in a variety of formats, using black and white and color. The course includes lectures, slide presentations and discussions, on-location field trips, lab time, written tests, a journal, and a portfolio. Students may wish to challenge the prerequisite on the basis of equivalent experience. A lab fee is charged for all studio classes.

PHOTO 392
Commercial and Advertising Photography 3 Units
Formerly: PHOTO 56
Prerequisite: PHOTO 320. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is a concentrated study in studio lighting techniques used in the production of advertising photographs. Topics of instruction include advanced studio lighting techniques, correct exposure using strobe, appropriate choice of camera format and films, studies in composition and meaning of advertising photographs and market research. Students are encouraged to work in a variety of formats. The course includes lectures, slide presentations and discussions, on-location field trips, lab time, written tests, a journal and a portfolio geared toward a professional presentation. Students may wish to challenge the prerequisite on the basis of equivalent experience. A lab fee is charged for all studio classes.

PHOTO 400
Digital Imaging 3 Units
Formerly: PHOTO 57
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This is an introductory course in digital imaging and electronic desktop photography. Methods currently used in publishing will be emphasized. The course includes lectures, use of computers and scanners, slide presentations, occasional off-campus class meetings, and preparation of a notebook and a digital portfolio. A fee is charged for digital printing.

PHOTO 410
Advanced Digital Imaging 3 Units
Formerly: PHOTO 59
Prerequisite: PHOTO 400. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is an advanced study of digital imaging and related software programs. Methods currently used in publishing will be emphasized. The course includes lectures, use of computers, scanners, and a variety of output devices, and preparation of a digital portfolio. This course will introduce the student to the emerging field of multi-media and visit various local businesses. A fee is charged for digital printing.

PHOTO 495
Independent Studies in Photography 1-3 Units
Formerly: PHOTO 491
Prerequisite: PHOTO 310. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
This course is designed to allow advanced students to pursue and research their photographic interests and receive credit. Students must provide a proposal outlining their area of interest and arrange meetings with an instructor. Students may wish to challenge the prerequisite on the basis of equivalent experience.

PHOTO 498
Work Experience in Photography 1-4 Units
Formerly: PHOTO 98
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

PHOTO 499
Experimental Offering in Photography .5-4 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Physical Education & Athletics

DEGREE: A.A.—Physical Education
CERTIFICATE: Coaching

Red Cross Lifesaving Certification (see Health Education)

Water Safety Instruction Certification (W.S.I.)

The Cosumnes River College Physical Education program offers a wide variety of physical education classes, including Fitness, Dance, Aquatics, Self Defense, Individual Sports, Team Sports, Intercollegiate Athletics, and Physical Education Theory classes. The program in Physical Education outlined below is typical of lower-division requirements for four-year colleges and universities (though some requirements tend to vary from college to college). For specific requirements, students should refer to a catalog of the college of their choice. Students are also advised to see a counselor before selecting the courses best aligned with their transfer institution.

Career Options
- Physical Education Instructor/Assistant;
- Coach; Athletic Trainer; Recreational Supervisor

Most career options require a Bachelor’s degree. Classes beyond the Associate Degree may be required for preparation for transfer to a University program.

Highlights
- A wide variety of physical education options
- Outstanding facilities that include a state of the art fitness center, competitive aquatic facilities, baseball stadium, state of the art community and athletic center, second gymnasium, soccer/football stadium
- 2 FIFA sized soccer fields with scoreboards, softball stadium, 8 championship tennis courts and numerous physical education fields.

Field Study Classes at Cosumnes River College

Nature is often the best classroom!
Come learn outside in Cosumnes River College’s field study courses. These classes consist of short classroom sessions followed by extended trips to some of the most unique and beautiful environments in California, including Big Sur, Monterey Bay, Mt. Lassen, Point Reyes, Yosemite and more! These short-term classes are offered by several departments, including Biology, Geography, Geology, Photography, and Physical Education. For more information about specific classes, consult the class schedule or visit the Los Rios Field Study Consortium website at: www.losrios.edu/fieldstudy.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.
**DEGREE**

**A.A.— Physical Education**  
**CODE #1499**

**REQUIRED PROGRAM .................................................................................. Units**

- PET 302 (12) Introduction to Physical Education ........................................... 2
- BIO L 430 (25) Anatomy and Physiology ...................................................... 5
- BIO L 431 (26) Anatomy and Physiology ...................................................... 6
- CHEM 305/307 (2A) Introduction to Chemistry ............................................... 4-5

**Elective:**
Select a minimum of six (6) additional units from the following: ........ 6
- BIO L 310 (16) General Biology ................................................................. 4
- STAT 300 (1) Introduction to Probabilities and Statistics ......................... (4)
- HEED 300 (1) Health Science .................................................................. 3
- PET 301/HEED 350 (2) Personal Wellness .............................................. (2) or
  PET 380 (4) HEED 360 (4) Weight Management .................................... (3)
- HEED 342 (25) Contemporary Problems of Student-Athletes ............ (1)
- NUTRI 300 (10) Nutrition ....................................................................... (3)
- PHYS 350 (5A) General Physics .................................................................. (4)

**Plus two to three (2-3) units selected from the following: ........... 2-3**
- PET 320 (13) or 322 (14) Sports Officials (2)
- PET 312 (15) Theory & Techniques of Adapted Physical Educ (3)
- PET 342 (17) Theory of Baseball ................................................................. (2)
- PET 346 (18) Theory of Basketball ............................................................... (2)
- PET 354 (28) Theory of Soccer ................................................................. (2)
- PET 358 (25) Theory of Softball ............................................................... (2)
- PET 366 (20) Theory of Tennis ................................................................. (2)
- PET 374 (26) Theory of Volleyball ......................................................... (2)

**Plus one to two (1-2) units selected from the following: ............. 1-2**
Adapted Aquatics, Adapted Physical Education, Aerobics,  
Basketball, Body Fitness, Dance, Golf, Lifeguard Training,  
Mountaineering, Softball, Swimming, Team Sports, Tennis,  
Volleyball, Water Polo, Weight-Training

**TOTAL UNITS REQUIRED .......................................................................... 25-28**

**Associate in Arts Degree (A.A.) Degree:** The A.A. Degree may be  
obtained by completion of the Required Program, plus General  
Education Requirements, plus sufficient electives to meet a  
60 unit total.

**Transfer Readiness:** Students are advised to see a counselor before  
selecting the option best aligned with the transfer institution.

**General Education Graduation Requirements - See page 18.**

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**CERTIFICATE**

**Coaching**  
**CODE #1538**

The Coaching Certificate program will help coaches at all skill levels  
improve their knowledge and enhance their ability to be effective in  
coaching principles, theory of their particular sport, First Aid and  
CPR, and hands on experience coaching. Included within the  
completed course work is eligibility for certificates from the National  
Federation of State High School Association and the American Sport  
Education Program.

**REQUIRED PROGRAM .............................................................................. Units**

- PET 303 Principles of Athletic Coaching .................................................. 1
- HEED 314 Community and First Aid and Safety ..................................... 2
- HSER 498 (98) Work Experience in Human Services ............................ 1-4

**Plus two (2) units from the following: ............................................... 2**
- PET 342 (17) Theory of Baseball ................................................................. (2)
- PET 346 (18) Theory of Basketball ............................................................... (2)
- PET 354 (28) Theory of Soccer ................................................................. (2)
- PET 358 (25) Theory of Softball ............................................................... (2)
- PET 366 (20) Theory of Tennis ................................................................. (2)
- PET 374 (26) Theory of Volleyball ......................................................... (2)

**TOTAL UNITS REQUIRED .......................................................................... 6-9**

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**PHYSICAL EDUCATION**

**NOTE:** The University of California has a limitation on the  
number of units of physical education courses that can be  
transferred. The California State University System has no  
such limitation, but there are restrictions placed on the  
number of physical education units that can be applied  
toward the major and general education. See a counselor for  
specific course limitations.

All activity classes are open to both men and women unless  
noted within the course title. Students may be concurrently  
enrolled in more than one physical education activity class;  
however, no more than two of the same physical education  
activity classes may be taken by a student in the same  
semester.

The prefixes ADAPT, DANCE, FITNESS, PACT, TMACT, and  
SPORT refer to courses which may be used to satisfy the  
physical education graduation requirement. Beginning  
classes concentrate on fundamental skills, rules, scoring,  
equipment, dress, etiquette and basic strategy. Intermediate  
classes continue efforts on skill development while  
concentrating on strategy and competitive play.

Activity courses may be taken up to four times in each  
activity area, unless otherwise identified (e.g. four Tennis,  
four Aerobics, four Weight Training, etc.).

Courses with the "PET" prefix are open to students interested in  
the physical education major and in the theoretical aspects  
of sports activity. PET courses do not meet the physical  
education graduation requirement; however, they are all  
transferable. Some "PET" courses have a unit limitation to the  
UC system. See a counselor for specific course limitations.

**ATHLETICS**

**Academic Advising for Athletes**

10 intercollegiate athletic opportunities for student participation:

<table>
<thead>
<tr>
<th>For Men</th>
<th>For Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseball</td>
<td>Basketball</td>
</tr>
<tr>
<td>Basketball</td>
<td>Soccer</td>
</tr>
<tr>
<td>Soccer</td>
<td>Softball</td>
</tr>
<tr>
<td>Tennis</td>
<td>Volleyball</td>
</tr>
<tr>
<td>Tennis</td>
<td>Water Polo</td>
</tr>
</tbody>
</table>

Cosumnes River College is a member of the Bay Valley Conference  
which includes community colleges located in the San  
Francisco Bay Area and the interior valleys of Northern Califor-  
ia. The Bay Valley Conference is a member of the Community  
College League of California - Commission on Athletics (COA)  
and adheres to all rules and regulations governing community  
college athletics within the State of California.

In order to participate in intercollegiate athletics, both men and  
and women must fulfill the requirements of the Los Rios  
Community College District and the Athletic Constitution of  
the Commission on Athletics. These requirements are very  
exacting and the athletes are advised to become thoroughly  
familiar with them in order to avoid eligibility problems. The  
athletic director is familiar with the eligibility requirements  
and would be available to answer specific questions.

- - - continued on next page
Students who have not competed in intercollegiate athletics are deemed scholastically eligible for their first season of competition. In order to maintain eligibility, an athlete must participate in Cosumnes River College’s Athletic Academic Advising. This Academic Advising Program requires athletes to:

- Meet with an athletic academic counselor annually and complete a Student Educational Plan (SEP).
- Maintain at least a 2.0 cumulative Grade Point Average (GPA), attend classes regularly and complete all assigned course work.

- Successfully complete 24 units between the first and second season of participation in a specific sport, of which 18 units must be in General Education or degree specific classes.
- Maintain active enrollment in a minimum of 12 units during the semester of competition. Nine of these 12 units must be General Education or degree specific.

### Adapted Physical Education (ADAPT)

#### ADAPT 300
Adapted Physical Education 1-2 Units
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC; 54 hours LAB
In adapted physical education, the instructor works under the recommendation/direction of the student’s physician. Class activities are adapted or modified to meet individual needs. Each student performs at an individual level of ability without pressure or competition. Students with both temporary and permanent disabilities are served as well as students with major health problems. Students must have a physician’s statement indicating: (a) the disability, (b) specific restrictions, and (c) recommended activities. This course may be taken four times for credit.

#### ADAPT 336
Motor Development for the Physically Challenged 1-2 Units
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC; 54 hours LAB
This course gives the student individual instruction which promotes and develops overall physical fitness and psychomotor skills. This activity class for the physically challenged includes exercises in flexibility, strength development, aerobic activity and relaxation training. Students must have a doctor’s recommendation on file. This course may be taken four times for credit.

#### ADAPT 332
Adapted Aquatics 1 Unit
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 9 hours LEC; 27 hours LAB
This physical education course covers swim technique, water safety, and water activities adapted for individuals who are physically challenged. The class will be tailored for the individual’s abilities and needs. Topics covered will include stroke mechanics, water safety, movement through water, and the use of water for resistive exercises. This course may be taken four times.

#### ADAPT 495
Independent Studies in Adapted Physical Education 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

#### ADAPT 499
Experimental Offering in Adapted Physical Education .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

### Dance (DANCE)

#### DANCE 310
Jazz Dance 1 Unit
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC; 54 hours LAB
This physical education course covers barre and center floor warm-ups, exercises, jazz techniques, isolations, walks and turns. This course explores variation of styles in ethnic, lyrical and modern given in combinations and offers students the opportunity for exploration and improvisation using jazz steps learned in class. This course may be taken four times.

#### DANCE 332
Modern Dance 1.5 Units
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC; 36 hours LAB
This class offers an introduction to basic dance movement, basic elements of music and rhythm. Creative assignments will be given in improvisation and movement communication and expression utilizing problem solving techniques. This course may be taken four times.
DANCE 342  
Social Dance  
1.5 Units  
Formerly: PER 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 18 hours LEC ; 36 hours LAB  
This activity class is designed to provide students the opportunity to develop physical, mental and social skills through Social Dance. Dances presented will include Swing, Foxtrot, Waltz, Cha Cha, Rumba, Tango, and Country Swing. This class may be taken four times.

DANCE 350  
Country Western Line Dance  
1 Unit  
Formerly: PER 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LAB  
This course provides instruction in basic country western line dances and partner swing dances such as the Texas Two Step and Country Waltz plus current dances that are in vogue.

DANCE 372  
Dance Composition and Production  
2 Units  
Formerly: PER 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 18 hours LEC ; 54 hours LAB  
This physical education course is the study and performance of dance composition including technique, choreography and direction. This course may be taken four times.

DANCE 495  
Independent Studies in Dance  
1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

DANCE 499  
Experimental Offering in Dance  
.5-4 Units  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

FITNS 301  
Aerobics  
1.5 Units  
Formerly: PER 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 18 hours LEC ; 36 hours LAB  
This physical education course is an activity class designed to help students gain an understanding of how to develop overall physical fitness including cardiovascular fitness, muscular strength and endurance, and coordination. This course is also designed to help students develop a positive attitude towards exercise and healthful living through participation in aerobic exercise, class lectures, and class discussion. This course involves calisthenics, floor exercises, aerobic exercise and strength development. This course may be taken four times.

FITNS 309  
Step Aerobics  
1.5 Units  
Formerly: PER 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 18 hours LEC ; 36 hours LAB  
This physical education course is an activity class designed to help students gain an understanding of how to develop overall physical fitness including cardiovascular fitness, muscular strength and endurance, and coordination. This course is also designed to help students develop a positive attitude toward activity, exercise and healthful living through participation in aerobic exercise, class lectures, and class discussion. This course involves the use of an exercise step and includes calisthenics, floor exercises, aerobic activity, exercise and strength development. This course may be taken four times.

FITNS 310  
Aqua Aerobics  
1 Unit  
Formerly: PER 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LAB  
This aqua aerobics class is designed to improve aerobic and anaerobic fitness. The use of water resistance for both low and non weight bearing improvements in cardiovascular fitness, muscle endurance, flexibility and strength. The course includes both deep and shallow water workouts and provides information related to overall health and fitness. This course may be taken four times for credit.

FITNS 312  
Aquatic Fitness  
1 Unit  
Formerly: PER 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LAB  
This course is a physical education class that covers instruction and practice in swimming with major emphasis on cardiovascular fitness. Workouts will be designed to improve individual aerobic fitness, stroke efficiency and muscular endurance. This course may be taken four times.
FITNS 316
Lap Swimming 1 Unit
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LAB
This swimming class emphasizes improvement in aerobic fitness. This is a self-paced “overload” method of training using a workout approach. Stroke efficiency, aerobic fitness, and personal improvement will be emphasized. This course may be taken four times for credit.

FITNS 320
Body Fitness 2 Units
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 54 hours LAB
This course is an activity class which emphasizes cardiovascular development through continuous aerobic activity (e.g., jogging, stationary bicycle riding, calisthenics). This course may be taken four times.

FITNS 323
Fitness Ball 1.5 Units
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 27 hours LAB
The fitness ball is a valuable tool for developing core strength (middle of your body), flexibility and balance. Because of the fitness ball’s inherent instability, the effect of traditional strength training exercises is intensified when performed in conjunction with the fitness ball. Students will learn to safely and effectively execute strengthening exercises for all the major muscle groups with and without hand weights, flexibility exercises, and balancing exercises. This course may be taken four times.

FITNS 331
Boot Camp Fitness 1 Unit
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 9 hours LEC ; 27 hours LAB
This course is designed to be a physically intense and challenging fitness class. Training exercises used during this class will include jogging, interval training, hill running training, obstacle courses, and performing a variety of calisthenics designed to enhance muscular strength and endurance. In addition, students will be challenged to understand and apply fitness training principles. The students will train individually, with a partner or in a team setting. This course may be taken up to four times.

FITNS 333
Off-Season Conditioning for Basketball 1.5 Units
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 36 hours LAB
This course is designed to maintain and improve fitness and skill levels of the collegiate basketball player during the off-season. Emphasis will be on improving and enhancing skill level. This course may be taken four times for credit.

FITNS 334
Off-Season Conditioning 1.5 Units
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 36 hours LAB
This course is designed to prepare athletes for the competitive season. It presents a solid aerobic conditioning and weight training combination of activities to prepare the athlete both mentally and physically. This course may be taken four times.

FITNS 335
Pre-Season Conditioning for Basketball 1.5 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 36 hours LAB
This course is designed to prepare the collegiate basketball player for the competitive season. It presents a solid aerobic conditioning, weight-training, skill development, and team play combination of activities designed to prepare the athlete both physically and mentally. This course may be taken four times for credit.

FITNS 336
Individualized Physical Fitness 1 Unit
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LAB
This course is a physical education class that emphasizes personalized health-related physical fitness and recreational activities. This course deals primarily with physical activity, exercise, health physical fitness, skill learning and body mechanics. This course may be taken four times.

FITNS 337
Workforce Fitness 1 Unit
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 9 hours LEC ; 27 hours LAB
This physical education course emphasizes concepts related to health, physical fitness and recreation as they relate to the industrial worker. Exercise programs will be designed to improve specific muscle groups impacted in the occupational setting. This course may be taken four times.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>FITNS 365</td>
<td>Mountaineering</td>
<td>2</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Formerly: PER 1</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
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<tr>
<td></td>
<td>Hours: 18 hours LEC ; 54 hours LAB</td>
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<tr>
<td></td>
<td>This course is designed to provide students with the opportunity to gain the knowledge and skills of mountaineering in a safe, enjoyable manner. Topics covered will be: outdoor fundamentals; rock, snow, ice and alpine climbing; emergency prevention and response; the mountain environment. Two field trips to area crags and visits to local rock gymnasiuims will comprise the laboratory portion of the course.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FITNS 382</td>
<td>Weight Training</td>
<td>1.5</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Formerly: PER 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hours: 18 hours LEC ; 36 hours LAB</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This physical education course is designed to develop fitness through weight training. The class is specifically aimed at muscle group development. This course may be taken four times.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FITNS 390</td>
<td>Basic Yoga</td>
<td>1</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hours: 54 hours LAB</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course in Yoga emphasizes breathing, stretching, and relaxing techniques. Yoga positions and philosophies are examined. This course may be taken four times for credit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FITNS 406</td>
<td>Walking and Jogging</td>
<td>1.5</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hours: 18 hours LEC ; 27 hours LAB</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is designed to improve cardiovascular fitness, muscle endurance, and flexibility. Weight management, nutritional guidelines and healthy living information will also contribute to overall health and wellness for the student in this course. This course may be taken four times for credit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FITNS 430</td>
<td>Water Safety Instruction</td>
<td>1.5</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Formerly: PER 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hours: 18 hours LEC ; 36 hours LAB</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Students who successfully complete this course will be certified (W.S.I) instructors. This course may be taken four times.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FITNS 436</td>
<td>Lifeguard Training</td>
<td>2</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Formerly: FITNS 435</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Hours: 30 hours LEC ; 18 hours LAB</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>This course is designed to teach students to become a certified lifeguard. Knowledge and skills necessary to keep patrons of aquatic facilities safe in and around water. Upon successful completion of the Lifeguard Training course requirements, American Red Cross Lifeguard Training, CPR for the Professional Rescuer and American Red Cross First Aid, certificates will be issued.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FITNS 440</td>
<td>Swimming</td>
<td>1</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hours: 9 hours LEC ; 27 hours LAB</td>
<td></td>
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<tr>
<td></td>
<td><strong>Beginning:</strong> This class provides the opportunity for students to become safe and comfortable in the water. Students will develop swimming skills on the front and back. Instruction will emphasize freestyle and backstroke as well as water safety. <strong>Intermediate:</strong> In this class, emphasis will be placed on improving swimming technique and efficiency. Each student will progress toward becoming an endurance swimmer for enhanced fitness. This class may be taken four times.</td>
<td></td>
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</tr>
<tr>
<td>FITNS 451</td>
<td>Self-Defense for Women</td>
<td>1.5</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Formerly: PER 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hours: 18 hours LEC ; 36 hours LAB</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This physical education class covers personal safety and defense for women. This course may be taken four times.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FITNS 452</td>
<td>Self-Defense for Men</td>
<td>1.5</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Formerly: PER 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hours: 18 hours LEC ; 36 hours LAB</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This physical education class covers personal safety and defense for men. This course may be taken four times.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FITNS 495</td>
<td>Independent Studies in Fitness</td>
<td>1-3</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Course Transferable to CSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hours: 18 hours LEC ; 54 hours LAB</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(See catalog page 21)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FITNS 499</td>
<td>Experimental Offering in Fitness</td>
<td>.5-4</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hours: 54 hours LEC ; 54 hours LAB</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(See catalog page 21)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Personal Activities (PACT)

PACT 320
Bowling 1 Unit
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LAB
This is a coed physical education bowling class at the beginning and intermediate levels. Lecture, demonstration and participation will provide the student with sufficient knowledge for continued participation in bowling. This course may be taken up to four times for credit.

PACT 350
Golf 1 Unit
Prerequisite: None
Course Transferable to UC/CSU
Hours: 9 hours LEC ; 27 hours LAB
This course will focus on improving basic skills, learning rules, and the etiquette of golf. Both beginning and intermediate players are encouraged to take this course. This course may be taken four times.

PACT 392
Tennis 1.5 Units
Formerly: PER 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 36 hours LAB
Basic fundamentals, techniques, rules, and social courtesies of tennis. Instruction in intermediate skills. This class may be taken four times.

PACT 495
Independent Studies in Personal Activity 1-3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

PACT 499
Experimental Offering in Personal Activity .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

Sports (SPORT)

SPORT 91
Academic Study Skills for Student Athletes .5-1 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 54 hours LAB
This lab course is designed to assist the at-risk student athlete in acquiring work habits and basic study skills to gain academic success in the classroom. Grading is credit/no credit. This is an open entry, open exit course. A student athlete may register for this course up to the 12th week of class. This class may be taken four times for credit.

SPORT 300
Baseball, Intercollegiate, Men - Spring 2 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 180 hours LAB
This course is for students who wish to participate in intercollegiate baseball. The Athletic Director should be contacted regarding eligibility requirements.

SPORT 311
Basketball, Intercollegiate, Men - Fall 1 Unit
Prerequisite: None
Course Transferable to UC/CSU
Hours: 90 hours LAB
This course is for students who wish to participate in intercollegiate basketball. The Athletic Director should be contacted regarding eligibility requirements.

SPORT 312
Basketball, Intercollegiate, Men - Spring 1 Unit
Prerequisite: None
Course Transferable to UC/CSU
Hours: 90 hours LAB
This course is for students who wish to participate in intercollegiate basketball. The Athletic Director should be contacted regarding eligibility requirements.

SPORT 316
Basketball, Intercollegiate, Women - Fall 1 Unit
Prerequisite: None
Course Transferable to UC/CSU
Hours: 90 hours LAB
This course is for students who wish to participate in intercollegiate basketball. The Athletic Director should be contacted regarding eligibility requirements.

SPORT 317
Basketball, Intercollegiate, Women - Spring 1 Unit
Prerequisite: None
Course Transferable to UC/CSU
Hours: 90 hours LAB
This course is for students who wish to participate in intercollegiate basketball. The Athletic Director should be contacted regarding eligibility requirements.
**SPORT 350**  
**Soccer, Intercollegiate, Men**  
2 Units  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 180 hours LAB  
This course is for students who wish to participate in intercollegiate soccer. The Athletic Director should be contacted regarding eligibility requirements.

**SPORT 355**  
**Soccer, Intercollegiate, Women**  
2 Units  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 180 hours LAB  
This course is for students who wish to participate in intercollegiate soccer. The Athletic Director should be contacted regarding eligibility requirements.

**SPORT 365**  
**Softball, Intercollegiate, Women**  
2 Units  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 180 hours LAB  
This course is for students who wish to participate in intercollegiate softball. The Athletic Director should be contacted regarding eligibility requirements.

**SPORT 388**  
**Tennis, Intercollegiate, Men/Women**  
2 Units  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 180 hours LAB  
This course is for students who wish to participate in intercollegiate tennis. The Athletic Director should be contacted regarding eligibility requirements.

**SPORT 405**  
**Volleyball, Intercollegiate, Women**  
2 Units  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 180 hours LAB  
This course is for students who wish to participate in intercollegiate volleyball. The Athletic Director should be contacted regarding eligibility requirements.

**SPORT 415**  
**Water Polo, Intercollegiate, Women**  
2 Units  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 180 hours LAB  
This course is for students who wish to participate in intercollegiate water polo. The Athletic Director should be contacted regarding eligibility requirements.

**SPORT 495**  
**Independent Studies in Sports**  
1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC; 54 hours LAB  
(See catalog page 21)

**SPORT 499**  
**Experimental Offering in Sports**  
.5-4 Units  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 18 hours LEC; 54 hours LAB  
(See catalog page 21)

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**Team Activities (TMACT)**

**TMACT 320**  
**Basketball**  
1 Unit  
Formerly: PER 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LAB  
This course is a physical education course that covers a complete review of the basic fundamentals, tactics, rules, and systems of play, and will enhance the student’s understanding and ability. This class may be taken four times.

**TMACT 332**  
**Volleyball**  
1.5 Units  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 18 hours LEC; 36 hours LAB  
**Beginning/Intermediate:** This is a coed physical education volleyball class at the beginning and intermediate levels. Lecture, demonstration and participation will provide the student with sufficient knowledge for continued participation in volleyball.  
**Advanced:** This is a coed physical education volleyball class at the advanced level. Lecture, demonstration and participation will provide the student with sufficient knowledge to compete at a higher level. This class may be taken four times.

**TMACT 352**  
**Softball, Slow Pitch**  
1 Unit  
Formerly: PER 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LAB  
This physical education class is designed to develop basic softball skills and understanding of slow pitch rules in tournament format. This course may be taken four times.
### Physical Education - Theory (PET)

**PET 301**  
**Personal Wellness**  
*3 Units*  
**Prerequisite:** None  
**Course Transferable to CSU**  
**Hours:** 54 hours LEC  
This course takes a personal approach to lifetime healthy habits. The students will relate their own lives to topics that include: Fitness, weight management, relationships, nutrition, stress management, sexual health, risky behaviors, and prevention of diseases. Assessment, plans for change and reinforcement will be applied through the use of journals, projects, written assignments and tests. This course is the same as HEED 350, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

**PET 302**  
**Introduction to Physical Education**  
*2 Units*  
Formerly: PET 12  
**Prerequisite:** None  
**Course Transferable to UC/CSU**  
**Hours:** 36 hours LEC  
This course is designed to give the prospective Physical Education Educator, Coach, or Fitness Leader an understanding of the dynamics of physical education, including opportunities and responsibilities associated with physical education leadership. Theory, history and principles of physical education will be covered.

**PET 303**  
**Principles of Athletic Coaching**  
*1 Unit*  
**Prerequisite:** None  
**Course Transferable to CSU**  
**Hours:** 18 hours LEC  
Students will be introduced to the fundamentals of coaching through this course. This course integrates knowledge from experienced coaches with the latest research by sport scientists. Topics covered are: coaching philosophy, sport psychology, sport pedagogy, sport physiology, sport management. Completion of this course entitles the student to receive certification from either the National Federation of State High School Association or the American Sport Education Program.

**PET 306**  
**Fundamentals of Games and Rhythms**  
*2 Units*  
**Prerequisite:** None  
**Course Transferable to CSU**  
**Hours:** 18 hours LEC ; 54 hours LAB  
This course is designed for early childhood, elementary education, and recreation majors. Recommended for physical education majors. Early childhood education, elementary and lead-up games for individual and team sports, stunts, tumbling, and elementary and culturally diverse rhythms and dances will be practiced. This course is the same as ECE 364, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET 312</td>
<td>Theory and Techniques of Adapted Physical Education</td>
<td>3</td>
<td>This is a lecture course which provides knowledge and experience in rehabilitation uses of recreation and exercise programs. This class develops skills which qualify an individual to work with physically limited persons.</td>
</tr>
<tr>
<td>PET 313</td>
<td>Laboratory in Adapted Physical Education</td>
<td>1-2</td>
<td>This course is a directed laboratory experience in the basic principles of assisting the physically limited in prescribed exercise programs. This course may be taken three times for credit.</td>
</tr>
<tr>
<td>PET 320</td>
<td>Sports Officiating (Fall)</td>
<td>2</td>
<td>Theory and practice are combined in study of the organization and techniques of officiating at competitive athletic activities. The student obtains comprehensive instruction on rules and officiating techniques with practical experience required in intramural, varsity programs, and leagues.</td>
</tr>
<tr>
<td>PET 322</td>
<td>Sports Officiating (Spring)</td>
<td>2</td>
<td>In this physical education course, theory and practice are combined in a study of the organization and techniques of officiating at competitive athletic activities. The student obtains comprehensive instruction on rules and officiating techniques with practical experience required in intramurals.</td>
</tr>
<tr>
<td>PET 346</td>
<td>Theory of Basketball</td>
<td>2</td>
<td>This course is designed to develop a thorough understanding of coaching basketball. Special emphasis on individual skills, position play, and team strategy. This course may be taken twice for credit.</td>
</tr>
<tr>
<td>PET 354</td>
<td>Theory of Soccer</td>
<td>2</td>
<td>This course is a detailed approach to the current problems and trends in soccer. Special attention will be given to rules, fitness requirements, nutrition, conditioning, care and prevention of injuries, team organization, techniques, and tactics. This course will also include season planning, soccer philosophy team policies, player management, and team building. This course may be taken two times for credit.</td>
</tr>
<tr>
<td>PET 342</td>
<td>Theory of Baseball</td>
<td>2</td>
<td>This course is designed to develop a thorough understanding of baseball. Special emphasis on individual skills, position play, and team strategy. This course may be taken twice for credit.</td>
</tr>
<tr>
<td>PET 358</td>
<td>Theory of Softball</td>
<td>2</td>
<td>This course is designed to develop a thorough understanding of softball. Special emphasis on individual skills, position play and team strategy. This course may be taken two times for credit.</td>
</tr>
<tr>
<td>PET 366</td>
<td>Theory of Tennis, Tactics &amp; Strategy</td>
<td>2</td>
<td>This course will examine the United States Tennis Association's basic components of its USTA player development program. Emphasis placed upon practical application of those components to competitive and recreational tennis.</td>
</tr>
<tr>
<td>PET 374</td>
<td>Theory of Volleyball</td>
<td>2</td>
<td>Designed for those students entering the coaching or teaching profession, this course will allow students to study and actively participate in many aspects of the game of volleyball, including: training/conditioning, individual techniques, team play, rules and strategies.</td>
</tr>
</tbody>
</table>
PET 380
Weight Management 3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course includes all aspects relating to managing your weight, including causes, health risks, assessment, prevention and treatment strategies. Also includes communication, basic health behavior changes, basic nutrition, program planning and implementation. This course is the same as HEED 360, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

PET 403
Fitness and Exercise Assessment 1 Unit
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
This course covers the assessment of cardiorespiratory endurance, body composition, muscular strength, muscular endurance, blood pressure, flexibility, and the evaluation of the results of such tests.

PET 495
Independent Studies in Physical Education - Theory 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)

PET 499
Experimental Offering in Physical Education - Theory .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC; 54 hours LAB
(See catalog page 21)
Physics, Physical Science & Astronomy

DEGREES
A.S.—Physics
A.S.—Science, General (see Science... page 306)

The CRC PHYSICS, PHYSICAL SCIENCE and ASTRONOMY department offers a full array of transferable courses that fulfill both major and general education requirements.

The CRC PHYSICS program consists of a three-semester calculus-based physics sequence and a two-semester trigonometry-based sequence. These sequences are designed to meet transfer requirements for students in the physical and life sciences, engineering, architecture, and computer information science. Laboratories are a central, not subservient part of the courses. A conceptual physics course for non-science majors and a preparatory physics course are also offered. Physics is presented as a dynamic, exciting field and is taught by experienced and dedicated instructors who consider teaching a primary responsibility.

The courses in ASTRONOMY and PHYSICAL SCIENCE are offered as part of the general education program at CRC. The physical science course includes a laboratory section. Both courses are an excellent way for the liberal arts students to gain an appreciation of scientific knowledge and methods.

Career Options
CALCULUS-BASED PHYSICS:
Physicist; Engineer; Meteorologist;
Oceanographer; Geologist;
Physical Scientist; Astronomer;
Chemist; Architect; Computer Scientist

TRIGONOMETRY-BASED PHYSICS:
Pre-Med; Allied Health;
Life Science fields

Highlights
Modern and well-equipped laboratories
Small class size
Evening session calculus-based physics sequence completion
A Mathematics, Engineering, and Science Achievement (MESA) program

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate's degree in this major may be different from the requirements needed for the Bachelor's degree.
Physics (PHYS)

PHYS 310
Conceptual Physics 3 Units
Formerly: PHYS 10
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This course provides a conceptual overview of Newtonian and modern physics for non-science and science students alike. The conceptual or non-mathematical approach to physics is tied to the student’s personal experience in the everyday world, so that the student learns to see physics not as a classroom or laboratory activity, but as a part of his or her surroundings. The class is open to all students with no previous physics course.

PHYS 311
Basic Physics 3 Units
Formerly: PHYS 11
Prerequisite: None
Advisory: MATH 335 (may be taken concurrently) or high school trigonometry with a grade of “C” or better.
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
This course is a survey course for science, engineering, mathematics, architecture, and computer science majors who have had no previous physics courses and plan to continue with PHYS 350 or 411. The course will develop the math and science background and the problem-solving skills necessary for success in PHYS 350 or 411. Material covered will include math review, vectors, and basic mechanics (kinematics, Newton’s laws, energy). Students who have taken PHYS 310 cannot get transfer credit for PHYS 311.

PHYS 350
General Physics 4 Units
Formerly: PHYS 5A
Prerequisite: MATH 335, or a high school course in trigonometry or the equivalent. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU; UC - See Counselor
(CAN PHYS 2)
(with 360, CAN PHYS SEQ A)
Hours: 54 hours LEC; 54 hours LAB
This course, the first semester of General Physics, is a transferable course required for life science, liberal studies and other students and may also be taken for general education credit. Materials covered will include classical mechanics (including kinematics, statics, dynamics, Newton’s Laws, energy and momentum conservation, rigid body motion and oscillatory motion), fluid mechanics, mechanical waves (including sound), and thermodynamics.

PHYS 360
General Physics 4 Units
Formerly: PHYS 5B
Prerequisite: PHYS 350. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU; UC - See Counselor
(CAN PHYS 4)
(with 350, CAN PHYS SEQ A)
Hours: 54 hours LEC; 54 hours LAB
This course, the second semester of General Physics, is a transferable course required for life science and other students and may also be taken for general education credit. Material covered will include classical electricity and magnetism (including electrostatics, electric fields and potential, magnetic fields, electromagnetic induction, Maxwell’s equations and electromagnetic radiation), DC and AC circuits, light, geometric and wave optics, special relativity, atomic structure, quantum physics and nuclear physics.
PHYS 411
Mechanics of Solids and Fluids 4 Units
Formerly: PHYS 4A
Prerequisite: MATH 400. Grade of “C” or better required to meet prerequisite.
Advisory: Completion of or concurrent enrollment in MATH 401 is recommended.
Course Transferable to UC/CSU; UC - See Counselor
(CAN PHYS 8)
(with 421 and 431 CAN PHYS SEQ B)
Hours: 54 hours LEC ; 54 hours LAB
The course examines the fundamentals of mechanics: vectors, kinematics, Newton’s laws, vibrations, conservation principles, fluids, and gravitation. This course is recommended for students studying engineering, physics, chemistry, architecture, computer science, and mathematics.

PHYS 421
Electricity and Magnetism 4 Units
Formerly: PHYS 4B
Prerequisite: PHYS 411 and MATH 401. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU; UC - See Counselor
(CAN PHYS 12)
(with 411 and 431 CAN PHYS SEQ B)
Hours: 54 hours LEC ; 54 hours LAB
This course examines the fundamentals of electricity and magnetism. Topics include electric and magnetic fields and forces, electric potentials, capacitors and dielectrics, DC and AC circuits, inductance, magnetic materials, Maxwell’s equations, electromagnetic waves, and the operation of general electrical circuit measuring devices including multimeters and oscilloscopes. This is the second course (although PHYS 421 and 431 may be taken in either order) of the calculus-based physics sequence for physical science, engineering, and computer science majors.

PHYS 431
Heat, Waves, Light and Modern Physics 4 Units
Formerly: PHYS 4C
Prerequisite: PHYS 411 and MATH 401. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU; UC - See Counselor
(CAN PHYS 14)
(with 411 and 421, CAN PHYS SEQ B)
Hours: 54 hours LEC ; 54 hours LAB
This course examines the fundamentals of thermodynamics, waves and modern physics: temperature, heat, kinetic theory of gases, thermodynamics, mechanical waves, sound, light reflection and refractions, interference and diffraction phenomena, optics, lasers, special relativity, quantum physics, atomic physics, nuclear physics, and particle physics.

PHYS 495
Independent Studies in Physics 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

PHYS 499
Experimental Offering in Physics .5-4 Units
Formerly: PHYS 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

Physical Science (PS)

PS 302
Introduction to Physical Science 4 Units
Formerly: PS 1
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC ; 54 hours LAB
This is an integrated, interdisciplinary course which introduces the non-science major student to the physical sciences. Areas covered will include astronomy, physics, chemistry and geology. The purpose of the course is to trace the development of modern scientific concepts, to analyze a number of natural phenomena, and to explore the significance of science.

PS 495
Independent Studies in Physical Science 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
(See catalog page 21)

PS 499
Experimental Offering in Physical Science .5-4 Units
Formerly: PS 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Astronomy (ASTR)

ASTR 300  
**Introduction to Astronomy**  3 Units  
Formerly: ASTR 1  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC  
This course is a descriptive course in general astronomy treating the nature and evolution of the solar system, stars, galaxies, cosmology and life in the universe.

ASTR 400  
**Astronomy Laboratory**  1 Unit  
Formerly: ASTR 2  
Prerequisite: None  
Corequisite: ASTR 300 (may be taken previously). Grade of “C” or better required to meet corequisite.  
Course Transferable to UC/CSU  
Hours: 54 hours LAB  
This course offers practical use of a telescope for both visual observation and astrophotography; identification of constellations; and experience in the collection of scientific data.

ASTR 495  
**Independent Studies in Astronomy**  1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

ASTR 499  
**Experimental Offering in Astronomy**  0.5-4 Units  
Formerly: ASTR 49  
Prerequisite: None  
Course Transferable to UC/CSU; UC - See Counselor  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
# Plant Science

This CRC program offers courses designed for students in the Agriculture Business and Horticulture programs.

## Career Options
See career options in Agriculture Business and Horticulture

## Highlights
Courses included in two degree programs and a variety of certificates

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### Plant Science (PLTS)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Prerequisite/Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLTS 299</td>
<td>Experimental Offering in Plant Science</td>
<td>.5-4</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: None</td>
<td></td>
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<tr>
<td></td>
<td>Hours: 18 hours LEC; 54 hours LAB</td>
<td></td>
<td>(See catalog page 21)</td>
</tr>
<tr>
<td></td>
<td>PLTS 300</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Introduction to Plant Science</td>
<td></td>
<td>Formerly: PLTS 1</td>
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<tr>
<td></td>
<td>Prerequisite: None</td>
<td></td>
<td>Course Transferable to UC/CSU</td>
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<tr>
<td></td>
<td>Hours: 36 hours LEC; 54 hours LAB</td>
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</tbody>
</table>

This course is designed to provide the students with a working knowledge of the fundamental structures and processes of plants. Principles to be applied cover plant structures, physiology, heredity, environmental relationship to growth, adaptation, and management of crops. Techniques of research, exploration of plant growth, and identification of economical crops will be included.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLTS 310</td>
<td>Soils and Plant Nutrition</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Formerly: PLTS 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prerequisite: None</td>
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</tr>
<tr>
<td></td>
<td>Advisory: HORT 300 or PLTS 300.</td>
<td></td>
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<tr>
<td></td>
<td>Course Transferable to UC/CSU</td>
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<tr>
<td></td>
<td>Hours: 36 hours LEC; 54 hours LAB</td>
<td></td>
</tr>
</tbody>
</table>

This course provides a basic knowledge of the physical, chemical, and biological properties of soils. The course includes factors of: fundamental soil properties, soil and plant relationships, principles of soil formation, fertilizers and soil management, salinity, pH, erosion management, and non-agricultural uses. This course is the same as HORT 302, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.
PLTS 320
Viticulture
(Grape and Wine Production) 3 Units
Formerly: PLTS 71
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
Production of grapes, current status of grape and wine industry; classification of grapes and wines, history and development of wine industry. Principles and practices of vineyard selection, development, establishment and other cultural practices, including training and pruning. Principles of vine physiology and morphology as related to responses of cultural practices. Wine quality will also be explored. Vineyard management, health and economics will be included. Technological study of winery equipment, location, and operation; techniques in analyzing and evaluating grapes and wine will be made.

PLTS 332
Integrated Pest Management 3 Units
Formerly: PLTS 87
Prerequisite: None
Advisory: PLTS 330 and 336.
Course Transferable to CSU
Hours: 54 hours LEC
This study of integrated pest management includes principles of controlling pests by biological, cultural, physical, mechanical, radiation phenomena, genetic resistance and chemical control methods. Cost and effects as related to ecosystem, society and economics will be included. Pest monitoring and examples of integrated pest management in local areas and California will be reviewed. As this is the trend for the future, students and growers, as well as pest control advisors, will find this study valuable, as well as an aid in preparing for state licensing as pest control advisors.

PLTS 334
Agriculture Chemicals/
Safety and Calibration 3 Units
Formerly: PLTS 67
Prerequisite: None
Advisory: PLTS 300.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
The purpose of this study is to train individuals in techniques of chemical application, and to provide for the proper, safe, and efficient use of pesticides essential for production of food and fiber and for the protection of public health and environment, pesticide clarification, laws and regulations, foundations, calibration of an types of equipment for ground application and effective pesticide placement. A must for students preparing for state licensing as a pest control applicator.

PLTS 336
Weeds and Weed Control 3 Units
Formerly: PLTS 74
Prerequisite: None
Advisory: PLTS 300.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This course deals with the identification, life histories, and control of common, noxious and poisonous California weeds. The study will emphasize areas not included in the licensing procedures of agriculture pest control advisors and applicators. Fundamentals of chemical, biological, and physical control of weeds will be discussed.

PLTS 495
Independent Studies in Plant Science 1-3 Units
Formerly: PLTS 49I
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

PLTS 498
Work Experience in Plant Science 1-4 Units
Formerly: PLTS 99
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

PLTS 499
Experimental Offering in Plant Science .5-4 Units
Formerly: PLTS 49
Prerequisite: None
Course Transferable to UC/CSU: UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Political Science

The study of political science involves not only the examination of the structure of government and political systems but the examination of the interaction of individuals and institutions within those systems. These courses offer valuable insight into events on the local, state, national and international levels and they also encourage involvement of the citizenry.

Career Options

Administrator; Attorney; Budget Analyst; Businessperson; Campaign Aide/Elected Official; City Planner; Foreign Service Officer; Government Worker; Legislative Aide/Lobbyist; Military Officer; Occupational Analyst; Personnel Manager; Political Economist; Political Scientist; Public Information Officer; Public Relations Specialist; Public Opinion Surveyor; Researcher/Research Analyst

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights

Courses in both American and foreign political structures
Widely traveled and internationally astute instructional staff
Insightful analysis of international events
Suggestions/contacts for student involvement in the political process

Pre-Law Education

Pre-law, contrary to common belief, is not a major but rather a term that describes a student interested in applying for admission to a law school.

Because overall GPA is important in applying for admission to a law school, a pre-law student should consider a major which he/she enjoys and can do well. It is advisable to consider the major as an alternative to law school or one which can be used in conjunction with the law degree. Law schools are looking for individuals who have a high level of writing competence; good analytical skills; intellectual discipline; breadth in humanities, sciences and social sciences; and a general understanding of the business world. Most law schools require a baccalaureate degree. The Law School Admission Test (LSAT) is required. A pre-law student needs to plan a course of study in cooperation with a counselor in the Counseling Center.

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.
Political Science (POLS)

POLS 301
Introduction to Government: United States 3 Units
Formerly: POLS 1
Prerequisite: None
Advisory: Completion of ENGWR 101 or eligibility for ENGWR 300 is advised.
Course Transferable to UC/CSU
(CAN GOVT 2)
Hours: 54 hours LEC
An introduction to Political Science, American government and politics. Structured to promote political and analytical understanding and thinking regarding American politics and government. Areas of concentration include principles, institutions, problems, processes, theory, philosophy, and ideology. Satisfies the State requirement regarding the Constitution, American Institutions, and State and Local Government.

POLS 302
Introduction to Government: Foreign 3 Units
Formerly: POLS 2
Prerequisite: None
Advisory: Completion of ENGWR 101 or eligibility for ENGWR 300 is advised.
Course Transferable to UC/CSU
Hours: 54 hours LEC
Comparative study and analysis of political systems, ideologies, institutions, policies, cultures, histories, and the development of selected foreign governments. Special emphasis placed on the cultural and social dimensions of political behavior and attitudes in connection with governmental and political practices typical of particular geographical regions. Coverage includes an examination of selected developed and lesser developed nation states from a global perspective.

POLS 310
Introduction to International Relations 3 Units
Formerly: POLS 10
Prerequisite: None
Advisory: Completion of ENGWR 101 or eligibility for ENGWR 300 is advised.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This is an introduction to international relations and a survey of the nation-state system, techniques of interaction, the issue of war, nationalism, power alignments, international actors, transnational movements, diplomacy, political economy, and perceptions in world politics. Particular emphasis is placed on an analysis of the world outlook of Central and Eastern Europe, Russia, the United States, the major Western Allies, China, and the Lesser Developed World.

POLS 495
Independent Studies in Political Science 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

POLS 499
Experimental Offering in Political Science .5-4 Units
Formerly: POLS 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Psychology concerns itself with the study of behavior of humans and other animals. Part of its appeal and fascination is the fact that it involves both pure science and the practical application of science to matters of everyday life. Those pursuing psychology as a field of study will find many career options centering around helping others understand, predict and control their own behavior and the behavior of others. Training in psychology also provides a valuable foundation for other professions that deal with people.

Career Options
Career options as educators, scientists, consultants, practitioners and mental health professionals with some of the following titles:
- Administration; Behavior Analyst;
- Childcare Worker; College Professor;
- College Counselor; Social Services Counselor; Human Services Specialist;
- Marketing Specialist; Personnel Analyst; Probation Officer; Psychiatric Tech/Aide; Psychologist; Psychometrist;
- Public Survey; Research Therapist;
- Training/Development; Specialist;
- Ward Attendant; Youth Supervisor

Some career options may require more than two years of college study.

Highlights
- Exemplary instructional staff that includes authors and researchers
- Varied course offerings including psychology of women and human sexuality
- Psychology courses complement AA degrees and/or certifications in many other fields: communications media, early childhood education, human services, interdisciplinary studies, marketing/business, health/medicine, consumer affairs, and the military.

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

Psychology (PSYC)

PSYC 300
General Principles 3 Units
Prerequisite: None
Course Transferable to UC/CSU (CAN PSY 2)
Hours: 54 hours LEC
This course is an introduction to the scientific study of human behavior. Topics include scientific method, the biological basis of behavior, sensation, perception, consciousness, conditioning and learning, memory, cognition, developmental psychology, motivation, emotion, stress and health, personality, abnormal psychology, psychotherapy, and social psychology. PSYC 300 is designed for psychology majors, behavioral science majors, and other students who desire a comprehensive overview of general principles of contemporary psychology.
PSYC 301  
Laboratory for Introductory Psychology  1 Unit  
Formerly: PSYC 11  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LAB  
This course complements and amplifies the lectures from both PSYC 300 (General Principles) and PSYC 351 (Human Behavior) by providing laboratory activities correlated with each topic area presented in class. These activities provide opportunities for active data gathering, hypothesis testing and further investigation of psychological topics and principles. While the course is intended to amplify topics in PSYC 300 and 351, the course is open to everyone. Concurrent enrollment in PSYC 300 and 351 is not required.

PSYC 312  
Biological Psychology  4 Units  
Formerly: PSYC 2  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC; 54 hours LAB  
This course examines the biochemical, cellular, and organismal physiological substrates of normal and abnormal behavior. The course content focuses on interactions of the central nervous system, peripheral nervous system, endocrine and immune system to produce consciousness, sensation, perception, thinking, motivation and emotion. These areas are addressed within an evolutionary context that emphasizes developmental plasticity of the individual and the species. Current methods of obtaining data (e.g. neuroimaging techniques) will be examined and evaluated. Students are required to perform anatomical identification of brain structures using a sheep’s brain.

PSYC 320  
Social Psychology  3 Units  
Formerly: PSYC 3  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC  
This course focuses on the scientific study of human interaction, with an emphasis on the individual within a social context. Study includes social perception, social cognition, attitudes and attitude change, the self and social identity, prejudice, interpersonal attraction, close relationships, social influence, prosocial behavior, aggression, and group behavior.

PSYC 330  
Introductory Statistics for the Behavioral Sciences  3 Units  
Formerly: PSYC 5  
Prerequisite: MATH 120 or MATH 125 or the equivalent. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU; UC - See Counselor  
Hours: 54 hours LEC  
This course covers the application of descriptive and inferential statistics to experimental and non-experimental findings in psychology and other behavioral sciences from an applied rather than a theoretical perspective.

PSYC 335  
Research Methods in Psychology  3 Units  
Formerly: PSYC 4  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC  
This course provides an overview of the methodologies used in experimental and quasi-experimental research in psychology. Students will learn how to design and conduct research, including formulating hypotheses, reviewing the literature, evaluating ethical issues, selecting methodologies, organizing data, applying statistics and writing reports.

PSYC 340  
Abnormal Behavior  3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
This course is an exploration of the broad questions of normality and abnormality. It offers the investigation of specific mental, emotional, and behavioral difficulties and current approaches to psychological intervention including present community mental health practice. This course considers the contribution of social, biological and psychological factors to the development and persistence of behavior disorders. PSYC 340 would be a useful course for students majoring in Human Services and/or preparing for a career in psychology or the helping professions.

PSYC 351  
Human Behavior  3 Units  
Formerly: PSYC 7  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC  
This course is an introduction to the scientific study of human behavior. The course provides a comprehensive overview of the subject matter of psychology while emphasizing the application of psychological thought and research to personal and social issues.

PSYC 354  
Marriage, The Family and Alternatives  3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
Overview of the elements involved in building, maintaining and surviving paired relationships, both traditional and newer partnerships and relationship styles. Includes choosing each other, types of commitment (love, romance, sex and security), dealing with conflict, parenting, crisis and family disorganization, such as starting over, and changes confronting the individual throughout life’s stages.
PSYC 356  Human Sexuality  3 Units
Formerly: PSYC 25
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
A survey of the biological, psychological and social aspects of human sexual behavior. The course provides factual, up-to-date nonjudgmental information designed to dispel myths and facilitate problem identification and problem-solving. Topics include sexual anatomy and physiology, conception and childbirth, contraception, sexual development, variations and deviations, sex research, sexually transmitted diseases, sex therapy, intimacy and relationships, and sexual victimization.

PSYC 358  Principles of Interpersonal Relationships  3 Units
Formerly: PSYC 40
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
The study of principles involved in effective interpersonal relationships. Includes such topics as interpersonal feedback, self-disclosure, the role of emotions in relationships, the act of listening and the ability to challenge others toward growth and productivity. The focus is on concepts useful to the student in his/her face-to-face relationships at home, school, or work.

PSYC 360  Psychology of Women  3 Units
Formerly: PSYC 28
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
A course for men and women that highlights the psychological, biological and social influences on the behavior of women.

PSYC 365  Issues of Diverse Populations  3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 54 hours LEC
This course is a study of the values, problems, issues (e.g. ethnocentrism and/or racism), concerns and counseling needs of special population groups. These include African Americans, Chicano, Latino, Hispanic Americans, Asian Americans, Native Americans, homosexuals, the poor, the elderly, and terminally ill. It also includes the nature and extent of health and mental health problems such as depression, chemical dependency and other addictive behaviors. Emphasis is placed on cultural tolerance and cultural competence. This course would also be a useful course for students majoring in the Human Services program and/or who have an interest in Psychology and the helping professions.

PSYC 372  Child Development  3 Units
Formerly: PSYC 34
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
A survey of human, social, physical and intellectual development from conception through adolescence.

PSYC 372  Child Development  3 Units
Formerly: PSYC 34
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
A survey of human, social, physical and intellectual development from conception through adolescence.

PSYC 372  Child Development  3 Units
Formerly: PSYC 34
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
A survey of human, social, physical and intellectual development from conception through adolescence.

PSYC 372  Child Development  3 Units
Formerly: PSYC 34
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 54 hours LEC
A survey of human, social, physical and intellectual development from conception through adolescence.

PSYC 495  Independent Studies in Psychology  1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

PSYC 499  Experimental Offering in Psychology  .5-4 Units
Formerly: PSYC 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Radio Production

DEGREE A.A.—Communications Media, Radio Production

Concentration on the audio portion of broadcasting, with emphasis on performing, production and knowledge of music. Students will learn to prepare both professional live radio programs for the campus and internet radio stations, and tapes to be played over local community stations. This option can lead to an entry-level position with a commercial radio station.

Career Options
Disc Jockey; Announcer; Sportscaster; Studio Technician; Newscaster; Audio Technician; Radio Producer; Promotions Coordinator

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights
Internship opportunities at local radio stations
Practical experience in the campus radio station, Internet broadcasting at www.kccriverradio.org

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE A.A.—Communications Media, Radio Production CODE #1062

REQUIRED PROGRAM ............................................................. Units
CMED 300 (5) Mass Media and Society ..................................... 3
CMED 310 (26) History of American Radio (1920-1950) ............. 1
CMED 312 (56) Radio Studio Operations .................................... 3
CMED 301 (62) Introduction to Telecommunications .................... 3
CMED 370 (63) Broadcast Writing and Announcing or CMED 380 (73) Broadcast Journalism ...................................... 3
CMED 316 (66) Intro to Radio Workshop (May be taken twice) .... 3
CMED 317 (76) Radio Workshop (Must be taken twice) .............. 2/2
CMED 110 (86) Automated Radio ............................................ 3
CISC 302 (CIS 1X) / JOUR 330 (1) Computer Familiarization ....... 2
CMED 315 (COMM 371) Voice and Diction for Broadcasting ....... 3
Plus three (3) units selected from: ............................................. 3
COMM 301 (1), 363 (8)
CMED 110 (86), 330 (54), 372 (65), 376 (60), 498 (98); JOUR 150 (54), 300 (20A);
MKT 310 (22);
TOTAL UNITS REQUIRED ..................................................... 31

General Education Graduation Requirements • see page 18.

See Communications Media section for class offerings in this program.
Real Estate

**A.A.—Real Estate**

**CERTIFICATES**
- Real Estate Broker
- Real Estate Sales
- Applications of Desktop G.I.S. (Business/Marketing emphasis)

(CRC offers, in addition to a Real Estate AA Degree, a variety of courses available which satisfy State of California prerequisites for Real Estate Salesperson and Real Estate Broker examinations.)

**Career Options**
- Real Estate Agent; Real Estate Broker; Real Estate Appraiser

Some career options may require more than two years of college study.

**Highlights**
- Instruction by trained, working real estate professionals
- Preparation for State of California real estate license examinations
- Training in one of the most lucrative careers in today’s world
- A lab with tutorial assistance

**Note to Transfer Students:**
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

**APPLICANTS FOR THE REAL ESTATE SALESPERSON EXAM**
To qualify to take an examination for a Real Estate Salesperson License, an applicant must submit evidence (transcripts) of having completed a college-level course in **Real Estate Principles**.

In addition to **Real Estate Principles** the applicant must also (either when qualifying for the examination, when applying for the original license or within eighteen months after license issuance) submit evidence of having completed **TWO** additional basic real estate courses from the following CRC course offerings. (It is recommended that Real Estate Practice be one of the courses selected.)

- Accounting 301 (1A)
- Business Law 340 (18A)
- Introduction to Escrow Procedures
- Legal Aspects of Real Estate
- Real Property Management
- Real Estate Appraisal
- Real Estate Economics
- Real Estate Finance
- Real Estate Practice

**APPLICANTS FOR THE REAL ESTATE BROKER EXAMINATION**
An applicant for the Broker examination must have completed eight college-level courses, in addition to the experience/educational requirements. These eight courses should include the following CRC course offerings:

- Real Estate Principles
- Real Estate Practice
- Legal Aspects of Real Estate
- Real Estate Finance
- Real Estate Appraisal
- Real Estate Economics or Accounting 301 (1A)
- and two courses from the following group: *
  - Business Law 340 (18A)
  - Real Property Management
  - Introduction to Escrow Procedures
  - Advanced Appraisal

* If applicant completes both Accounting and Real Estate Economics, only one additional course is required.
Real Estate (RE)

RE 110
Legal Aspects of Real Estate  3 Units  
Formerly: RE 81  
Prerequisite: None  
Hours: 54 hours LEC  
This course is a study of California real estate laws. Topics include: the sources of law and the judicial system; agency; duties and responsibilities of licensees; contracts and their application to real estate; property ownership and management; real estate security devices; property rights, liens and homesteads; landlord-tenant law, land use controls, and title insurance and escrow. Successful completion of this course applies towards the education requirements for the broker’s examination.

RE 120
Real Estate Practice  3 Units  
Formerly: RE 82  
Prerequisite: None  
Hours: 54 hours LEC  
This course covers practices and techniques of residential real estate brokerage and sales. Topics will include ethics, fair housing agency, goal setting, prospecting, listing, advertising, escrow procedures, financing, taxation, marketing, property management, leasing and business opportunities. Successful completion of this course applies toward California Department of Real Estate Education requirement for the broker’s examination.

RE 130
Real Estate Finance  3 Units  
Formerly: RE 83  
Prerequisite: None  
Hours: 54 hours LEC  
This course is an analysis of real estate financing, including lending policies and problems in financing transactions in residential, apartment, commercial, and special purpose properties. Methods of financing properties are emphasized. Successful completion of the course applies toward the educational requirements for the Broker’s Examination.

RE 140
Real Estate Appraisal  3 Units  
Formerly: RE 84  
Prerequisite: None  
Hours: 54 hours LEC  
This course covers the purposes of appraisals and the appraisal process. Topics will also include the different approaches, methods and techniques used to determine the value of various types of property with emphasis on residential single-family properties. Successful completion of this course applies toward the educational requirement for the Real Estate Broker’s license, and Licensed and General Appraisers’ license.
RE 141  
**Advanced Appraisal**  
3 Units  
Formerly: RE 94  
Prerequisite: RE 140. Grade of “C” or better required to meet prerequisite.  
Hours: 54 hours LEC  
This course discusses advanced appraisal concepts with an emphasis on market and income analysis, capitalization techniques, rate derivation, compound interest tables, cost and sales comparison approaches; and the appraisal of specific income properties such as apartments, office buildings, shopping centers and industrial properties.

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RE 150  
**Real Estate Economics**  
3 Units  
Formerly: RE 85  
Prerequisite: None  
Hours: 54 hours LEC  
This course covers nature and classification of real estate and real estate investments, economic development of real property, real estate cycles and market trends. Governmental and private sector influence on the economics of real estate is covered. It is recommended that this course be taken last in the real estate course series.

---

RE 160  
**Introduction to Escrow Procedures**  
3 Units  
Formerly: RE 86  
Prerequisite: None  
Hours: 54 hours LEC  
This course covers the functions and responsibilities of the escrow holder, including actual preparation of escrow instructions and documents in a typical real estate transaction. Audit, disbursement, the issuance of closing statements and analysis of title insurance policies are also covered.

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RE 161  
**Advanced Escrow Procedures**  
3 Units  
Formerly: RE 87  
Prerequisite: RE 160. Grade of “C” or better required to meet prerequisite.  
Hours: 54 hours LEC  
This course covers unusual and difficult types of escrow, including the evaluation of possible solutions with emphasis on real estate loans, financing instruments and exchanges.

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RE 190  
**Real Property Management**  
3 Units  
Formerly: RE 95  
Prerequisite: None  
Hours: 54 hours LEC  
This course covers the day-to-day operation and management of real property. Topics will include: marketing procedures, leases, maintenance, accounting and economics, recordkeeping, management forms, legal requirement, laws, human relations, employer responsibilities and management.

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RE 295  
**Independent Studies in Real Estate**  
1-3 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

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RE 299  
**Experimental Offering in Real Estate**  
.5-4 Units  
Prerequisite: None  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

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RE 300  
**California Real Estate Principles**  
3 Units  
Formerly: RE 19  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
This fundamental real estate course covers the basic laws and principles of California real estate, giving understanding, background, and terminology necessary for advanced study in specialized courses. This course is required by the California Department of Real Estate prior to taking the real estate salesperson’s examination.

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RE 495  
**Independent Studies in Real Estate**  
1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

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RE 498  
**Work Experience in Real Estate**  
1-4 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 336)

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RE 499  
**Experimental Offering in Real Estate**  
.5-4 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
Science

DEGREE A.S.—Science, General

CERTIFICATE Applications of Desktop GIS, (see Geography, page 202)

Areas of Study:
• Biology . . page 79 .
• Chemistry . . page 99 .
• Engineering . . page 167 .
• Environmental Technology . . page 184 .
• Geography . . page 201 .
• Geology . . page 206 .
• Physics, Physical Science, Astronomy . . page 291 .

CRC students may choose courses in the various disciplines of science to meet any of several objectives. Courses are designed to:

• Prepare students for transfer and continuation of studies at other colleges or universities (chemistry, biology, medicine, etc.)
• Meet general education requirements for non-science majors
• Prepare students for immediate entry into a science-based technology career
• Provide for career advancement and continuing education

Many courses include hands-on practical experience and/or opportunities for work experience in local industry and business.

The student, in consultation with a counselor, should choose science courses to meet his or her program, transfer, or general education requirements. The Counseling Center also has information regarding science requirements for transfer to other four-year institutions.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor's degree.

DEGREE A.S.—Science, General
CODE #1229

This degree is designed to meet common lower division requirements for a general science major.

REQUIRED PROGRAM ............................................................... Units
Eighteen (18) units of transfer level course work in science. Two laboratory courses must be included: one in the physical sciences and one in the biological sciences. Courses may be selected from astronomy, biology, chemistry, geology, physical geography, physical anthropology, physics, and physical science.

TOTAL UNITS REQUIRED ............................................................. 18

General Education Graduation Requirements - See page 18.
PRE-PROFESSIONAL HEALTH SCIENCE EDUCATION

Students planning to attend a dental, medical, veterinary or optometry school are not required to complete a prescribed undergraduate major. Many students have the misconception that "predental," "pre-med," etc., are academic majors. They are not. A student's undergraduate degree might be achieved in anything, as long as appropriate courses required for dental/medical/veterinary/optometry school admission are completed. Professional schools are looking for well-rounded students who have taken courses in the humanities and social sciences and who have participated in school activities and community work. Generally, admission criteria include: completion of required courses; cumulative GPA; science courses GPA only; extracurricular activities, including work experience related to the health science specialization; test scores; application, which includes a personal statement; letters of recommendation; and an interview.

In addition to a good GPA, a student must be self-motivated, have social concern, communication skills and maturity. An applicant, however, does not need a 4.0 GPA for admission, as a GPA is an impersonal reflection of a student's ability to handle university work.

Students planning to enroll in a professional health science school may complete at Cosumnes River College: (1) transfer general education courses, (2) transfer courses for the student's chosen major, (3) a basic core of courses which is required for all health science students, and (4) other courses required for the chosen speciality, i.e., dental, medical, optometry, and/or veterinary.

The basic core courses are:
BIO L 400 (1A), 420 (3)
CHEM 400 (1A), 401 (1B)
EN GW R 300 (ENGL 1A), 301 (ENGL 1B), 302 (ENGL 1C)
PHYS 350 (5A), 360 (5B)
MATH 335 (20), 350 (16A), 351 (16B) (or high school equivalent)

Pre-dental
Although a student may be admitted to a dental school upon completion of 90 units, a baccalaureate degree is recommended. A student should have at least a 3.0 GPA. The Dental Aptitude Test (DAT) is a requirement.

In addition to the basic core courses, the required PSYC 300 (1) and 320 (3) and a minimum of 12 units of social sciences, humanities, and foreign languages may be completed at Cosumnes River College.

Pre-medical
Although a student may be admitted to a medical school upon completion of 90 units, a baccalaureate degree is recommended. The usual stated minimum GPA is 2.5. In reality, a student with a GPA below 3.0 is almost never accepted, and it is rare to be admitted with a GPA below 3.4. The Medical College Admission Test (MCAT) is a requirement.

In addition to the basic core courses, the required MATH 350 (16A) and 351 (16B) and a full year of organic chemistry [CHEM 420 (12A) and 421 (12B)] may be completed at Cosumnes River College.

Pre-optometry
Although a student may be admitted to an optometry school upon completion of 90 units, a baccalaureate degree is recommended. The usual stated minimum GPA is 2.0; however, a more realistic minimum is a 3.0 GPA. The Optometry College Admission Test (OCAT) is a requirement.

In addition to the basic core courses, other courses such as BIO L 440 (6), 430 (25), 431 (26); MATH 350 (16A), 351 (16B); PSYC 300 (1); STAT 300 (1); humanities courses and social science classes may be required. Please check with your counselor. These courses can be completed at Cosumnes River College.

Pre-veterinary
It is extremely difficult to gain admission to a veterinary school without being a resident of the state in which the school is located. A California resident, therefore, is virtually restricted to attending the University of California School of Veterinary Medicine at Davis.

Although a student may be admitted to the School of Veterinary Medicine upon completion of 90 units, a baccalaureate degree is recommended. A student with a 2.5 GPA may be considered for admission; however, rarely is a student admitted with a GPA below 3.0. Experience with animals is given heavy consideration. The Graduate Record Examination General Aptitude Section and Advanced Test in Biology are requirements.

In addition to the basic core courses, the required STAT 300 (1) may be completed at Cosumnes River College.

Pre-physical therapy
Students may take general education and a basic core of prerequisite courses at Cosumnes River College and transfer to California State University, Fresno, Long Beach or Northridge. Admission into a physical therapy program is very competitive with great weight given to relevant work experience and grade point average earned in the prerequisite courses. Because admission requirements vary among the programs, students are advised to work closely with a counselor to plan for the completion of work experience, general education and a core of basic program courses. Many Physical Therapy programs will be offered at the Master's Degree level only. Check with the counseling department.

The core courses may include:
BIO L 400 (1A), 420 (3), 430 (25), 431 (26)
CHEM 400 (1A), 401 (1B)
CHEM 305/307 (2A), 306/308 (2B)
PHYS 350 (5A), 360 (5B)
PSYC 300 (1)

Pre Nursing Option, see Biology section, page 80.
Sign Language Studies

CRC offers courses in Sign Language Studies designed to introduce students to American Sign Language. Students learn basic skills to enable them to communicate with members of the deaf community.

Career Options
- Interpreter; Instructor;
- Human Services Worker;
- Rehabilitation Counselor

Some career options may require more than two years of college study.

Highlights
- Dedicated, well-trained instructors
- Practical tools provided for communication opportunities

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

Sign Language Studies (SILA)

SILA 305
American Sign Language 1 4 Units
Formerly: SILA 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 72 hours LEC
This is the beginning course in a series of four courses in visual-gestural processing of sign language. It provides instructional activities for people who wish to become competent in communication with deaf people. This emphasis is on non-verbal communication.

SILA 306
American Sign Language 2 4 Units
Formerly: SILA 2
Prerequisite: SILA 305. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 72 hours LEC
This is the second in a series of four courses in American Sign Language. The emphasis is on non-verbal communication. Topics presented include grammatical features such as descriptors, differentiation between cardinal/ordinal numbers, contrastive structure, temporal aspect markers and temporal sequencing.
SILA 315  
American Sign Language 3  4 Units  
Formerly:  SILA 3  
Prerequisite:  SILA 306. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 72 hours LEC  
This course is the third in a series of four courses in American Sign Language. It emphasizes expressive and receptive non-verbal communication skills between signers who have preliminary American Sign Language syntactical and lexical skills. It provides an understanding of deaf cultural processes by identifying behaviors and several norms from activities assigned in the class. It also includes dialogues that involve asking, empathizing, negotiation and agreeing or disagreeing.

SILA 316  
American Sign Language 4  4 Units  
Formerly:  SILA 4  
Prerequisite:  SILA 315. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 72 hours LEC  
This course is the fourth in a series of four courses in American Sign Language. The emphasis is on non-verbal communication, at advanced levels of competency. Topics presented included advance grammatical features, such as descriptors, classifier use, various numbering systems in American Sign Language, cultural features of the language and the diverse aspects of the American Deaf Community.

SILA 330  
Impact of Deafness  3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 54 hours LEC  
This class is a survey of processes from the perspective of four institutions that have critical impact on the psycho-social development of people: family, education, work, and society. Students will learn and become sensitive to the unique challenges of deafness. They will be exposed to how these challenges influence personal, social and communication competencies of deaf people. Written reports and student-initiated field trips will be required for this course.

SILA 345  
Fingerspelling  1 Unit  
Formerly:  SILA 54  
Prerequisite: None  
Corequisite:  SILA 305. Grade of “C” or better required to meet corequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC ; 9 hours LAB  
This is a basic course in use of the manual alphabet designed to augment expressive and receptive fingerspelling skills introduced in American Sign Language courses. Perceptual strategies of use to hearing adults will be stressed. Emphasis will be placed on recognition of fingerspelling in context. Basic knowledge of American Sign Language is required.

SILA 495  
Independent Studies in Sign Language Studies  1-3 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

SILA 499  
Experimental Offering in Sign Language Studies  .5-4 Units  
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
The Social Science department offers classes in law and society and special studies in the areas of Mexican-American, Asian, and Native American experiences. These classes provide an excellent background for further study.

The program includes 21 units of coursework in the following areas: anthropology, economics, geography, history, philosophy, political science, psychology, social science, or sociology. Students who wish to transfer to a four-year college or university should plan their programs to meet general education and lower division major requirements. All students are encouraged to consult with a counselor.

Career Options
Instructor; Social Worker; Researcher; Criminal Justice; Social Services; Business and Corporate employment

Some career options may require more than two years of college study.

Highlights
Opportunities to build a foundation for interdisciplinary studies
Overview of theoretical, methodological, analytical, and cultural principles

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE A.A.—Social Science

This degree is designed to meet common lower division requirements for a major in one of the social sciences. Students should check the transfer requirements for the college and specific major to which they wish to apply.

REQUIRED PROGRAM ......................................................... Units
Twenty-one (21) units must be completed in at least three different subject areas listed below:

Program subject areas:
Anthropology, Economics, Geography 310 (2), History, Political Science, Philosophy 360 (7), Psychology, Social Science, and Sociology.

This degree enables the student to experience a wide range of diverse social science disciplines. To verify the transferability of specific courses and their university application, please consult your CRC counselor.

TOTAL UNITS REQUIRED ......................................................... 21

General Education Graduation Requirements - See page 18.
Social Science (SO CSC)

SOCSC 325
Asian Experience in America 3 Units
Formerly: SS 44
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This class is an exploration of the rich diversity of Asian-American groups within the United States, with an emphasis on the historical and cultural contributions of both immigrant and refugee populations, including an investigation of socio-economic, educational, legal and political issues. The students will analyze, compare and contrast, the Asian-American assimilation experience with Latinos, African-Americans, and Native Americans. They will gain an understanding of American ethnocentrism, ethnicity, and racism to help develop a personal foundation of cultural tolerance.

SOCSC 330
Mexican-Americans in the United States 3 Units
Formerly: SS 42
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is a socio-historical examination of Mexican-Americans as a minority group with an emphasis on the impact of political and geographic factors.

SOCSC 360
Law and Society 3 Units
Formerly: SS 16
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introduction to the American legal system emphasizing the nature, purpose, sources and functioning of American law but including some comparative analysis of other historical and contemporary legal systems. Emphasis is placed on the evolution of legal concepts as a reflection of the social environment and the role of the judiciary. A theoretical rather than practical viewpoint is used through analysis of selected cases and legislation in the areas of individualism, socioeconomic groups, the family, the economy, crime, criminal procedure and punishment, church and state separation, the environment, and torts. This is not to be taken in place of BUS 340 when required. This course is the same as BUS 345, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

SOCSC 480
Honors Seminar in Social Science 1 Unit
Formerly: SS 47B
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC
Honors Seminars in Social Science are special one-unit intensive courses for academically-accomplished students or those with the potential for high academic achievement. In these seminars, students will study topics in the movements, trends and philosophies found in the Social Sciences. Enrollment is limited to Honors Program students (see catalog page 21). This course is the same as HONOR 370. This course, under either name, may be taken a total of four times for credit on different topics. See “Cross Listed-Courses” in the catalog.

SOCSC 495
Independent Studies in Social Science 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

SOCSC 499
Experimental Offering in Social Science .5-4 Units
Formerly: SS 49
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Sociology

CRC offers courses in the study of human behavior in society. The discipline is concerned with the study of systems and how individuals live, work and interact within them.

**Career Options**
- Sociologist; Social Worker; Instructor; Probation Officer; Employment Counselor; Urban Planner

Some career choices may require courses beyond the Associate Degree.

**Highlights**
- Practical courses valuable to all students
- Well-trained and interesting instructional staff

**Note:**
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

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**Sociology (SOC)**

**SOC 300**
**Introductory Sociology**

| Formerly: SOC 1A |
| Prerequisite: None |
| Course Transferable to UC/CSU |

(CAN SOC 2)

| Hours: 54 hours LEC |

This course is a study of human behavior in society, including social groups, culture, personality, social stratification, social change, collective behavior and social institutions.

**SOC 301**
**Social Problems**

| Formerly: SOC 1B |
| Prerequisite: None |
| Course Transferable to UC/CSU |

(CAN SOC 4)

| Hours: 54 hours LEC |

This course is a survey of social problems in American society. It will examine their causes and evaluate proposed solutions. A special emphasis will be placed on local issues.
SOC 305  
Critical Thinking in the Social Sciences  
3 Units
Formerly: SOC 2  
Prerequisite: None  
Advisory: ENGWR 300 or the equivalent.  
Course Transferable to UC/CSU  
Hours: 54 hours LEC
This course examines the definitional and contextual nature of social issues. It develops a “critical thinking” approach which integrates interdisciplinary principles and incorporates a comparative framework utilizing literary criticism, logic, argumentation, and persuasion to analyze and compare the content and validity of social problems. This course specifically explores how the media and scientific community collect, interpret, and report social data. Combining critical thinking techniques with the sociological perspective will help students to question the “taken-for-granted” assumptions that surround social phenomena and influence human behavior.

SOC 310  
Marriage and the Family  
3 Units
Formerly: SOC 3  
Prerequisite: None  
Advisory: Eligibility for ENGWR 101.  
Course Transferable to CSU  
Hours: 54 hours LEC
This course will examine the social, psychological, historical and economic factors relating to the changing family, marriage, remarriage and significant relationships. Exploration of the changing gender roles, the meaning of love and sexuality, dating, communication skills and parenting will also be included.

SOC 321  
Race, Ethnicity and Inequality in the United States  
3 Units
Formerly: SOC 5  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC
This course is a social profile of major American minority groups. It examines the problems of minority assimilation into an “open” society and culture.

SOC 325  
Chicano Culture  
3 Units
Formerly: SOC 6  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC
This course examines the individual Chicano/a and his/her cultural pattern within the United States; the acquisition of his/her culture, innovation, adaptation, and direction of future cultural development.

SOC 341  
Sex and Gender in the U.S.  
3 Units
Formerly: SOC 20  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC
This course provides a study of the changing roles of women and men in the US. Theories of women’s and men’s “natures”, gender role socialization, gender related inequalities, health and body issues, and a current examination of the women’s and men’s movements will be explored.

SOC 495  
Independent Studies in Sociology  
1-3 Units
Prerequisite: None  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)

SOC 499  
Experimental Offering in Sociology  
.5-4 Units
Formerly: SOC 49  
Prerequisite: None  
Course Transferable to UC/CSU; UC - See Counselor  
Hours: 18 hours LEC ; 54 hours LAB  
(See catalog page 21)
Spanish

DEGREE: A.A.—Spanish

CRC offers the basic grammar and conversation courses in Spanish. Students will be able to understand the spoken language, to speak with reasonable fluency, and to write at their speaking level.

Career Options
Airlines/Travel; Banking; Bilingual Education/Teacher’s Aide; Bilingual Telecommunications; Emergency Services; Foreign Service; Foreign Language Teacher; Import & Export; Intelligence/Military Service; International Business; IRS/State Franchise Tax Board; Overseas Employment: Business & Commerce; Law Enforcement/Correctional Officer; Social Security Officer; Social Service; Translating & Interpreting; Tourism

Some career options may require more than two years of college study.

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE
A.A.—Spanish
CODE #1537

This degree is designed to meet common lower division requirements for a major in Spanish in a four-year university. This will include the fundamentals of language learning, listening, speaking, reading, writing and culture.

REQUIRED PROGRAM ......................................................... Units

Core courses:
SPAN 401 (1A) Elementary Spanish ................................. 4
SPAN 402 (1B) Elementary Spanish ................................. 4
SPAN 411 (2A) Intermediate Spanish ............................... 4
SPAN 412 (2B) Intermediate Spanish ............................... 4

Restricted Electives:
Select seven to nine (7-9) units from the following: .............. 7-9
SPAN 311 (42A) Conversational Spanish/Intermediate (2)
SPAN 312 (42B) Conversational Spanish/Intermediate (2)
SPAN 425 (35) Advanced Reading and Conversation (3)
SPAN 426 Introduction to Mexican American Literature (3)
SPAN 427 Introduction to Spanish American Literature (3)
SOCSC 330 (SS42) Mexican Americans in the U.S. (3)
TOTAL UNITS REQUIRED .................................................. 23-25

Suggested Elective:
SPAN 434 (52A) Spanish for the Professions - Intermediate (3)

General Education Graduation Requirements - See page 18.

Note: The Associate of Arts Degree in Spanish may be obtained by completion of the required program, plus General Education Requirements, plus sufficient electives to a 60-unit total. No course may be taken more than once for purposes of credit towards the degree.
Native speakers of any of the languages offered in the department who have high school-equivalent reading and writing skills in their native language should enroll in the 411 (2A) level course (or above) of their native language.

**Spanish (SPAN)**

**SPAN 101**  
Conversational Spanish, Elementary  
3 Units  
Formerly: SPAN 50A  
Prerequisite: None  
Hours: 36 hours LEC; 54 hours LAB  
This is a first semester introduction to the Spanish language. It is designed for beginning students with little or no previous exposure to the language. It is characterized by an emerging ability to understand and produce appropriate responses in high-frequency situations utilizing learned materials. Speaking and writing will be comprehensible to a sympathetic listener. Verbal and written expression is limited to short, culturally appropriate communication. Students will acquire a knowledge of the geography, culture and people of regions where Spanish is spoken and of Spanish-speakers' contributions to North American and world cultures. This class consists of two hours lecture and one hour of laboratory work conducted in the classroom each week and two hours of laboratory work conducted in the Language Laboratory each week.

**SPAN 102**  
Conversational Spanish, Elementary  
3 Units  
Formerly: SPAN 50B  
Prerequisite: SPAN 101. Grade of “C” or better required to meet prerequisite.  
Hours: 36 hours LEC; 54 hours LAB  
This is second semester Elementary Spanish. It is designed for students who have completed SPAN 101 or two years of high school Spanish. It provides refinement of skills begun in 101. Students will gain increased accuracy and ability to understand and produce appropriate responses in high frequency situations utilizing learned materials. Speaking and writing will be comprehensible to a sympathetic listener. Verbal and written expression will be limited to short, culturally appropriate communication on a broader scale than at the 101 level. Students will acquire a knowledge of the geography, culture and people of regions where Spanish is spoken and of Spanish-speakers’ contributions to North American and world cultures. This class consists of two hours lecture and one hour of laboratory work conducted in the classroom each week and two hours of laboratory work conducted in the Language Laboratory each week.

**SPAN 311**  
Conversational Spanish, Intermediate  
2 Units  
Formerly: SPAN 42A  
Prerequisite: SPAN 102. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC; 54 hours LAB  
This is first semester Intermediate Spanish. It is designed for students who have completed SPAN 102 or three years of high school Spanish. This course provides refinement of skills attained in SPAN 102. Students will work toward the ability to create with the language without relying on learned responses, to understand main ideas in routine speech and to understand main ideas in written texts. Listening and reading comprehension continue to develop; speaking and writing will be comprehensible to a somewhat sympathetic native speaker. Students will develop the ability to respond in an unrehearsed manner on concrete topics in known situations. Written expression will meet limited personal needs in culturally appropriate language at a higher level of accuracy than found in 102. Students will continue acquisition of knowledge of geography, culture and people of regions where Spanish is spoken and of Spanish-speakers’ contributions to North American and world cultures. This course will consist of one hour of lecture and two hours of laboratory work conducted in the classroom each week and one hour of laboratory work conducted in the Language Laboratory each week.

**SPAN 312**  
Conversational Spanish, Intermediate  
2 Units  
Formerly: SPAN 42B  
Prerequisite: SPAN 311 or 411. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC; 54 hours LAB  
This is second semester Intermediate Spanish. It is designed for students who have completed Spanish 311 or four years of high school Spanish. It provides continued development of skills attained in 311. The focus will be the development of written narrative and expository prose combined with increased cultural awareness. Emphasis will be placed on culturally authentic reading and writing through the introduction of basic literary analysis. Students will develop the ability to handle complicated situations using past and future time frames. Students will continue acquisition of knowledge of geography, culture and people of regions where Spanish is spoken and of Spanish-speakers’ contributions to North American and world cultures. This course will consist of one hour of lecture and two hours of laboratory work conducted in the classroom each week and one hour of laboratory work conducted in the Language Laboratory each week.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 401</td>
<td>Elementary Spanish</td>
<td>4</td>
<td>Intermediate Spanish is designed for beginning students with little or no previous exposure to the language. It is characterized by an emerging ability to understand and produce appropriate responses in high-frequency situations utilizing learned materials. Speaking and writing will be comprehensible to a sympathetic listener. Verbal and written expression is limited to short, culturally appropriate communication. Students will acquire a knowledge of the geography, culture, and people of regions where Spanish is spoken and of Spanish-speakers' contributions to North American and world cultures.</td>
</tr>
<tr>
<td>SPAN 402</td>
<td>Elementary Spanish</td>
<td>4</td>
<td>Intermediate Spanish is designed for students who have completed SPAN 401 or two years of high school Spanish. It provides refinement of skills begun in SPAN 401. Students will gain increased accuracy and ability to understand and produce appropriate responses in high-frequency situations utilizing learned materials. Speaking and writing will be comprehensible to a sympathetic listener. Verbal and written expression is limited to short, culturally appropriate communication on a broader scale than at the SPAN 401 level. Students will acquire a knowledge of the geography, culture, and people of regions where Spanish is spoken and of Spanish-speakers' contributions to North American and world cultures.</td>
</tr>
<tr>
<td>SPAN 411</td>
<td>Intermediate Spanish</td>
<td>4</td>
<td>Intermediate Spanish is designed for beginning students with little or no previous exposure to the language. It is characterized by an emerging ability to understand and produce appropriate responses in high-frequency situations utilizing learned materials. Speaking and writing will be comprehensible to a sympathetic listener. Verbal and written expression is limited to short, culturally appropriate communication on a broader scale than at the SPAN 401 level. Students will acquire a knowledge of the geography, culture, and people of regions where Spanish is spoken and of Spanish-speakers' contributions to North American and world cultures.</td>
</tr>
<tr>
<td>SPAN 412</td>
<td>Intermediate Spanish</td>
<td>4</td>
<td>Intermediate Spanish is designed for students who have completed SPAN 411 or four years of high school Spanish. It provides continued development of skills attained in 411. The focus will be the development of written narratives and expository prose combined with increased cultural awareness. Emphasis will be on culturally authentic reading and writing through the introduction of basic literary analysis. Students will develop the ability to handle complicated situations using past and future time frames. Students will continue acquisition of knowledge of geography, culture, and people of regions where Spanish is spoken and of Spanish-speakers' contributions to North American and world cultures.</td>
</tr>
<tr>
<td>SPAN 413</td>
<td>Spanish for the Native Speakers I</td>
<td>4</td>
<td>Spanish for the Native Speakers I is designed for students who have completed SPAN 411 or four years of high school Spanish. It provides continued development of skills attained in 411. The focus will be the development of written narratives and expository prose combined with increased cultural awareness. Emphasis will be on culturally authentic reading and writing through the introduction of basic literary analysis. Students will develop the ability to handle complicated situations using past and future time frames. Students will continue acquisition of knowledge of geography, culture, and people of regions where Spanish is spoken and of Spanish-speakers' contributions to North American and world cultures.</td>
</tr>
<tr>
<td>SPAN 425</td>
<td>Advanced Reading and Conversation</td>
<td>3</td>
<td>Advanced reading and conversation in Spanish with emphasis on building vocabulary and review of grammar. Introduction to literature of the Hispanic world. May be taken two times for credit.</td>
</tr>
<tr>
<td>SPAN 426</td>
<td>Introduction to Mexican American Literature</td>
<td>3</td>
<td>This course is an introductory survey to the four genres of Mexican American Literature: Poetry, Narrative, Theatre, and the Essay, and the culture which produced it. Emphasis will be given to twentieth century writers and works. This course is conducted in English and Spanish.</td>
</tr>
</tbody>
</table>
SPAN 427
Introduction to Spanish American Literature 3 Units
Prerequisite: SPAN 412 or equivalent. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is an introductory survey to the four genres of Spanish American Literature: Poetry, Narrative, Theatre and the Essay, and the culture which produced it. Post Independence writers and their works will be emphasized. This course is conducted in Spanish.

SPAN 434
Spanish for the Professions - Intermediate 3 Units
Formerly: SPAN 52A
Prerequisite: SPAN 102 or 402. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 54 hours LEC
This is an intermediate course designed for persons in law enforcement, business and finance, social services and the medical professions. The emphasis of the course is on acquiring verbal facility in interviewing, collecting data, giving instructions and general courtesies. The course will help students acquire language proficiency while reviewing and broadening the grammar foundation attained in elementary Spanish. It will introduce specific vocabulary necessary for professionals to communicate successfully in a professional situation. Cultural and behavioral attitudes appropriate for relating to persons of Hispanic heritage will be suggested. This course may be taken twice for credit.

SPAN 495
Independent Studies in Spanish 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

SPAN 499
Experimental Offering in Spanish .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Student Government

These courses are designed for those students elected to student government positions. The Associated Student Government is recognized as the voice of students. Those enrolled in this program have a variety of opportunities to serve on the Student Senate, and/or any college committees.

### Highlights
- Develop leadership skills by working with student activities, student government, and the inter-club council
- Participate on college committees to help develop and determine policy as it relates to student issues
- Represent the student voice to the campus and community

### Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

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**Student Government (SGVT)**

**SGVT 300**
Introduction to Student Government 2 Units
- Formerly: SGVT 1
- Prerequisite: None
- Course Transferable to CSU
- Hours: 18 hours LEC ; 54 hours LAB
This class provides a study of the legal, educational and philosophical basis of student government. May include travel to other campuses, area conferences and state conferences. Will include the opportunity to participate on faculty and administrative committees. Designed to teach leadership skills and to give practical experience in the field of student government. May be taken three times for credit.

**SGVT 495**
Independent Studies in Student Government 1-3 Units
- Prerequisite: None
- Course Transferable to CSU
- Hours: 18 hours LEC ; 36 hours LAB
(See catalog page 21)

**SGVT 499**
Experimental Offering in Student Government .5-4 Units
- Formerly: SGVT 49
- Prerequisite: None
- Course Transferable to CSU
- Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Television Production

DEGREE  A.A.—Communications Media, Television Production

CERTIFICATES  Cable Access Production
              Television Production

Designed to provide skills in television and film production through the preparation of videotapes for campus viewing and Cable TV. This option can lead to entry-level jobs in television, film, Cable TV, business and industry or for preparation for transfer to a four-year institution.

Career Options
Camera Operator; Computer Graphic Artist; Tape or Non-Linear Video Editors; Technical Director; Broadcast Technician; Production Assistant; DVD, TV, film Producer/Director; Personal or Corporate Video

Some career options may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights
Practical experience working in the campus television studio or at Access Sacramento
Student film, music video and commercial opportunities
Internship opportunities working in local television stations post-production facilities, and with independent film-makers
Complete digital TV studio with four cameras, switcher, character generator and teleprompter
State-of-the-art digital computer lab for graphics and non-linear editing, including Apple Final Cut Pro, DVD Studio Pro, Adobe Photoshop, Adobe Illustrator, After Effects and Newtek Lightwave 3-D

Note to Transfer Students:
If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE
A.A.—Communications Media, Television Production

CODE #1063

REQUIRED PROGRAM ........................................................................ Units
CMED 300 (5)  Mass Media & Society ........................................... 3
CMED 330 (54) Basic Film/Video Camera Techniques ............... 3
CMED 312 (56) Radio Studio Operations ................................. 3
CMED 301 (62) Introduction to Telecommunications ............... 3
CMED 370 (63) Broadcast Writing and Announcing (3) or CMED 380 (73) Broadcast Journalism (3) ......................... 3
CMED 331 (64) Television Production....................................... 3
CMED 332 (74) Advanced Television Production (must be taken twice) ........................................... 2,2
CMED 360 (80) Introduction to Motion Graphics:
               Adobe After Effects ............................................... 3
Plus six (6) units selected from: .................................................. 6
CMED 304 (70), 333 (84), 361 (81), 362 (162/82),
363, 371 (1), 372 (65), 376 (60), 377 (85), 378 (83), 498 (98)
JOUR 150 (54), 300 (20A)
MKT 310 (22)
PHOTO 300 (1), 301 (4)
CMED 315 (COMM 371)
TOTAL UNITS REQUIRED .......................................................... 31

General Education Graduation Requirements - See page 18.
CERTIFICATE
Cable Access Production
CODE #1061

Short-term courses designed to enable students to gain skills in the operation and use of video/audio equipment and techniques.

REQUIRED PROGRAM ......................................................... Units
CMED 334 (91) Producing Your Cable TV Program ................... 1
CMED 336 (92A) Single Camera TV Production ...................... 1
CMED 347 (92B) Lighting for Video .................................... 1
CMED 335 (93) Videotape Editing for Cable TV ..................... 1
CMED 337 (94A) Multiple-Camera Studio Production ............ 1
CMED 379 (94B) Television Performance Techniques ........... 1

Plus six (6) units selected from: ........................................... 6
CMED 300 (5), 312 (56), 301 (62), 372 (65), 360 (60),
361 (161), 374 (94C), 344 (94D), 318 (95A),
348 (95B), 314 (95C), 345 (96)

TOTAL UNITS REQUIRED ..................................................... 12

See Communications Media section for most class offerings.

CERTIFICATE
Television Production
CODE #1063

Designed to provide skills in television production through the preparation of videotapes for campus viewing and Cable TV. This option can lead to entry level jobs in television, Cable TV, business and industry or for preparation for transfer to a four-year institution.

REQUIRED PROGRAM ......................................................... Units
CMED 330 (54) Basic Film/Video Camera Techniques ............ 3
CMED 331 (64) Television Production ................................. 3
CMED 332 (74) Advanced Television Production ............... 2
CMED 360 (80) Introduction to Motion Graphics:
Adobe After Effects ........................................ 3

Plus six (6) units selected from: ......................................... 6
CMED 333 (84), 361 (81), 362 (162/82) 363, 372 (65),
376 (60), 377 (85), 378 (83), 498 (98)

TOTAL UNITS REQUIRED ..................................................... 17
Theatre Arts

DEGREE A.A.—Theatre Arts

The two-year program in Theatre Arts is designed to provide students with a broad spectrum of activities in all phases of play production. The basic program also provides an opportunity for specialization in acting or one of the technical areas of theatre work.

Career Options
- Acting; Theatre Arts Management;
- Design for the Theatre; Publicity and Public Relations; Teaching; Theatre Technician/Stage Management; Box Office Management

Some career choices may require courses beyond the Associate Degree.

Highlights
- Distinguished faculty with nationally renown professional experience in directing, playwriting and design, as well as considerable teaching experience on both the graduate and undergraduate levels in the UC system
- New Visual and Performing Arts Complex which includes a 320-seat proscenium theatre and a 150-seat flexible space
- CRC’s Theatre Department includes River Stage, Sacramento’s critically acclaimed professionally-oriented theatre company
- Professional Acting Studio presently being developed in conjunction with River Stage, eventually to become a three-year program
- Work side-by-side with seasoned professional theatre artists
- Opportunity for advanced students to gain access to the finest four-year college and university theatre programs as well as internships in major regional theatres throughout the country

Required Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA 300 (1)</td>
<td>Introduction to the Theatre</td>
<td>3</td>
</tr>
<tr>
<td>TA 302 (2A)</td>
<td>History and Theory of the Theatre I</td>
<td>3</td>
</tr>
<tr>
<td>TA 303 (2B)</td>
<td>History and Theory of the Theatre II</td>
<td>3</td>
</tr>
<tr>
<td>TA 340 (13)</td>
<td>Beginning Acting</td>
<td>3</td>
</tr>
<tr>
<td>TA 350 (15A)</td>
<td>Theory and Techniques of Acting I</td>
<td>3</td>
</tr>
<tr>
<td>TA 420 (16)</td>
<td>Stagecraft</td>
<td>3</td>
</tr>
<tr>
<td>TA 422 (31)</td>
<td>Stage Lighting</td>
<td>3</td>
</tr>
<tr>
<td>TA 476 (44)</td>
<td>Fundamentals of Repertory Production (.5-6) and/or</td>
<td>3</td>
</tr>
<tr>
<td>TA 460 (47)</td>
<td>Rehearsal and Performance (.5-3) and/or</td>
<td>3</td>
</tr>
<tr>
<td>TA 407 (25)</td>
<td>Children’s Theatre (.5-3)</td>
<td>3</td>
</tr>
<tr>
<td>TA 424 (32)</td>
<td>Advanced Technical Theatre (3-6)</td>
<td>3</td>
</tr>
<tr>
<td>TA 430 (36)</td>
<td>Costume Construction</td>
<td>3</td>
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<tr>
<td>TA 440 (34)</td>
<td>Arts Management</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL UNITS REQUIRED</td>
<td></td>
<td>33</td>
</tr>
</tbody>
</table>

General Education Graduation Requirements - See page 18.

Note to Transfer Students:
- If you are interested in transferring to a four-year college or university to pursue a bachelor’s degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an Associate’s degree in this major may be different from the requirements needed for the Bachelor’s degree.

DEGREE
A.A.—Theatre Arts
CODE #1239

This degree is designed to provide hands on experience in the production of plays as well as prepare students for transfer to four-year institutions, and for a baccalaureate major in Theatre or related majors.

Required Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>TA 300 (1)</td>
<td>Introduction to the Theatre</td>
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<tr>
<td>TOTAL UNITS REQUIRED</td>
<td></td>
<td>33</td>
</tr>
</tbody>
</table>

General Education Graduation Requirements - See page 18.
Theatre Arts (TA)

TA 300
Introduction to the Theatre 3 Units
Formerly: TA 1
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This class surveys the literary, cultural and historical aspect of theatre arts. It is an audience oriented, non-performance theatre arts course open to all students.

TA 302
History and Theory of the Theatre I 3 Units
Formerly: TA 2A
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is a survey of the history of theatre from the Greeks through the 17th Century. The history and development of theatre and drama are studied in relationship to cultural, political and social conditions of the time. Plays are read for analysis of structure, plot, character and historical relevance. This course is recommended for students planning to major in Theatre, Humanities, English or Communication.

TA 303
History and Theory of the Theatre II 3 Units
Formerly: TA 2B
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course is a survey of the history of theatre from the 17th Century through modern times. This history and development of theatre and drama are studied in relationship to cultural, political and social conditions of the time. Plays are read for analysis of structure, plot, character and historical relevance. This course is recommended for students planning to major in Theatre, Humanities, English, or Communication.

TA 306
Diversity in American Drama (1960 to Present) 3 Units
Formerly: TA 4
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This multicultural course surveys the theatrical expression of Native-American, African-American, Chicana/Chicano, and Asian-American theatre from 1960 to the present, including the social, political, cultural, and economic climate in which the theatre was created.

TA 322
An American Musical: Stage and Film 3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course studies the transition of the Musical from its earliest incarnation to the latest Broadway and box office hits. This class will examine both production films (movies made of stage productions) and feature films to examine how the theatrical techniques of the Musical have been translated to the media of film.

TA 323
From Stage to Screen: Production Design and Art Direction 3 Units
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course will examine the aesthetic design of films by looking at costume, scenery and prop design. Students will evaluate how the production design of a film helps to shape all of the elements that make up the film. In this class we will examine how production design has been utilized to show the past, present and future as well as imaginary time periods. This class will draw upon theatrical design techniques and evaluate how those techniques have been used in film production.

TA 340
Beginning Acting 3 Units
Formerly: TA 13
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course introduces the student to the basic art and craft of acting. Basic exercises in voice and diction, movement, and character will be utilized.

TA 350
Theory and Techniques of Acting I 3 Units
Formerly: TA 15A
Prerequisite: TA 340 or TA 380. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
(CAN DRAM 8)
Hours: 54 hours LEC
This course follows the Beginning Acting class and enables the student to utilize the simple learned skills and apply them to scene work on American realistic scenes and monologues. The emphasis will be placed on broadening the understanding of the acting process by exploring at least four characters during the semester, as well as observing the progress of other actors in the class. This course may be taken two times for credit.
TA 351
Theory and Techniques of Acting II  3 Units
Formerly: TA 15B
Prerequisite: TA 350 or TA 381. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC
This course follows TA 350 and will enable the serious acting student to expand skills that have been learned and apply them to an ongoing study of the craft of acting. The emphasis is placed on encouraging the actor to explore and expand the range and flexibility of their personal acting process, including acting for the camera. Students will explore at least four characters during the semester, as well as observe progress of the other actors in the class. This course may be taken two times for credit.

TA 356
Acting for the Camera I  3 Units
Formerly: TA 19
Prerequisite: TA 350 or CMED 370. Grade of “C” or better required to meet prerequisite.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
Introductory course in the theory and techniques of acting for film and video, comparing the differences between stage acting and acting for the camera. Scenes and commercials enacted and played back on video tape for class critiquing. Students may wish to challenge the prerequisite on the basis of equivalent experience. This course is the same as CMED 378, and only one may be taken for credit. See “Cross-Listed Courses” in the catalog.

TA 360
Styles of Acting  3 Units
Formerly: TA 16
Prerequisite: TA 351 or TA 382. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
Students will study and practice different styles of acting from the ancient to modern times. The instructor may concentrate on selected periods. This course may be repeated twice for credit. Students may wish to challenge the prerequisite on the basis of equivalent experience.

TA 370
Theatre Movement  2 Units
Formerly: TA 17
Prerequisite: None
Course Transferable to UC/CSU
Hours: 18 hours LEC ; 54 hours LAB
This course is an active participation and performance experience designed to give students opportunities in discovering and solving movement tasks of the actor. The course incorporates exercises to expand the individual’s movement for characters and scenes, as well as training in specific movement areas such as combat, period style, and dance. This course may be taken four times for credit.

TA 380
Introductory Actors Studio  3 Units
Formerly: TA 27A
Prerequisite: None
Advisory: Audition/demonstrated acting skills.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
A practical, performance-oriented course designed to introduce the career-oriented drama student to an integrated program of skills in actor training. Studies will include basic principles of acting, improvisation, voice and movement dynamics, and beginning scene study.

TA 381
Beginning Acting Studio  3 Units
Formerly: TA 27B
Prerequisite: TA 380 or TA 340. Grade of “C” or better required to meet prerequisite.
Advisory: Audition/demonstrated acting skills.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is a continuation of TA 380 offering a further examination of an integrated program of beginning skills in actor training for the career-oriented acting student. Studies will include audition techniques, beginning scene study, speech for the stage and dialects.

TA 382
Intermediate Acting Studio  3 Units
Formerly: TA 27C
Prerequisite: TA 381 or TA 350. Grade of “C” or better required to meet prerequisite.
Advisory: Audition/demonstrated acting skills.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
A practical, performance-oriented course designed to introduce the career-oriented drama student to an integrated program of intermediate skills in actor training. Studies will include intermediate audition techniques and Shakespeare scene study, intermediate scene study and project work in one or more classic styles.

TA 383
Advanced Acting Studio  3 Units
Formerly: TA 27D
Prerequisite: TA 382 or TA 351. Grade of “C” or better required to meet prerequisite.
Advisory: Audition/demonstrated acting skills.
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course is a continuation of TA 382 offering a further examination of an integrated program of advanced skills in actor training for the career-oriented acting student. Studies will include advanced scene study and project work, advanced audition techniques, and acting for the camera.
TA 384
Advanced Scene Study Workshop 3 Units
Formerly: TA 27E
Prerequisite: TA 383 or TA 360. Grade of “C” or better required to meet prerequisite.
Advisory: Audition/demonstrated acting skills.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This advanced skills course for the experienced actor which concentrates on developing and expanding the range and power of the actor’s work. Actors will be individually directed through a series of scenes and audition monologues.

TA 401
Children’s Literature and Creative Drama 3 Units
Formerly: TA 28
Prerequisite: None
Course Transferable to CSU
Hours: 45 hours LEC ; 27 hours LAB
This course examines teaching strategies and techniques for introducing children to theatre. This is not a class for children, rather a class for educators service providers for children, and recreation majors. This course will introduce the students to children’s theatre. This will be accomplished both through the study of contemporary children’s theatre scripts as well as hands on exercises dealing with the methodology of presenting theatre for children (including mask making, puppetry, and creative drama techniques).

TA 407
Children’s Theatre .5-3 Units
Formerly: TA 25
Prerequisite: None
Course Transferable to CSU
Hours: 6 hours LEC ; 9 hours LAB
This course will explore Children’s Theatre through dramatic presentations of fiction, drama, and poetry for an audience of children or young people. It will provide the opportunity to analyse and experience the production process from script to stage. Participants will create a touring children’s theatre production. No prior theatrical experience is required. For theatre, education, early childhood education and recreation majors who wish to explore theatre from a production rather than audience standpoint. This course may be taken for credit for a maximum of 12 units.

TA 420
Stagecraft 3 Units
Formerly: TA 30A
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
This course covers the basic materials used in the construction of scenery and properties. Also included are construction and painting techniques; kinds of scenery and backstage organization are explored through a combination of lecture and practical experience gained by working on department productions.

TA 424
Advanced Technical Theatre 3 Units
Formerly: TA 32
Prerequisite: TA 420 and 422.
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
Advanced study dealing with technical theatre production techniques and design in the areas of scenery, props, lighting, sound, scenic painting, rigging, costumes or stage management and costumes, through individual projects and participation in major productions. This course may be taken two times for credit.

TA 430
Costume Construction 3 Units
Formerly: TA 36
Prerequisite: None
Course Transferable to UC/CSU
Hours: 36 hours LEC ; 54 hours LAB
In addition to constructing costumes for the Theatre Arts productions, students will learn techniques of pattern drafting and sewing for stage use. Basic elements of color, design, and if applicable, period styles will be explored. This course may be taken two times for credit.

TA 440
Arts Management 3 Units
Formerly: TA 34
Prerequisite: None
Course Transferable to CSU
Hours: 36 hours LEC ; 54 hours LAB
This is a general survey class in arts management with emphasis on organization, marketing/development, and financial management. Field work will include projects with an existing arts organization.

TA 460
Rehearsal and Performance .5-3 Units
Formerly: TA 47
Prerequisite: None
Course Transferable to UC/CSU
Hours: 54 hours LAB
This course is a workshop experience for students in theatre. All students performing or working backstage in productions may enroll in this class for one-half to three units as determined by the requirements of the production. The course may be repeated for a maximum of twelve units. Students may enroll in this class after the close of late registration as determined by the requirements of the production.
TA 476
Fundamentals of Repertory Production .5-6 Units
Formerly: TA 44
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
This course provides for participation in one or more River Stage productions and includes lecture regarding essential theatre production information. It also includes, depending upon the number of units taken, working in areas of the theatre including front of house, (i.e. house management, ushering, concessions, lobby display and box office assistance), stage management, directorial assistance and various duties related to running production (or productions). The course alternates between the regular class meeting times and attendance at the production(s). During production regular weekly meetings are changed to conform to the performance schedule. Fulfillment of this course in lab as an actor requires being cast through the audition process. This course may be repeated for a maximum of twelve units.

TA 494
Topics in Theatre Arts .5-4 Units
Formerly: TA 42
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
This course is designed to give students an opportunity to study a variety of topics dealing with performance and/or production aspects of theatre not included in current course offerings. This course may be repeated for credit, providing there is no duplication of topics.

TA 495
Independent Studies in Theatre Arts 1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

TA 498
Work Experience in Theatre Arts 1-4 Units
Formerly: TA 48
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

TA 499
Experimental Offering in Theatre Arts .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
CRC's Veterinary Technology program is designed to provide the student with the skills and knowledge necessary to pursue a career as a Registered Veterinary Technician. The program offers a rigorous yet rewarding academic curriculum while simultaneously providing ample hands-on experience. The student will gain a working knowledge of animal behavior, restraint, nutrition and nursing. The curriculum will include, but not be restricted to, the performance of emergency care, anesthesia, dental care, surgical assistance and laboratory procedures.

Registered Veterinary Technicians (RVTs) (previously known as Animal Health Technicians) are trained professionals who work as highly skilled assistants to veterinarians and researchers. Their knowledge and skills have led to their being desirable employees in a variety of related fields.

Most states (including California) require official licensing or certification of RVTs. In California certification is accomplished by:

- completion of an educational curriculum
- achievement of a passing score on a state board exam

Career Options
Private Veterinary Practice; Zoos/Wild Animal Parks; Pharmaceutical Industry; Veterinary Supplies Sales; Diagnostic Laboratories; Military Service; Education; Biomedical Research; Humane Societies/Animal Control; Regulatory Veterinary Medicine; Livestock Health Management

Highlights
- One of only six programs in California that has earned accreditation by the American Veterinary Medical Association
- Acceptance of degree by examining boards in states other than California
- High-quality training recognized by local employers
- Excellent record of students passing state board exams
- On-the-job training and future job placement opportunities
DEGREE
A.S.—Veterinary Technology
CODE #1017

Upon completion of an A.S. degree in this field, the student will be
fully eligible to take the State Board examination to become
registered as a Veterinary Technician.

REQUIRED PROGRAM ............................................................ Units
First Year (Fall)
BIOL 440 (6) General Microbiology ......................................... 4
VT 100 (50) Introduction to Veterinary Technology .................. 3
VT 111 (61) Anatomy & Physiology of Animals ...................... 3.5

Second Year (Spring)
VT 110 (60) Veterinary Office Practice .................................. 3
VT 113 (63) Clinical Lab Techniques for Veterinary Technicians ... 4

TOTAL UNITS REQUIRED ............................................................ 30

Suggested Elective:
VT 152 (92) Introduction to Laboratory Animals and Caged Birds

Additional Suggested Electives:
AH 110 (54); NUTRI 300 (10); PSYC 300 (1)

General Education Graduation Requirements - See page 18.

IMPORTANT NOTICE TO STUDENTS
In order to ensure that prerequisites for subsequent courses
are met and to allow completion of course work in four
semesters, the student must adhere to the following schedule.
NOTE: VT courses are offered only once per year– spring or
fall semester.

<table>
<thead>
<tr>
<th>SEMESTER 1 (Fall)</th>
<th>VT 100</th>
<th>VT 110</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIOL 440</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEMESTER 2 (Spring)</td>
<td>VT 110</td>
<td>VT 113</td>
</tr>
</tbody>
</table>

** May be taken Fall or Spring semester of first year.

With the exception of VT 110 (60), all courses are pre- or
co-requisites for the subsequent semester's courses. Failure
to complete a course successfully will therefore delay
progress through the program.

VT 298 (98) Work Experience can be taken any semester after
completion of VT 113 (63). A minimum of 150 hours is
required.

VT 152 (92), an elective, when offered, may be taken during
the second or fourth semester.

Requir...
Students may become eligible to sit for the California Veterinary Technician examination with successful completion of an AS degree in Veterinary Technology (Category 2), or completion of the certificate program and three (3) years of clinical experience working as an unregistered veterinary assistant (Category 5).

Additional Program Notes:
All student enrolled in any of the following courses will be required to spend 2-6 hours per week in the care of colony animals. Shifts will be assigned and will include weekends, holidays and semester break.

VT 111 (61) VT 113 (63) VT 120 (70) VT 122 (72) VT 130 (80)

Veterinary Technology (VT)

VT 100
Introduction to Veterinary Technology 3 Units
Formerly: VT 50
Prerequisite: None
Hours: 36 hours LEC ; 54 hours LAB
This is an orientation course which reviews the history, training and career opportunities pertaining to Registered Veterinary Technicians. Animal behavior, handling, training and restraint will be thoroughly presented and discussed in the lecture periods. Laboratories will provide opportunities for students to gain hands-on experience with domestic, farm, laboratory and non-domestic animal species (when they are available). Students will be introduced to the medical terminology common to the animal health care field. Enrollment in this course limited to students admitted through the pre-enrollment process.

VT 110
Veterinary Office Practice 3 Units
Formerly: VT 60
Advisory: Completion of or concurrent enrollment in CISC 302.
Hours: 36 hours LEC ; 54 hours LAB
A practice-oriented course that includes hospital and clinic management procedures, business and professional aspects of practice, ethical and legal considerations for the Registered Veterinary Technician and his/her employer. Students will be introduced to OSHA requirements and regulations as they pertain to veterinary hospitals. Assignments in medical terminology will be given. Enrollment in this course limited to students admitted through the pre-enrollment process.

VT 111
Anatomy-Physiology of Animals 3.5 Units
Formerly: VT 61
Prerequisite: BIOL 400 or 401; and CHEM 305 or 307 with grades of “C” or better.
Corequisite: Concurrent enrollment in VT 100 (may be taken previously).
Hours: 36 hours LEC ; 81 hours LAB
This course will cover the basics of the anatomy and physiology of common domestic animals, specifically dogs, cats, horses, swine and ruminants. The information will be organized according to body systems. Within each system, the variation between species will be explored. Whenever possible, topics will be related to pertinent veterinary situations. (Note: Laboratory periods will include dissection of cadavers.) Students will be required to spend 2-6 hrs/week during assigned times in the care of the colony animals. Time may include weekends and holidays as well as semester break.

VT 113
Clinical Laboratory Techniques for Veterinary Technicians 4 Units
Formerly: VT 63
Prerequisite: VT 111. Grade of “C” or better required to meet prerequisite.
Hours: 54 hours LEC ; 72 hours LAB
This course will cover the basic clinical laboratory skills needed by Registered Veterinary Technicians. Subjects included will be parasitology, cytology, urinalysis, bacteriology and an introduction to hematology. Both normal and abnormal values for various species of animals will be covered. Students will gain additional hands-on experience as they learn to restrain the animals for specimen collection procedures. Office procedures as they pertain to clinical laboratory work will be included: filing, recordkeeping, telephone reports, etc. Students will be required to spend 2-6 hrs/week during assigned times in the care of the colony animals. Time may include weekends and holidays as well as semester break.

VT 120
Pharmacology and Anesthesiology for the Veterinary Technician 4 Units
Formerly: VT 70
Prerequisite: VT 111 and 113. Grade of “C” or better required to meet prerequisite.
Hours: 54 hours LEC ; 72 hours LAB
This course will lay the foundation for the student’s understanding of pharmacological agents. Drugs will be discussed according to classification, action, method of administration and dispensing (including procedures for scheduled drugs). Injectable and inhalation anesthetic agents will be discussed and demonstrated during surgical laboratory exercises. Students will have an opportunity to work with two inhalation anesthetic agents. All students will rotate through various surgical positions where they will enhance their knowledge of equipment and job tasks required of the surgical assistant and anesthesia monitor. Students will learn intravenous catheterization and fluid therapy. Students will be required to spend 2-6 hrs/week during assigned times in the care of the colony animals. Time may include weekends and holidays as well as semester break. Students will also be assigned a dog and cat which will require an additional 140 min/week for obedience training, socialization and grooming.
VT 122  
**Animal Disease: Pathology**  
3 Units  
Formerly: VT 72  
Prerequisite: VT 111 and VT 113.  
Corequisite: BIOL 440 (may be taken previously). Grade of “C” or better required to meet prerequisite or corequisite.  
*Hours: 54 hours LEC*  
A course of study designed to acquaint the Veterinary Technician trainee with the many varied disease entities seen in the animal health field. While most of the diseases discussed will be those of the common domestic animals, some problems of exotic and laboratory animal species will also be investigated. There will be exposure to such areas of study as etiology, pathogenesis, symptomatology and control of disease. Necropsy demonstrations will be provided as visual aids to the textbook study. Students will be required to spend 2-6 hrs/week during assigned times in the care of the colony animals. Time may include weekends and holidays as well as semester break. Students will also be assigned a dog and cat which will require an additional 140 min/week for obedience training, socialization and grooming.

VT 126  
**Dentistry for the Veterinary Technician**  
1.5 Units  
*Prerequisite: None*  
*Corequisite: VT 120.*  
*Hours: 18 hours LEC ; 27 hours LAB*  
This course will prepare the student for all aspects of veterinary diagnostics and prophylaxis in dogs and cats appropriate to the veterinary technician. It will include instruction in dental charting, radiography, prophylaxis and extractions. Students will perform dental radiography and prophylaxis on anesthetized animals.

VT 130  
**Advanced Veterinary Technology**  
4 Units  
Formerly: VT 80  
*Prerequisite: VT 120. Grade of “C” or better required to meet prerequisite.*  
*Hours: 54 hours LEC ; 72 hours LAB*  
This course includes instruction in abnormal hematology, an introduction to bone marrow evaluation, veterinary nutrition, dentistry, and emergency patient care. The student is also instructed in multiple aspects of small animal, laboratory animal, and non-domestic animal nursing techniques. Students will be required to spend 2-6 hrs/week during assigned times in the care of the colony animals. Time may include weekends and holidays as well as semester break. Students will also be assigned a dog and cat which will require an additional 140 min/week for obedience training, socialization and grooming.

VT 131  
**Introduction to Diagnostic Imaging**  
3 Units  
Formerly: VT 81  
*Prerequisite: VT 120 and 122. Grade of “C” or better required to meet prerequisite.*  
*Hours: 36 hours LEC ; 54 hours LAB*  
This course is designed to meet the needs of the Registered Veterinary Technician who will be working for veterinarians in private practice, animal research laboratories, private and state industrial or educational institutions. The course covers safety procedures, rules, regulations, x-ray production and theory and specific techniques associated with the use of x-ray equipment. It includes positioning techniques for various animal species as well as radiograph developing techniques and basic x-ray theory. Alternate imaging modalities are introduced and their use in veterinary medicine described. Emphasis is placed on the theory of diagnostic ultrasound and its use in veterinary medicine.

VT 134  
**Large Animal Nursing**  
1.5 Units  
Formerly: VT 74  
*Prerequisite: VT 111 and 113. Grade of “C” or better required to meet prerequisite.*  
*Hours: 18 hours LEC ; 27 hours LAB*  
A course in restraint, behavior, anesthesia and nursing care of ruminant and equine animals, including hands-on experience with these species. Some routine medically-oriented management procedures, such as ruminant dehorning, will also be covered. In addition to lecture presentations, students will train at off-campus sites in procedures such as venipuncture, tail and leg wrapping, administration of injectable and oral medication and intravenous catheterization. The student will also receive instruction in the use of restraint equipment and techniques in the use of equipment for obstetrical examination, and in the administration of anesthesia.

VT 152  
**Introduction to Laboratory Animals and Caged Birds**  
2 Units  
Formerly: VT 92  
*Prerequisite: None*  
*Corequisite: VT 100 (may be taken previously). Grade of “C” or better required to meet corequisite.*  
*Hours: 27 hours LEC ; 27 hours LAB*  
This course is designed to expand upon the brief introduction the veterinary technology student has had to caged birds and laboratory animals. The student will have more hands-on exposure to laboratory animals and caged birds (e.g. specimen collection, anesthesia, etc.) thereby increasing their understanding of laboratory animal care maintenance requirements. Greater emphasis will be placed on obtaining handling skills. This course will provide information and handling skills which will help the student prepare for AALAS certification.

VT 295  
**Independent Studies in Veterinary Technology**  
1-3 Units  
Formerly: VT 49I  
*Prerequisite: None*  
*Hours: 18 hours LEC ; 54 hours LAB*  
*(See catalog page 21)*
VT 298
Work Experience in Veterinary Technology 1-4 Units
Prerequisite: VT 111 and 113. Grade of “C” or better required to meet prerequisite.
Hours: 18 hours LEC ; 54 hours LAB
As a part of the Veterinary Technology degree program, students are required to work a minimum of 150 hours in an active veterinary environment to provide practical work experience which coordinates with their academic training. This work experience is to be obtained after completion of the first year of the veterinary technology program. Work experience must be completed under the supervision of a California licensed veterinarian. (See catalog page 336.)

VT 299
Experimental Offering in Veterinary Technology .5-4 Units
Formerly: VT 49
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
Vietnamese

CRC offers the basic grammar and conversation courses in Vietnamese. Students will be able to understand the spoken language, to speak with reasonable fluency, and to write at their speaking level.

Career Options
- Airlines/Travel
- Banking
- Bilingual Education/Teacher's Aide
- Bilingual Telecommunications
- Emergency Services
- Foreign Service
- Foreign Language Teacher
- Import & Export
- Intelligence/Military Service
- International Business
- IRS/City Franchise Tax Board
- Overseas Employment
- Business & Commerce
- Law Enforcement/Correctional Officer
- Social Security Officer
- Social Service
- Translating & Interpreting
- Tourism

Some career options may require more than two years of college study.

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.

Native speakers of any of the languages offered in the department who have high school-equivalent reading and writing skills in their native language should enroll in the 411 (2A) level course (or above) of their native language.

 Vietnamese (VIET)

VIET 101
Conversational Vietnamese, Elementary  3 Units
Formerly: VIET 50A
Prerequisite: None
Hours: 36 hours LEC ; 54 hours LAB
This is a first semester introduction to the Vietnamese language. It is designed for beginning students with little or no previous exposure to the language. It is characterized by an emerging ability to understand and produce appropriate responses in high-frequency situations utilizing learned materials. Speaking and writing will be comprehensible to a sympathetic listener. Verbal and written expression is limited to short, culturally appropriate communication. Students will acquire a knowledge of the geography, culture and people of regions where Vietnamese is spoken and of Vietnamese-speakers' contributions to North American and world cultures. This class consists of two hours lecture and one hour of laboratory work conducted in the classroom each week and two hours of laboratory work conducted in the Language Laboratory each week.

VIET 102
Conversational Vietnamese, Elementary  3 Units
Formerly: VIET 50B
Prerequisite: VIET 101.Grade of “C” or better required to meet prerequisite.
Hours: 36 hours LEC ; 54 hours LAB
This is second semester Elementary Vietnamese. It is designed for students who have completed VIET 101 or two years of high school Vietnamese. It provides refinement of skills begun in 101. Students will gain increased accuracy and ability to understand and produce appropriate responses in high-frequency situations utilizing learned materials. Speaking and writing will be comprehensible to a sympathetic listener. Verbal and written expression will be limited to short, culturally appropriate communication on a broader scale than at the 101 level. Students will acquire a knowledge of the geography, culture and people of regions where Vietnamese is spoken and of Vietnamese-speakers' contributions to North American and world cultures. This class consists of two hours lecture and one hour of laboratory work conducted in the classroom each week and two hours of laboratory work conducted in the Language Laboratory each week.
VIET 311  
Conversational Vietnamese, Intermediate  
2 Units  
Formerly: VIET 42A  
Prerequisite: VIET 102. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
This course will provide continued refinement of the Novice Mid and High level skills attained in VIET 102 while helping the student work toward the Intermediate Low to Mid levels, which are characterized by increased student ability to create with the language without relying on learned responses; to understand main ideas in routine speech, in face-to-face conversations, in simple announcement and media reports; and to understand main ideas in written texts dealing with the immediate environment, while listening and speaking continue to develop. Speaking will be comprehensive to a somewhat sympathetic native listener and reader and will include the ability to respond in an unrehearsed manner on concrete topics in known situations. This course will provide increased knowledge of geography, and awareness of cultural norms and an appreciation for the culture and people of regions where Vietnamese is spoken and for Vietnamese-Speaker’s contributions to North American and world-wide culture. This course will consist of one hour of lecture and two hours of laboratory work conducted in the classroom and one hour of laboratory work conducted in the Language Laboratory per week.

VIET 312  
Conversational Vietnamese, Intermediate  
2 Units  
Formerly: VIET 42B  
Prerequisite: VIET 311 or 411. Grade of “C” or better required to meet prerequisite.  
Course Transferable to CSU  
Hours: 18 hours LEC ; 54 hours LAB  
This is second semester Intermediate Vietnamese. It is designed for students who have completed Vietnamese 311 or four years of high school Vietnamese. It provides continued development of skills attained in 311. The focus will be the development of written narratives and expository prose combined with increased cultural awareness. Emphasis will be placed on culturally authentic reading and writing through the introduction of basic literary analysis. Students will develop the ability to handle complicated situations using past and future time frames. Students will continue acquisition of knowledge of geography, culture and people of regions where Vietnamese is spoken and of Vietnamese-speakers’ contributions to North American and world cultures. This course will consist of one hour of lecture and two hours of laboratory work conducted in the classroom each week and one hour of laboratory work conducted in the Language Laboratory each week.

VIET 401  
Elementary Vietnamese  
4 Units  
Formerly: VIET 1A  
Prerequisite: None  
Course Transferable to UC/CSU  
Hours: 54 hours LEC ; 54 hours LAB  
This course will provide an introduction to the Vietnamese language at the Novice Low Level, which is characterized by an emerging ability to understand and produce appropriate responses in high-frequency situations utilizing learned materials, standardized messages, phrases and expressions including numbers, dates, days, weather, time, foods and Vietnamese names. Speaking and writing will be comprehensible to a sympathetic listener, including a native speaker used to interacting with non-native speakers. Verbal and written expression is limited to short, culturally-appropriate communication, including kinship terms and nouns of address. Students will acquire a knowledge of the geography, culture and people of regions where Vietnamese is spoken and of Vietnamese-speakers’ contributions to North American and world-wide culture.

VIET 402  
Elementary Vietnamese  
4 Units  
Formerly: VIET 1B  
Prerequisite: VIET 401. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 54 hours LEC ; 54 hours LAB  
This is second semester Elementary Vietnamese. It is designed for students who have completed VIET 401 or two years of high school Vietnamese. It provides refinement of skills begun in 401. Students will gain increased accuracy and ability to understand and produce appropriate responses in high frequency situations utilizing learned materials. Speaking and writing will be comprehensible to a sympathetic listener. Verbal and written expression will be limited to short, culturally appropriate communication on a broader scale than at the 401 level. Students will acquire a knowledge of the geography, culture and people of regions where Vietnamese is spoken and of Vietnamese-speakers’ contributions to North American and world cultures.

VIET 411  
Intermediate Vietnamese  
4 Units  
Formerly: VIET 2A  
Prerequisite: VIET 402. Grade of “C” or better required to meet prerequisite.  
Course Transferable to UC/CSU  
Hours: 54 hours LEC ; 54 hours LAB  
This is first semester Intermediate Vietnamese. It is designed for students who have completed VIET 402 or three years of high school Vietnamese. It provides refinement of skills attained in 402. Students will work toward the ability to create with the language without relying on learned responses, to understand main ideas in routine speech and to understand main ideas in written texts. Listening and reading comprehension continue to develop; speaking and writing will be comprehensible to a somewhat sympathetic native speaker. Students will develop the ability to respond in an unrehearsed manner on concrete topics in known situations. Written expression will meet limited personal needs in culturally-appropriate language at a higher level of accuracy than found in 402. Students will continue acquisition of knowledge of geography, culture and people of regions where Vietnamese is spoken and of Vietnamese-speakers’ contributions to North American and world cultures.
VIET 412
Intermediate Vietnamese  4 Units
Formerly: VIET 2B
Prerequisite: VIET 411. Grade of “C” or better required to meet prerequisite.
Course Transferable to UC/CSU
Hours: 54 hours LEC ; 54 hours LAB
This is second semester Intermediate Vietnamese. It is designed for students who have completed Vietnamese 411 or four years of high school Vietnamese. It provides continued development of skills attained in 411. The focus will be the development of written narratives and expository prose combined with increased cultural awareness. Emphasis will be placed on culturally authentic reading and writing through the introduction of basic literary analysis. Students will develop the ability to handle complicated situations using past and future time frames. Students will continue acquisition of knowledge of geography, culture and people of regions where Vietnamese is spoken and of Vietnamese-speakers’ contributions to North American and world cultures.

VIET 495
Independent Studies in Vietnamese  1-3 Units
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

VIET 499
Experimental Offering in Vietnamese  .5-4 Units
Prerequisite: None
Course Transferable to UC/CSU; UC - See Counselor
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Welding

CERTIFICATE  Welding
This certificate can be used in conjunction with other technology areas such as:

- Automotive Mechanics Technology
- Building Inspection Technology
- Construction Management Technology

The CRC welding program is designed for students interested in seeking employment or advancing employment in welding fabrication and industrial repairs.

Current job statistics show a long-term and growing industry demand for skilled welders with very good pay for those with experience.

Welding encompasses study in electrical, metallurgy, chemistry, physics, design, and mechanical engineering.

Career Options
Welding Technician; Sales; Inspection; Supervision & Management; Welding Engineering; Sculpting; Home/Handicraft & Hobby; Construction; Trucking & Automotives

Highlights
Classes for beginning and advanced welders
Certification from the American Welding Society
Hands-on experience and opportunities for participation in student projects

CERTIFICATE  Welding
CODE #1245

REQUIRED PROGRAM ............................................................. Units
WELD 100 (51)  Introduction to Welding........................................... 3
WELD 114 (55)  Preparation For Welding Certification............... 2
WELD 290 (83)  Advanced Student Projects................................. 2

Plus three (3) units selected from: ................................................... 3
MATH 20 (200) (3)
WELD 112 (53) (3)
CMT 300 (50), or any Automotive Mechanics Technology class (3)

TOTAL UNITS REQUIRED ............................................................. 16

* 3 Unit course to be taken twice for credit.
Welding (WELD)

WELD 100
Introduction to Welding 3 Units
Formerly: WELD 51
Prerequisite: None
Hours: 36 hours LEC ; 54 hours LAB
An introductory course that covers the theory and techniques of operating electric arc welding machines, stick electrode Shielded Metal Arc Welding (SMAW), oxy-acetylene burning and welding, brazing and heat treating. The course also includes a review of power sources, joint design, metals, welding symbols and welding techniques.

WELD 110
Advanced SMAW and Semi-Automatic Process 3 Units
Formerly: WELD 52
Prerequisite: None
Advisory: WELD 100.
Hours: 36 hours LEC ; 54 hours LAB
Specialized training for welding technicians emphasizing proficiency in out-of-position in Shielded Metal Arc Welding (SMAW). In addition, the student will be trained for welding in the Gas Metallic Arc Welding (GMAW) and Flux-Cored Arc Welding (FCAW) on heavy plate. Shielding gases, wire classification, setting up the equipment and metallurgy will also be covered. Course may be taken two times for credit.

WELD 112
TIG, Other Ferrous and Non-Ferrous Welding 3 Units
Formerly: WELD 53
Prerequisite: None
Advisory: WELD 100.
Hours: 36 hours LEC ; 54 hours LAB
This course covers tungsten inert gas welding of aluminum, stainless and other metals used in industry. Course covers equipment set-up, electrode selection, joint design and aluminum wire feed. Other welding techniques covered are welding cast irons, hardfacing, air arc and welding non-ferrous metals.

WELD 114
Preparation for Welding Certification 2 Units
Formerly: WELD 55
Prerequisite: None
Advisory: WELD 100 and completion of or concurrent enrollment in WELD 110 or 112.
Hours: 18 hours LEC ; 54 hours LAB
This course covers groove and fillet welds encountered in general fabrication. Both of these are included in the welding procedure qualification test. Qualification with groove welds qualifies for both groove and fillet welds. The processes covered are Shielded Metal Arc Welding (SMAW), Gas Metallic Arc Welding (GMAW) and Flux-Cored Arc Welding (FCAW). All positions of welding will be performed in these processes. Prepares students for American Welding Society (AWS) certification tests. Course may be taken two times for credit.

WELD 290
Advanced Student Projects 2 Units
Formerly: WELD 83
Prerequisite: None
Advisory: WELD 100.
Hours: 108 hours LAB
Opportunity for students to pursue advanced projects which are selected by the department. May be taken two times for credit.

WELD 294
Topics in Welding .5-5 Units
Formerly: WELD 93
Prerequisite: None
Hours: 54 hours LEC ; 108 hours LAB
Individualized course developed in cooperation with industry to meet specialized training needs. May be taken two times for credit.

WELD 295
Independent Studies in Welding 1-3 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)

WELD 298
Work Experience in Welding 1-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 336)

WELD 299
Experimental Offering in Welding .5-4 Units
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB
(See catalog page 21)
Work Experience (Co-op)

Education and Internships

Cooperative Work Experience Education (Co-op) is a unique, experiential, academic program that allows individuals to apply what they've learned in the classroom to a work environment. Upon completion of their Co-op experience, students may earn 1-4 units of transferable credit with a letter grade.

Co-op serves: College interns, volunteers, and employees. It is also one of several Living Skills graduation requirements for an associate degree.

Co-op Internships and Opportunities
Internships and volunteer experiences provide an opportunity for students to obtain work experience in their major. This activity assists students to develop technical skills, check out career choice, build confidence, network with people in the field, and transition for entry into a competitive labor market.

Interested students must apply two or more weeks before classes start and are required to take a weekly career management class. College credit is earned and internships may be paid or non-paid.

Employees
Co-op also assists our busy employed students who are interested in advancing within their existing work environment. Through Co-op and the approval of the student's employer supervisor, students can apply what they have learned in the classroom to their job.

College credit is earned.

How the Program Works
There are two types of Co-op Programs: Vocational and General.

Vocational Work Experience (298/498) provides students with opportunities to develop or add marketable skills related to their vocational study programs.*

Eligible students must:

• Be working in a paid job, internship, or volunteer opportunity. Students not currently in an internship opportunity who would like assistance should contact the Cooperative Work Experience Education Office. Students must have a cooperating employer by the end of the third week of the semester, first week of a nine week, or summer session to remain in the program.

• With employer’s assistance, establish new or expanded on-the-job skills that will be documented.

• Attend a weekly career management class... or qualify for the "Returning Co-op Student" status. However, attendance is required for everyone for the first two class sessions.

• Register for 1, 2, 3, or 4 units. One unit of credit may be earned for each 75 hours of paid work experience or for 60 hours of non-pay experience. A total of 16 units may be earned in Vocational Work Experience.

• Students working in their college majors and taking, or have taken a course in that area, should enroll in that area's work experience class (e.g. - a sales clerk should enroll in Business).*

Note:
Transferable courses may or may not satisfy lower division major preparation, general education, and/or elective requirements. Please meet with a counselor for specific transfer course evaluation.
* Interested students may earn college credit in the following majors:

Accounting
Agriculture Business
Architectural Design Technology
Architecture
Automotive Mechanics Technology
Building Inspection Technology
Business
Communications Media
Computer Information Science
Construction
Construction Management Technology
Culinary Arts Management
Early Childhood Education
Emergency Medical Technology
Environmental Technology
Fire Technology
Health Information Technology
Horticulture
Human Services
Journalism
Management
Marketing
Medical Assisting
Photography
Plant Science
Real Estate
Theatre Arts
Veterinary Technology
Welding

Co-op Work Experience (198/298/498)
Co-op has two different ways to qualify for the program:

New (1st Time Co-op) Students:
A. You are working a paid or non-paid job, internship, or volunteer opportunity.
B. You must attend the class that meets each week. This class will cover workforce/career transition issues.
C. Your grade and units are earned based on your performance in the workplace (developing new skills) and classroom assignments.

Returning Students:
A. You have completed a Co-op class at CRC.
B. You are working a paid or non-paid job, internship, or volunteer opportunity.
C. No class attendance is required for this program except for the first two class sessions. However, you must establish new on-the-job skills with your employer and complete the necessary forms.
D. Your grade and units are earned based on your work performance and outside homework assignments that emphasize career transition.

For more information, call 691-7372 or visit our website: www.crc.losrios.edu/~trans.

General Work Experience (198):
General work experience education assists students in learning about the world of work and is open to all students regardless of major or job. Like vocational work experience, it is designed for students wanting to apply skills learned in the classroom to their actual job.

College credit (1-3 units) will be earned for working in the students’ current job per semester. No more than six units may be earned in the program. One unit of credit may be earned for each 75 hours of paid work experience or for 60 hours of volunteer experience. Students must have a cooperative employer by the end of the third week of the semester (end of the first week of a nine week or a summer session) to remain in the program.

- Register for "General Work Experience" (Work Experience 198), and attend weekly career management class.

Work Experience (WEXP)

WEXP 198
Work Experience - General 1-3 Units
Formerly: WEXP 97
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB

WEXP 298
Work Experience in (Subject) 1-4 Units
Formerly: WEXP 98
Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB

WEXP 498
Work Experience in (Subject) 1-4 Units
Formerly: WEXP 48
Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB
FACULTY STATEMENT OF PROFESSIONAL ETHICS

1. Faculty members, guided by a deep conviction of the worth and dignity of the advancement of knowledge, recognize the special responsibilities placed upon them. Their primary responsibility to their disciplines is to seek and to state the truth as they see it. To this end they devote their energies to developing and improving their scholarly and teaching competence. They accept the obligation to exercise critical self-discipline and judgment in using, extending and transmitting knowledge. They practice intellectual honesty. Although they may follow subsidiary interests, these interests must never seriously hamper or compromise their freedom of inquiry.

2. As educators, faculty members encourage the free pursuit of learning in their students. They hold before them the best scholarly standards of their discipline. They demonstrate respect for the student as an individual and adhere to their proper role as intellectual guides and counselors. They make every reasonable effort to foster honest academic conduct and to assure that their evaluation of students reflects their true merit. They respect the confidential nature of the relationship between faculty member and student. They avoid any exploitation of students for their private advantage and acknowledge significant assistance from them. They protect their academic freedom.

3. As colleagues, faculty members have obligations that derive from common membership in the community of scholars. They respect and defend the free inquiry of their associates. In the exchange of criticism and ideas they show due respect for the opinions of others. They acknowledge their academic debts and strive to be objective in their professional judgment of colleagues. They accept their share of faculty responsibilities for the governance of their institution.

4. As members of their institution, faculty members seek above all to be effective teachers and scholars. Although they observe the stated regulations of the institution, provided they do not contravene academic freedom, they maintain their right to criticize and seek revision. They determine the amount and character of the work they do outside their institution with due regard to their paramount responsibilities within it. When considering the interruption or termination of their service, they recognize the effect of their decision upon the programs of the institution and give due notice of their intentions.

5. As members of their community, faculty members have the rights and obligations of any citizen. They measure the urgency of these obligations in the light of their responsibilities to their disciplines, to their students, to their profession and to their institution. When they speak or act as private persons, they avoid creating the impression that they speak or act for their college or university. As citizens engaged in a profession that depends upon freedom for its health and integrity, faculty members have a particular obligation to promote conditions of free inquiry and to public understanding of academic freedom.

6. As members of a diverse, multicultural community, faculty members acknowledge a responsibility to cultural, gender and ability sensitivity that goes beyond tolerance and deference. Faculty members model these sensitivities in the classroom, on campus, and in the wider community.

7. The dual mission of the community college is to prepare students for success in both careers and participatory citizenship. Lowering standards to pass students along undermines their abilities to meet future challenges. Maintaining sound and fair standards while helping students to understand those standards together provide a realistic view of what can be expected in other educational institutions and in the larger society beyond the college campus.
FACULTY CODE OF ETHICS

1. Recognizing that, at times, students will offer us gifts or favors, we must be aware of potential implications. Acceptance of such offerings should be avoided.

2. Recognizing that student sensitivities must be respected, we must appreciate that remarks based on gender, race, religious or ethnic group, physical handicap or sexual orientation are inappropriate in the classroom environment.

3. Recognizing that instructors are concerned with the welfare of students and that students will, at times, wish to share information of a personal nature, it is appropriate for faculty to listen sympathetically to students but not to elicit, reveal or exploit confidential information.

4. Recognizing that while amorous relationships are appropriate in other circumstances, we accept that such relationships are always inappropriate when they occur between any faculty member and his or her student. Further, such relationships may have the effect of undermining the atmosphere of trust on which the educational process depends. Implicit in the idea of professionalism is the recognition by those in positions of authority that in their relationships with students there is always an element of power. It is incumbent upon those with authority not to abuse, nor appear to abuse, the power with which they are entrusted.

5. Recognizing that under certain circumstances touching students may be appropriate, we acknowledge that sexual touching of a student by an instructor is never appropriate.

6. Professional interaction between students and instructors should always take place in an academic setting.

7. Instructors should never engage in nor condone sexual harassment. In the academic context, the term “sexual harassment” may be used to describe a wide range of behavior. The fundamental element is the unwelcome personal attention by an instructor who is in a position to determine a student’s grade or student employment or otherwise affect the student’s academic performance or professional future.

CRC FACULTY

AAGAARD, David N. (1989) .......................................................... Counselor
B.A., Carleton College; M.A., CSU, Sacramento
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BOECK, Rick E. (1984) ............................................................... Journalism/Photography/Communications Media
B.A., CSU, Sacramento; M.A., Stanford University
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<th>Name</th>
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<td>DuBRAY, Daniel T.</td>
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<td>BROWN, Christopher R.</td>
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<td>CARNEY, Michael J.</td>
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<td>CARTER, Constance M.</td>
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<td>CASTON, Janis J.</td>
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<td>B.A.A., Boise State College; M.S., CSU, Sacramento; Ed.D., University of Southern California</td>
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<td>CHADERJIAN, Balbina P.</td>
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<td>B.S., University of Oklahoma; M.S., UC, Berkeley</td>
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B.A., Eastern New Mexico University; M.A., Eastern New Mexico University

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EDMAN, Jeanne L. (2001) .............................................................................................................. Researcher/Psychology
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HARRIS, Colette L. (2005) .......................................................................................................... Communication Studies
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HAWKEN, Christopher (2002) ................................................................................................. Dean & Athletic Director, Physical Education & Athletics
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HOCK, Dennis J. (1984) ................................................................. English
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HODAPP, David M. (1998) ................................................................. Environmental Technology
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HOM, Norman L. (2001) ................................................................. English
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HOSKINS, N. Estella (1998) ............................................................. Counselor
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HUANG, Chao-Jen (2000) ...................................................... Computer Information Science
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HUNTER, Mark A. (1999) ............................................................. Mathematics
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JACKSON, Hiram S. (2000) ............................................................. GIS/Geography/Earth Science
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JOHNSON, Jack C. (1976) ............................................................. Business/Marketing
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LaDUE, Cheri L. (1989) ............................................................. Physical Education
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LANDES, John W. (1993) ................................................................. Music
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MARCHAND, Lisa P. (1991) ....................................................................................................... English As A Second Language
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M.S., Carnegie-Mellon University
MATHIAS, Darlene D. (1987) ................................................................................................... Engineering
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B.A., MA, San Francisco State University
McEORMICK, Paul E. (1976) ................................................................................................... Anthropology/Sociology
B.S., MA, University of Missouri
McCULLOUGH, Crisco S. (1999) ............................................................................................ Dean, Careers and Technology
B.S., UC, Berkeley; MA, CSU, San Jose
McGLOUGHLIN, Stephen (2002) ........................................................................................... Dean, Learning Resources & College Technology
B.A., M.A, Trinity College, Dublin, Ireland
McKAIN, Katherine E. (1986) .................................................................................................. Dean, Science, Mathematics & Engineering
A.A., College of the Siskiyous; B.A., M.S., San Jose State University
McLaurin, Freddie L. (1989) ................................................................................................. Mathematics
A.A., American River College; B.A., CSU, Sacramento; M.A., Webster University, MO;
M.S., University of Colorado; Ed.D., University of San Francisco
MILLER, Billie (1972) ............................................................................................................. Business/Business Technology
A.A., Sacramento City College; B.S., M.A., CSU, Sacramento; Ph.D., University of New Mexico, Albuquerque
MONTANEZ, Robert L (1995) .................................................................................................. Chemistry
B.S., CSU, Stanislaus; Ph.D., UC, Santa Cruz
MOORE, Maureen G. (1999) .................................................................................................. Humanities
B.A., San Francisco State University; M.A., CSU, Sacramento
MORALES, Martin F. (2003) .................................................................................................... Political Science
B.A., M.A, San Francisco State University
MORENO, Camille N. (2001) ................................................................................................. Mathematics
B.S., CSU, Chico; M.A., CSU, Sacramento
MUKANTABANA, Mathilde (1994) .......................................................................................... History
B.A., University of Burundi; M.A., M.S.W., CSU, Sacramento
NEWMAN, Jason C. (2002) ..................................................................................................... History
B.A., M.A., Ph.D., UC, Davis
NYE, Jamey A. (2000) ........................................................................................................... English
B.A., M.A., CSU, Sacramento; Ph.D., Indiana University
OBERTH, Christine H. (1998) ............................................................................................... Chemistry
B.S., UC, Davis; M.S., CSU, Sacramento; Ph.D., UC, Davis
OLIVER, Julie A. (2001) ......................................................................................................... Biology
B.A., UC, Davis; M.S., CSU, Sacramento
OLSEN, Carol A. (1990) ........................................................................................................ Business/Computer Information Science
A.A.S., Suffolk County Community College; B.S., SUNY, Albany; M.S., SUNY, Stony Brook
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Custodial Services

Lane, Rosa
Counseling Services

Lee, Cathy
Library

Lee, Deborah
Business & Family Science

Lee, Yet
Custodial Services

Lewis, Lynn
Instructional Services

Luong, Joan (Lana)
Financial Aid

Lutz, Siegfried
Police Services

Magana, Laura
Custodial Services

Mamuyac, Salena
Counseling

Martin, Maureen
Child Development Center

Massi, Shelly
Counseling

McPeek, John
Police Services

Miranda, Blanca
Admissions and Records

Montoya, Alex
Police Services

Morgan, Elaine
Library

Morris, Amanda
Vice President Office / Administrative Services

Myart, James
Custodial Services

Nakamichi, Eugene
Custodial Services

Neal, Linda
President’s Office

Neary, Jason
Physical Education / Athletics

Neuhauser, Raymond
Communication, Visual & Performing Arts

Newcomb, Alan
Science, Mathematics, & Engineering

Nguyen, Bao
Cafeteria Services

Nguyen, My
Child Development Center

Nguyen, Ngoc
Child Development Center

Nguyen, Tina
Humanties & Social Science

Nuss, Barbara
Library

Organ, David
Careers and Technology

Ortega, Judi
Admissions and Records/Veterans Affairs

Ostapanko, Petr
Custodial Services

Patrick, Jennifer
Child Development Center

Patten, Cynthia
Science, Mathematics, & Engineering

Pearson, Gerald
Custodial Services

Perez-Guzman, Alma
Learning Resources and College Technology

Perez, Maria
Financial Aid

Perault, Barbara
Business Services

Petersen, Jolene
Child Development Center

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Science, Mathematics, & Engineering

Phillips, Francene
Technology

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Child Development Center

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EOP&S

Poore, Dustin
Campus Police

Presley, Linda
Child Development Center

Pownall, Laurie
Library

Proby, Diane
I T Services

Quigley, Neal
I T Services

Reali, Greg
Humanities and Social Science

Robertson, Dorothy
Financial Aid

Robertson, Karen
Business & Family Science

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Communication, Visual & Performing Arts

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Administrative Services / Duplicating

Shaw, Janet
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Simmons, Gene
Science, Mathematics, and Engineering

Singh, Induja
Child Development Center

Skubenich, Sergey
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Skubenich, Elena
Financial Aid Office

Smielke, Margie
Disabled Student Services

Smith, Carolyn
Child Development Center

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Careers & Technology

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Humanities & Social Science

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Custodial Services

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### Course Renumbering Guide 2005-2006

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CO SUM NES RIVER COLLEGE 2005 - 2006 Faculty / Staff / Index / Renumbering Guide 349
CHEMISTRY (CHEM)

N E W O L D
CHEM 300 CHEM 51
CHEM 305
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CHEM 307 CHEM 2A
CHEM 308 CHEM 74
CHEM 321 CHEM 7
CHEM 322 CHEM 7L
CHEM 332 CHEM 11
CHEM 400 CHEM 1A
CHEM 410 CHEM 5
CHEM 420 CHEM 12A
CHEM 421 CHEM 12B
CHEM 495 CHEM 49
CHEM 499 CHEM 49

COMMUNICATION STUDIES (COMM)

N E W O L D
COMM 301 COMM 1
COMM 311 COMM 3
COMM 315 COMM 18
COMM 321 COMM 10
COMM 325 COMM 14
COMM 331 COMM 15
COMM 341 COMM 13
COMM 361 COMM 9
COMM 363 COMM 8
COMM 371 COMM 3
COMM 373 COMM 4
COMM 480 COMM 20H
COMM 494 COMM 12
COMM 495 COMM 49I
COMM 499 COMM 49

COMMUNICATIONS MEDIA (CMED)

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CMED 310 CMED 26
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CMED 315 COMM 371
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CMED 317 CMED 76
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CMED 333 CMED 84
CMED 334 CMED 91
CMED 335 CMED 93
CMED 336 CMED 92A
CMED 337 CMED 94A
CMED 344 CMED 94D
CMED 345 CMED 96
CMED 346 CMED 90
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CMED 378 CMED 83
CMED 379 CMED 94B
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CMED 498 CMED 98
CMED 499 CMED 49

COMPUTER INFO. SCI. - CORE (CISC)

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CISC 300 CIS 1 +4
CISC 302 CIS 1X
CISC 303 CIS 4
CISC 305 CIS 21A
CISC 306 CIS 21B
CISC 308
CISC 309 CIS 1L
CISC 310 CIS 3
CISC 320 CIS 14A
CISC 321 CIS 14B
CISC 322 CIS 14C
CISC 323
CISC 324
CISC 329 CIS 14U
CISC 340 CIS 16A
CISC 355 CIS 16AX
CISC 356 CIS 16BX
CISC 360 CIS 29
CISC 495 CIS 49I
CISC 498 CIS 98
CISC 499 CIS 49

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CISA 160 CIS 75
CISA 299 CIS 99
CISA 300 CIS 14A
CISA 301 CIS 14
CISA 305 CIS 11X
CISA 306 CIS 11BX
CISA 309 CIS 11U
CISA 340 CIS 12A
CISA 341 CIS 12B
CISA 345 CIS 12AX
CISA 346 CIS 12BX
CISA 318
CISA 319 CIS 12U
CISA 320 CIS 13A
CISA 321 CIS 13B
CISA 329 CIS 13U
CISA 330 CIS 17A
CISA 331 CIS 17B
CISA 339 CIS 17U
CISA 340 CIS 15A
CISA 441 CIS 15B
CISA 349 CIS 15U
CISA 350 CIS 18A
CISA 405 CIS 26
CISA 499 CIS 49

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CISN 141 CIS 22B
CISN 142 CIS 22C
CISN 143 CIS 22D
CISN 399 CIS 99
CISN 300 CIS 80
CISN 301
CISN 302 CIS 81
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CISN 308 CIS 84
CISN 309 CIS 80U
CISN 320 CIS 55
CISN 322 CIS 56
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CISN 330 CIS 79A
CISN 331 CIS 79B
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CISN 370 CIS 86
CISN 374 CIS 87
CISN 378 CIS 58
CISN 380 CIS 59
CISN 490 CIS 16C
CISN 499 CIS 49

COMPUTER INFO. SCI. - PROGRAMMING (CISP)

NEW OLD
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CISP 310 CIS 35A
CISP 320 CIS 36A
CISP 321 CIS 36B
CISP 330 CIS 42A
CISP 331 CIS 42B
CISP 332 CIS 42C
CISP 340 CIS 33
CISP 350 CIS 37
CISP 351 CIS 32A
CISP 352 CIS 52B
CISP 353 CIS 53
CISP 354 CIS 54
CISP 356
CISP 360 CIS 32A
CISP 365 CIS 31
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### Veterinary Technology (VT)

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### Vietnamese (VIET)

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### Welding (WELD)

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### Work Experience (WEXP)

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<td>WEXP 498 WEXP 48</td>
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</tr>
</tbody>
</table>
For a List of Degrees and Certificates, see page 30.
For Renumbering Guide, see page 349.

ABOUT THE COLLEGE, 3
Academic Accommodations, 10
Academic Area Deans, 338
ACADEMIC CALENDAR, iv
Academic Dismissal, 40
Academic Freedom, 43
Academic Honesty Policy, 40
Academic Honors, 40
Academic Probation, 40
Academic Recognition, 40
Academic Regulations, 39
Academic Renewal, 41
Access to Students Records, 43
Accounting, 46, 47
Accounting, Advanced, 47
Accounting, Certification in Taxation, 48
Accounting Lab & Business Laboratory, 14
Accounting - Computer Applications, 47
Accounting - Clerk, 47
Accreditation, 4
Acting, Theatre Arts, 322, 323
Address Changes, Reporting, 42
Administrative Assistant, 92
ADMISSION REQUIREMENTS AND PROCEDURES, 6
Admissions Application, 7
Admission Eligibility, 6
Admission with Advanced Standing, 7
Admission for Veterans and Dependents, 7
Admission for International Students, 7
Advanced Education for
- High School students, 6
Advanced Placement Tests (CEEB), 20
Advanced Standing, 7
Advertising/Public Relations, 50
Advising and Orientation, 7
Advisories, 33
Aerospace Studies (ROTC), 21
Agriculture, 51
- Agriculture, General Transfer, 52
- Agriculture, General, 52
Agriculture Business, 53, 54
- Agriculture Business, Transfer, 54
Agriculture Chemicals, 296
Alcohol Free Policy, 44
Allied Health, 56
Allied Health, Phlebotomy, 56
ALTERNATIVE CREDIT/STUDY OPTIONS, 20
American Studies, 235
Analyst, Database-SQL, 118
Animal Science, 58
Anthropology, 59
Appeal Option, 40
Application for Admission, 7
Application Analyst, 122
Application, Data Entry, 118
Application Manager, 122
Application Technician, 122
Applications of Desktop GIS, 202
Applied Communication Skills, 103
Architectural Design Technology, 61
Architecture, 64, 65
- Architectural Design Technology, 62
Area Map, south Sacramento, 38
AREAS OF STUDY, 2
Art, 67
Art Design, 68
Art History, 68, 71
Art, New Media, 72
Art, Studio Art, 67
Asset (Ford) Program, 74
Assessment Services, 9
Assessment and Testing, 7
Assistant Teacher, ECE, 152
Associate Teacher, ECE, 153
Associated Student Government (ASG), 8
/ ID Cards - see Student Access Cards, 8
Astronomy, 294
Athletics, 281
Attendance, 41
Auditing Courses, 42
Automatic Transmission/Transaxle, 75
Automotive Brakes, 74
Automotive Electrical Systems, 74
Automotive Emission Control, 75
Automotive Engine Performance, 75
Automotive Engine Repair, 74
Automotive Heating & Air Conditioning, 74
Automotive Mechanics Technology, 73, 74
Automotive: Small Engine Repair, 75
Automotive Suspension & Steering, 75
Awards, CRC, other, 17

Baccalaureate Level Courses for CSU, 24
Basic Skills Education, 3
Basic Culinary Services, 146
Bike Locker Rentals, 12
Biology, 79
Biology, Biological Sciences, 79
Biology, Pre Nursing Options, 80
Biology, Pre Professional Option, 80
Board of Trustees, iii
BOGW-Board of Governors Waiver, 15
Bookstore (Hawks Nest), Services,
   Refunds and Buybacks, 9
Breadth Requirements, CSU, 23
Broadcast Journalism, 84
Building Inspection Technology (B.I.T.), 85, 86
   - Concrete Construction Inspection, 86
   - Electrical Construction Inspection, 86
   - HVAC Inspection, 86
   - Masonry Construction Inspection, 86
   - Plumbing Inspection, 86
   - Soils & Asphalt Construction Inspection, 86
   - Steel Construction Inspection, 87
   - Wood Frame Construction Inspection, 87
Bus Schedules, (see Student Development), 12
Business, 90
Business: Administrative Assistant, 92
Business: E-Business and the Internet, 93
Business: Finance, 196
Business English Help Line, 14
Business, General, 91
Business: General Transfer, 91
Business: Honors, 97, 219
Business Lab, 14
Business: Office Assistant, 92
Business: Office Technician, 92
Business: Small Business Management
   Entrepreneurship, 93
Business Services Fee Requirements, 7

Business Technology, 97
Business Transfer in
   Business Administration, 91

C++, Programming, 113
Cable Access Production, 320
CAL GRANTS - A, B, C, 15
Cafeteria, College, 10
Calendars,
   Summer 2005, Fall 2005, Spring 2006, iv
California Articulation Number System
   (CAN), 26, 27
California State University Transfer,
   General Education and Breadth Requirements, 23
CalWORKs, 13
Campus Map, 37
Campus Police, 9
Campus "Reflections", 12
Campus Security Act, 44
Campus Traffic Regulations, 42
C.A.N. - 26, 27
C.A.R.E., 13
Career Services, 4, 9, 13, 14
Catalog Rights - Graduation, 19
CEEB, 20
Certificate Programs List, 19, 30, 31
CERTIFICATES, 30, 31
Change of Address, 42
Cheating, definition of, 41
Chemistry, 99
Chicano Culture, 313
Child Development Center, 9
Children's Theatre, 324
Citizenship, 6, 43
Class Schedules, 12
CLEP, 20
Clubs and Organizations, 12
Coaching Certificate, 281
Coding Specialist, H.I.T., 212
College and Academic Regulations, 39
COLLEGE ADMINISTRATION, 338
College Bookstore, "Hawks Nest", 9
College Cafeteria, "Rio Bistro", 10
College Catalog, 12
College Level Examination Program (CLEP), 20
COLLEGE & ACADEMIC REGULATIONS, 39
College Nurse, (see Health Services), 11
Co-op, Cooperative
  Work Experience, 10, 13, 336
Cooperative Agencies Resources for Education
  (C.A.R.E.), 10
Corequisites, 33
Cosumnes River College History, 4
Cosumnes River College Scholarships, 17
Counseling, 4, 10
Course Numbering System, NEW, 33,
  Listed, 344
Course Prefix, Official, 34
Course Repetition, 41, 42
Courses Certified to Meet CSU
  General Education, 24-25
Courses Certified to Meet UC General Ed., 29
Credit by Examination, 20
Credit for Military Service, 20
Credit-No Credit Grading, 39
Cross Listed and
  Cross Referenced Courses, 35
CSU, Transfer, General Education
  and Breadth Requirements, 23
Culinary Arts Management, 145, 146
  - Basic Culinary Services, 146
  - Community Nutrition Specialist, 146
  - School Foodservice Specialist, 146
  Database Analyst-SQL, 118
  Database Design, 119
  Database, Relational Administration, 118
  Data Entry, 119
  Data Processing
    (See Computer Information Science)
DEGREES AND
  CERTIFICATES LIST, 30, 31, 32
Degree and Certificate Programs, 19, List, 30
Degree Programs, 19
Denial of Financial Aid, 16
Dental-Pre-Professional, 307
Department of Human Assistance (DHA), 13
DESCRIPTION OF COURSES, 33
  Database Analyst-SQL, 118
  Database Design, 119
  Database, Relational Administration, 118
  Data Entry, 119
  Data Processing
    (See Computer Information Science)
DEGREES AND
  CERTIFICATES LIST, 30, 31, 32
Degree and Certificate Programs, 19, List, 30
Degree Programs, 19
Denial of Financial Aid, 16
Dental-Pre-Professional, 307
Department of Human Assistance (DHA), 13
DESCRIPTION OF COURSES, 33
  Database Analyst-SQL, 118
  Database Design, 119
  Database, Relational Administration, 118
  Data Entry, 119
  Data Processing
    (See Computer Information Science)
DEGREES AND
  CERTIFICATES LIST, 30, 31, 32
Degree and Certificate Programs, 19, List, 30
Degree Programs, 19
Denial of Financial Aid, 16
Dental-Pre-Professional, 307
Department of Human Assistance (DHA), 13
DESCRIPTION OF COURSES, 33
  Database Analyst-SQL, 118
  Database Design, 119
  Database, Relational Administration, 118
  Data Entry, 119
  Data Processing
    (See Computer Information Science)
DEGREES AND
  CERTIFICATES LIST, 30, 31, 32
Degree and Certificate Programs, 19, List, 30
Degree Programs, 19
Denial of Financial Aid, 16
Dental-Pre-Professional, 307
Department of Human Assistance (DHA), 13
DESCRIPTION OF COURSES, 33
  Database Analyst-SQL, 118
  Database Design, 119
  Database, Relational Administration, 118
  Data Entry, 119
  Data Processing
    (See Computer Information Science)
DEGREES AND
  CERTIFICATES LIST, 30, 31, 32
Degree and Certificate Programs, 19, List, 30
Degree Programs, 19
Denial of Financial Aid, 16
Dental-Pre-Professional, 307
Department of Human Assistance (DHA), 13
DESCRIPTION OF COURSES, 33
  Database Analyst-SQL, 118
  Database Design, 119
  Database, Relational Administration, 118
  Data Entry, 119
  Data Processing
    (See Computer Information Science)
Dietetic Technician, Nutrition and Foods, 269
Digital Media, 150
Disabled Student Programs & Services, 10, 14
Dismissal, 40
Dismissal Period, 40
Distance Learning
  (see Televised Instruction), 22
Drafting - see Architectural Design Technology, 62
  (see also Architecture, 64)
Drops (see Withdrawals)
Drug and Alcohol Free Policy, 44

Early Childhood Education, ECE, 151, 152
  - Assistant Teacher, 152
  - Site Supervisor, 152
  - Associate Teacher, 153
  - Family Day Care, 153
  - Family Support Services, 153
  - Infant Specialist, 153
  - School Age Child Care, 153
  - Program Management, 153
  - Early Childhood Education Teacher, 154
  - Early Intervention Assistant I, 155
  - Elem. School Teacher Assistant, 153
  - Master Teacher, 154

E-Business and the Internet, 93
Economics, 163
Education - Teaching, 163
  - Liberal Studies for Elementary Educ., 163
  (See also Early Childhood Education)
Elementary School Teacher Assistant, ECE, 155
Eligibility to Apply, 6
EMT, Emergency Medical Technician, 166
Emergency Medical Technology, 165
Emission Control, 75
Employment, Students, 13, 15
Engineering, 167
English, 170
  EN GW R - English Writing, 171
  EN GLT - English Literature, 173
  EN GCW - English Creative Writing, 175
  EN GRD - English Reading, 176
  EN GED - English Education, 177
  EN GLB - English Laboratory, 177

English Sequence Ladder, 176
English as a Second Language (E.S.L.), 179
  ESL - English as a Second Language, 179
  ESLG - Grammar, 179
  ESSL - Listening, 180
  ESLP - Pronunciation, 181
  ESLR - Reading, 181
  ESLW - Writing, 182
ESL Sequence Ladder, 183
Enrollment, Eligibility, 6
Enrollment Fees and Refunds, 7, 8
Entrepreneuriship, see Business, 93
Environmental Design:
  Landscape Design, 222, 223
Environmental Technology (EnvT), 184, 185
  - Environmental Applications of Desktop GIS, 185
  - Environmental Health and Safety, 186
  - Environmental Sampling and Analysis, 185
Family Day Care - ECE, 153
Family Support Services - ECE, 153
Federal Aid, 15-16
Federal Education Tax Credits, 8
Federal Financial Aid, 15-16
Federal Pell Grants, 15
Federal SEOG, 16
Federal Work Study (FWS), 15
Federal Stafford Loan, 16
Federal Supplemental Educational
Opportunity Grants (FSEOG), 16
Fees, Parking, 8
Fee Requirements, 7-8
Fee Refunds, 8
Field Study Classes
- Biology, 79
- Geography, 203
- Geology, 206
- Photography, 276
- Physical Education, 280
Filing a Grievance, 44
Film & Media Studies, 194
Final Examinations, 42
Finance, 196
Financial Aid, Denial of, 16
Financial Aid Requirements, 16
Financial Aid Services, 11, 15, 16
FINANCIAL ASSISTANCE, 15
Fine & Performing Arts, 233
Fire Technology, 197-198
Follow-up Counseling, 7
Foodservice
(See Culinary Arts Management)
Ford ASSET Program, 74
Foreign Languages
(see Spanish) (see Vietnamese)
Fortran Programming, 113
Freshman, 42
FSEOG, 16
Full Time student, 42

General Business, 91
General Education, 3, 200
General Education Transfer, 200
General Education, UC, 26-29
General Education, Transfer, and
Breadth - CSU, 23
General Enrollment Fees, 7
General Work Experience, 336
Geography, 201, 202
- Applications of Desktop GIS, 202
Geology, 206, 207
Good Standing, 39
Grades and Grade Point Averages, 39
Grades of "In Progress", 39
Grades of "Incomplete", 39
Grades of "W " Withdrawal, 39
Graduate student, 42
Graduation, 18-19
Graduation Catalog Rights, 19
Graduation Competency, 18
Graduation with Honors Requirements, 40
GRADUATION REQUIREMENTS, 18
Grants, 15, 16
Greater Sacramento Small Business
Development Center (SBDC), 5
Grievance Procedure, Student, 43

Harrassment, Sexual, 45
"Hawks Nest", Bookstore, 9
Health Education, 209
Health Information Technology
(H.I.T.), 211, 212
- Coding Specialist, 212
Health Science Education,
Pre-professional, 307
Health Services, 11
History, 215
History and Facilities of CRC, 4
Honors Program, 20, 40, 218
Honors at Graduation, 40
Honors Scholar Program, 219
Honors Seminars, 219, 220
Hope Credit, 8
Horticulture, 221
Horticulture: Landscape Design, 222, 223
Horticulture: Landscape Industry, 222
Horticulture: Nursery Industry, 223
Horticulture: Nursery Operations, 223
Housing, (see Informational Services, 12 )
Human/Career Development, 226
Human Services: General, 230
Humanities, 233
Humanities (Interdisciplinary Studies), 236
HVAC Inspection, 86

I.G.E.T.C. (Intersegmental General Education
Transfer Curriculum), 28
Incomplete, Grades of, 39
Incorrect Classification, 6
Independent California College and Universities Transfer, 26
Independent Studies, 21
Infant Toddler Program, 153
Infant Specialist, 153
Information Processing, 122
Informational Services, 12
Information Systems Security, 120, 121
Instructional Material Fees, 8
Instrumental/Voice Instruction (MUIVI), 263
Inter Club Council, 12
Intercollegiate Athletics, 281, 287-288
Interdisciplinary Studies, 235
  - American Studies, 235
  - Ethnic Studies, 236
  - Humanities, 236
  - Women's Studies, 236
International Students (Admissions), 7
International Student Capital Outlay Fee, 8
Internet Programming, 114
Internships, Co-op Work Experience, 10, 336
Intersegmental General Education (IGETC), 28

JAVA, Software Development with, 119
Job Services, 13
Journalism, 238
  - Communications Media, Journalism, 238
Journalism, Broadcast, 84

Laboratory for Accounting & Business, 14
Laboratory for
  Computer Information Science, 14
Landscape Design, 222, 223
Landscape Industry, 222
Language Lab, 14
Law-Pre-Education, 307
Learning Disabilities, 10
Liberal Studies for Elementary Education, 164
Library, 11
Library courses, 241
Library Gallery, 14
Lifetime Learning Credit, 8
Limited English Proficiency, 6
Loans, Student, 15-16
Local Area Map, 38
Los Rios Community College
  District History, 4

Los Rios Community College District
  Non-Discrimination Policy, 43
Los Rios Community College District, map, 38

Maintenance Allowance, 11
Management, 242, 243
  - Retail, 243
Management Information Systems -
  C.I.S. 121
  - Programming COBOL, 121
  - Application Data Entry, 122
  - Information Processing, 122
  - Application Technician, 122
  - Application Analyst, 122
  - Application Manager, 122
  - E-Business Infrastructure, 122
Maps of CRC Campus and Local Area, 37, 38
Marketing, 248, 249
Masonry Construction Inspection, 86
Master Teacher - ECE, 154
Mathematics & Statistics, 251
Math Center (Lab), 11, 12, 14
Mathematics Tree Sequence of Classes, 257
Matriculation, 4, 6
Medical Assisting, 258, 259
Medical Assisting: Administrative, 259
  - Insurance Billing, 259
Medical Pre-Professional, 307
Medical Technology, (see EMT, 166)
MESA-CCCP, 12, 14
Military, Credit for, 20
Military Service Credit, 20, 23
Military Science (ROTC), 21
Military, Withdrawal, 39
Mission Statement - CRC, 3
Minimum Graduation Requirements at CRC, 18
Motorcycle Fees, Parking, 8
Multicultural Studies Requirements
  for Graduation, 18
Music, 261
  (MU FHL) Fundamentals/History
    and Literature, 262
  (MUIVI) Instrumental / Voice Instruction, 263
  (MUP) Music Performance, 265
  (MUSM) Specializations in, 267
National Restaurant Assoc. Program, 146
Network Helpdesk Technician, 114
Network Systems Administrator, 117
Network Systems Engineer, 115, 116
New Course Renumbering System
   Guide List, 33, 349
No Smoking Policy, 44
Non-Discrimination Policy, 3, 43
Non-Resident Students, 6
Non-Resident Tuition, 7
"No-Show" Policy, 42
Notice To Students, iv
Nursery Industry, 223
Nursery Operations, 223
Nursing, Pre-Nursing Options, 80
Nutrition & Foods, 268
   - Dietetic Technician, 269
   - Nutrition Community, 269

Occupational Education, 3
Office Administration (see Business, 90)
Office Assistant, Business, 92
Office Technician, Business, 92
Official Course Prefix, 34
On-Line Instruction, 21
Open Courses, 4
Optometry-Pre-Professional, 307
Organizational Communication, 103
Orientation and Advising, 7
Outreach Programs, 5

Parking Fees and Refunds, 8
Part-Time student, 42
Pascal Programming, 113
PELL Grant, 15
Philosophy, 272
Phlebotomy, Allied Health, 56
Photo I.D. Cards (see Student Access Card/UTP, 8
Photography, 275, 276
   - Portraiture & Weddings, 276
   - Commercial & Studio Photography, 276
Physical and Psychological Disabilities, 10
Physical Education and Athletics, 280
   - Coaching Certificate, 281
ADAPT, Adaptive courses, 282
DANCE, Dance courses, 282
FITNS, Fitness courses, 283
PACT, Personal Activity courses, 286
SPORT, Sports courses, 286
TMACT, Team Activity courses, 287
PET, P.E. Theory courses, 288
Physical Science, 291, 293
Physical Therapy-Pre-Professional, 307
Physics, 291, 292
Plagiarism, 41
Plant Disease & Pest Control, 217
Plant Science, 295
Political Science, 297
Portraiture and Wedding Photography, 276
Pre Law Education, 307
Pre Nursing Option (Biology), 80
Pre Professional Option, 80
Prerequisites, 33
Prerequisite Challenge Procedure, 33
Preschool Program, 9
Probation, 40
Program Abreviations
   (used in degrees/certificates), 34
Program Management - ECE, 153
Programming:
   Pascal, Visual BASIC, FORTRAN,
   Internet, “C/C++”,
   Workforce Entry, 114
   COBOL, 121, Web, 120
Progress Dismissal, 40
Progress Policy, Satisfactory, 16
Progress Probation, 40
Psychology, 299
Publications, College, 12
Public Relations, Advertising, 50
Publishing, Desktop, 114
Publishing, Web, 119
Purpose and Mission of the College, 3

Race, Ethnicity & Inequality in the US, 313
Radio Production, 302
Reading/Writing Center, 12
Real Estate, 303, 304
Real Estate Broker, 304
Real Estate Broker Exam, 303
Real Estate Sales, 304
Real Estate Salesperson Exam, 303
Red Cross Certification, 209
INDEX

Re Entry, 13
Refund Policy, Refund Requests, 8
Registration, 7
Relational Database Administration, 118
Removal from Probation, 40
Renumbering Guide, 349
Repeating Courses, 43
Requirements for Federal/State Financial Aid, 16
Residence, Determination of, 6
Retail Management, 243
Revision of Regulations, iv
Rideshare, (Student Development), 12
RIGHT TO KNOW, 43
River Hawk newsletter, 12
ROTC, 21

S.A.R (student aid report), 15
Satisfactory Progress Policy (Financial Aid), 16
Scholarships and Awards, 17
Scholarships, local, state and national, 17
Science, 306
  - Pre-Professional Health Science
    Education, 306
  - Pre Dental, 307
  - Pre Medical, 307
  - Pre Optometry, 307
  - Pre Veterinary, 307
  - Pre Physical Therapy, 307
Science Honors, 220
School Age Child Care - ECE, 153
School Foodservice Specialist, 146
Selective Service Notice, 17
Sexual Assault Policy, 45
Sexual Harassment, 45
Short-Term Student Loans (STSL), 16
Sign Language Studies, 308
Site Supervisor - ECE, 152
Small Business Development Center, 5
Small Business Management /
  Entrepreneurship, 93
Small Engine Repair, 75
Smoking Policy, (Non) 44
Social Science, 310
Sociology, 312
Sophomore, 42
Software Development using VisualBASIC.NET, 119
Software Development with JAVA, 119
Spanish, 314
Spanish, (Informacion en español), 6, 11, 43
Special Studies, 21
Speech, (see Communication Studies, 102)
Spring 2006 semester calendar, iv
Staff, 346
Staff Development, 4
Staff Handbook, 12
Stafford Loan Program, 16
State Financial Aid, 16
Statistics, 256
Steps to File a Grievance, 44
Student Access, 4
Student Access Card, Universal Transit Pass, 8
Student Activities,
  (see Student Development, 12)
Student Classification, 42
Student Development, 12
Student Employment, 13
Student Government (see Student Development), 12
Student Government courses, 318
Student Grievance Procedure, 44
Student Photo I.D. Cards, (see Student Access Card), 8
Student Records, 43
Student Representation Fee, 8
Student Right to Know
  Program Completion, 45
Student Rights and Responsibilities, 43
STUDENT SUPPORT SERVICES, 9
Student Support Center, 13
Studio Art - Art, 67
Studio Photography, 276
Study Abroad, 21
Summer Session 2005 calendar, iv

TABLE OF CONTENTS, iii
TANF, 13, 15
Teacher, (see Education/Teaching or
  Early Childhood Education)
Teacher Assistant, ECE, 153
Telecourses, 22
Televized Instruction, 22
Television Production, 319, 320
  - Cable Access Production, 320
Testing, 9
Theatre Arts, 321
Traffic Regulations, 42
Transcripts, 7
Transcripts to Other Colleges, 13
Transcript Requests, 13
Transfer in Business Administration, 91
Transfer Education, 3
Transfer Requirements, CSU, 23-29
Transfer Services, 14
Transition Services, 14
(employment, career services,
cooperative work experience, internships,
transfer services and Assist)
Travel Study, Study Abroad Programs, 21, 22
Tutoring courses,
(see HCD 89, 156, and 350, 226-228 )
(see ENGED 320, 177 )
Tutoring Services, 14
Business English Help Line,
Computer Information Science Lab,
Disabled Student Programs (DSPS),
Language Lab,
Library Gallery,
Lab for Accounting and Business,
Math Center and MESA-CCP
Typing
(See Business - Computer Keyboarding)
Undocumented Students, 6
Unit of Credit, 42
Unit Limitation, 42
Unit of Work, 39
Universal Transit Pass/Student Access Card, 8
University of California System
Transfer Requirements, 26, 29
University of California -
CRC Courses Acceptable for Transfer, 29
Veterans and/or Dependents, Admission for, 7, 15
Veterans Assistance, 14
Veterinary-Pre-Professional, 307
Veterinary Technology, 326, 327
Vietnamese, 331
Vision Statement - CRC, 3
Visual BASIC.NET,
Software Development, 119
Viticulture, 296
Vocational Work Experience
& Internships, 336-337
Web Courses, CIS, 137
Web Programming, 120
Web Publishing, 119
Who is Eligible to Apply for Enrollment, 6
Welding, 334
Withdrawal from Class, 39
Wood Frame Construction Inspection, 83
Women’s Studies, 230
Word/Information Processing,
(See Computer Information Science
or Business)
Word Processing
(See Computer Information Science
or Business)
Work Experience,
Co-op and General, 336
Internships, 336-337
Writing Lab Center, 12
Work Study, Federal, 15