

**EL CAMINO COLLEGE  
MINUTES OF THE COLLEGE CURRICULUM COMMITTEE  
NOVEMBER 25, 2008**

Present: A. Himsel, L. Kjeseth, M. Lipe, E. Martinez, C. Mosqueda, C. Somin, J. Thompson,  
J. Young

Absent: F. Arce, J. Davidson, R. Hughes, V. Lloyd, S. Panski, V. Rapp

Ex-Officio Members Present: Q. Chapman, M. Odanaka, L. Suekawa

Ex-Officio Members Absent: C. Brinkman, D. Charles, M. Hall, J. Harmon, R. Smith,  
T. Stewart

Also Present: D. Goldberg, R. Elton-Collett, B. Jaffe, J. Shankweiler, S. Rodriguez,  
M. Stalling, D. Valladares

**CALL TO ORDER**

Chair Young called the College Curriculum Committee (CCC) meeting to order at  
2:34 p.m.

**APPROVAL OF MINUTES**

The minutes from the November 11, 2008 meeting were approved by email.

**CHAIR'S REPORT**

- Chair Young informed the Committee that we will be implementing a new curriculum process in the spring semester.
- Q. Chapman and Chair Young will be going to the Deans meeting to discuss changes in the process.
- Q Chapman explained that the timeline will be slightly revised to allow the Committee to receive the proposals sooner, which will also allow divisions to prepare errata documents one week before CCC meetings.

**CURRICULUM REVIEW**

**Natural Sciences Proposals**

- Interim Dean, J. Shankweiler took the podium to present Anatomy and Physiology 34A, Anatomy and Physiology 34B, Chemistry 7A, Chemistry 7B, Geology 15, and the Environmental Horticulture Certificate of Achievement.
- J. Shankweiler distributed an errata sheet and introduced faculty member, Sara Di Fiori.

- J. Shankweiler began her presentation with Anatomy and Physiology 34A. She fielded a question from the Committee on college-level critical thinking assignment number 2 and accepted the recommendation.
- Anatomy and Physiology 34B, Chemistry 7A, and Chemistry 7B – no questions.
- She continued with a review of Geology 15. There was a recommendation from the Committee to revise the course objectives. The recommendation was accepted.
- Chair Young asked for a motion to approve the Natural Sciences proposals. A. Himsel moved, J. Thompson seconded, and the motion carried.
- Chair Young asked for a motion to approve the conditions of enrollment. L. Kjeseth moved, A. Himsel seconded, and the motion carried.

### **Industry and Technology Proposals**

- Dean S. Rodriguez took the podium to present Administration of Justice 132, Architecture 121abcd, Computer Aided Design/Drafting A.S. Degree, Computer Aided Design/Drafting Certificate of Achievement, Computer Aided Design/Drafting Certificate of Accomplishment, and Computer Aided Design/Drafting 10abcd.
- S. Rodriguez distributed an errata sheet and discussed sections where revisions were made.
- She began with Administration of Justice 132. S. Rodriguez accepted recommendations from the Committee on the catalog description, course objectives, and instructional methodology.
- She proceeded with a review of Architecture 121abcd and introduced faculty member, Mike Stallings. S. Rodriguez fielded a question from the Committee on the catalog description. No changes were made.
- The Committee began a review of Computer Aided Design/Drafting 10abcd. S. Rodriguez introduced faculty member, Dan Valladares. S. Rodriguez then accepted the recommendation from the Committee on the catalog description.
- Her presentation concluded with a review of the Computer Aided Design/Drafting Certificates of Accomplishment and Achievement, and A.S. degree. There were no questions.
- Chair Young asked for a motion to approve the Industry and Technology proposals. M. Lipe moved, J. Thompson seconded, and the motion carried.
- Chair Young asked for a motion to approve the conditions of enrollment. M. Lipe, moved, J. Thompson seconded, and the motion carried.
- Chair Young then called for a motion to approve Administration of Justice 132 as a stand-alone course. M. Lipe moved, A. Himsel seconded, and the motion carried.

### **Mathematical Sciences Proposals**

- Dean D. Goldberg took the podium to present Mathematics 73, 80, 115, 116, and the Mathematics A.S. degree.
- D. Goldberg distributed an errata sheet and began to discuss each course and revisions made.
- He proceeded to discuss the changes to the Mathematics major and the inactivation of the General A.S. degree. He took an opportunity to thank all involved in restructuring the A.S. degree and extended a thank you to counselor, Madeleine Carteron.

- Chair Young asked for a motion to approve the Mathematical Sciences proposals. A. Himsel moved, C. Somin seconded, and the motion carried.
- Chair Young asked for a motion to approve the distance education versions for Mathematics 73 and 80. L. Kjeseth moved, C. Somin seconded, and the motion carried.
- Chair Young then called for a motion to approve the conditions of enrollment. L. Kjeseth moved, C. Somin seconded, and the motion carried.

#### **PROPOSALS REVIEWED BY ARCE AND YOUNG**

- Chair Young advised the Committee that she and F. Arce had reviewed the recommendation from the System Office regarding our Transfer Studies Certificates of Achievement.
- The System Office advised Chair Young that they are keeping certificate titles throughout the Community College System consistent, and recommend that we remove “Transfer Studies” from our titles.
- If the Committee approves, our transfer studies certificates will be renamed: CSU General Education –Breadth (CSUGE-Breadth) and Intersegmental General Education Transfer Curriculum (IGETC).
- Chair Young then called for a motion to approve the revised titles. C. Mosqueda moved, L. Kjeseth seconded, and the motion carried.

#### **MATHEMATICS COMPETENCY**

- Chair Elect, L. Kjeseth directed the Committee’s attention to today’s handout and explained changes that will be made to the 2009-2010 college catalog to address the Mathematics Competency Test, and requirement.
- The competency test will now cover intermediate algebra.
- The Mathematics Competency section under General Education Criteria for Associate in Arts and Associate in Science Degrees has been revised for clarity.
- The next catalog will be up to date with the above mentioned revisions.

#### **GENERAL STUDIES MAJOR**

- Included in today’s handouts was a copy of the General Studies degree.
- L. Suekawa noted a correction to a course number, Art 5A.
- A question was brought to the Committee in regard to the amount of art history courses in the Arts and Humanities emphasis.
- L. Suekawa explained that it would benefit students to have more options for completing this degree and the course listing is appropriate.
- There were no further questions.
- Chair Young called for a motion to approve the General Studies degree as presented. C. Somin moved, L. Kjeseth seconded, and the motion carried.

**ANNOUNCEMENTS**

- The Committee will be reviewing five proposals at the December 2, 2008 meeting.
- There will be two courses from Health Sciences and Athletics, two courses from Humanities, and the Cosmetology certificates will come back for review.

**ADJOURNMENT**

Chair Young called for a motion to adjourn the meeting. L. Kjeseth moved, J. Thompson seconded, and the motion carried. The meeting was adjourned at 3:31 p.m.

**EL CAMINO COLLEGE  
COLLEGE CURRICULUM COMMITTEE**

**Proposed Curriculum Changes  
November 25, 2008**

**BEHAVIORAL AND SOCIAL SCIENCES DIVISION**

**CHANGES IN CERTIFICATE OF ACHIEVEMENT TITLE**

*Current Status/Proposed Change*

1. ~~Transfer Studies:~~ CSU General Education-Breadth

*Recommendation:*

CSU General Education-Breadth

*Current Status/Proposed Change*

2. ~~Transfer Studies:~~ Intersegmental General Education Transfer Curriculum (IGETC)

*Recommendation:*

Intersegmental General Education Transfer Curriculum (IGETC)

**CHANGE IN CATALOG PROGRAM DESCRIPTION**

1. General Studies – Associate of Arts Degree

*Current Status/Proposed Change*

The Associate Degree in gGeneral sStudies program provides students with the opportunity to explore diverse methods of inquiry ~~through a selection of~~ by selecting courses ~~in from~~ a cross section of disciplines. ~~The degree can be earned in the following options: Arts, Humanities, and Communications, Social and Behavioral Sciences, Mathematics and Science, Business and Computer Technology, and Health and Wellness. The curriculum in an “area of emphasis.”~~ Students ~~will enable students to~~ develop critical thinking skills, ~~and learn to communicate effectively in writing,~~ acquire an understanding of major concepts to solve problems, and employ methods of scientific inquiry to understand the world around them. Completion of the degree requirements will provide students with the skills and resources ~~necessary for making needed to make~~ informed academic and career-related decisions. ~~Competencies will be assessed through examinations, essays, research papers, directed projects and successful completion rates.~~

*Recommendation:*

The Associate Degree in General Studies provides students with the opportunity to explore diverse methods of inquiry by selecting courses from a cross section of disciplines in an “area of emphasis.” Students will develop critical thinking skills, learn to communicate effectively in writing, acquire an understanding of major concepts to solve problems, and employ methods of scientific inquiry to understand the world around

them. Completion of the degree requirements will provide students with the skills and resources needed to make informed academic and career-related decisions.

**CHANGE IN MAJOR**

1. General Studies – Associate of Arts Degree

*Current Status/Proposed Change*

~~Courses used to satisfy general education requirements cannot be used to meet major requirements.~~

~~Arts, Humanities, and Communications Option:~~

~~These courses emphasize the appreciation of art, humanities, and communication through cultural activities and artistic expression of human beings. Students will evaluate and interpret the ways in which people through the ages in different cultures have responded to themselves and the world around them in artistic and cultural creation.~~

~~A minimum of one course from at least two different subjects.~~

~~Select 18 units from:~~

~~American Sign Language 15, 16, 17A, 17B~~

~~Architecture 104, 150A, 150B, 199ab; Art 1, 2, 3, 4, 5A, 5B, 6, 7, 9, 10ab, 11abcd, 17ab, 18abcd, 19ab, 22ab, 23abcd, 31abcd, 37ab, 41ab, 61ab, 81ab, 82abcd, 108, 141abcd, 142abcd, 143abcd, 150~~

~~Chinese 1, 2, 24~~

~~Dance 1, 3, 5, 22ab, 23abcd, 32ab, 33ab, 42ab, 43abcd~~

~~English 1B, 1C, 10, 11, 12, 15A, 15B, 18, 20, 21, 22, 23, 24A, 24B, 25A, 26, 27, 28, 29, 30, 31, 32abc, 33, 34, 35, 36, 38, 39, 40A, 40B, 41A, 41B, 42, 43, 44, 46, 47~~

~~Film/Video 1, 3, 20, 21, 22, 52, 53~~

~~French 1, 2, 3, 4, 5, 6, 24, 35~~

~~German 1, 2, 3, 4, 5, 24~~

~~History 1A, 1B, 3, 4, 5A, 5B, 8, 9, 12A, 12B, 14A, 14B, 16A, 16B, 17, 18A, 18B, 19, 22, 25, 27, 30, 32, 37~~

~~History of Science 11~~

~~Humanities 1~~

~~Italian 1, 2, 24~~

~~Japanese 1, 2, 3, 4, 25~~

~~Journalism 1, 12~~

~~Music 1, 2A, 2B, 3A, 3B, 3C, 7, 8A, 8B, 11, 12, 13, 15A, 15B, 18ab, 19abcd, 23abcd, 31A, 31B, 31C, 31D~~

~~Philosophy 2, 3, 5, 7, 8, 10, 11, 23~~

~~Spanish 1, 2, 3, 4, 5, 6, 24, 52A, 52B~~

~~Theatre Arts 1, 4, 8, 14A, 14B, 30, 84, 88, 90, 94~~

~~Speech Communication 1, 3, 4, 5, 8, 9, 12, 14~~

~~Health and Wellness Option:~~

~~These courses emphasize lifelong understanding and development of a student's physiological, and social well-being. Students will develop an awareness of the principles and methods for maintaining good personal health and fitness. Courses~~

~~provide students with basic biological, behavioral, and social science concepts to enhance studies in related disciplines.~~

~~A minimum of one course from at least two different subjects.~~

~~Select 18 units from:~~

~~Anatomy 30, 32; Biology 10, 101, 102; Chemistry 1A, 4, 20, 21A, 21B; Child Development 3; Contemporary Health 1; Human Development 10; First Aid 1; Microbiology 33; Nutrition 11; Physical Education 217, 260, 270, 272, 275, 277, 280, 290; Physiology 31; Psychology 2, 5, 7, 12, 16, 33; Sociology 102~~

~~Biological, Physical or Mathematical Sciences Option:~~

~~These courses emphasize the development of mathematical and quantitative reasoning skills, the physical universe, its life forms, and its natural phenomena. Courses in mathematics and computer science will expand students' mathematical reasoning skills and integrate numeric, symbolic, functional, and spatial concepts. Courses in science will help students develop an understanding of the scientific method and the relationship between science and other human activities.~~

~~A minimum of one course from at least two different subjects.~~

~~Select 18 units from:~~

~~Anatomy 30, 32; Anthropology 1, 5; Astronomy 12, 20, 25; Biology 8, 10, 11, 12, 15, 16, 17, 18, 101, 102, 103; Chemistry 1A, 1B, 4, 7A, 7B, 20, 21A, 21B; Computer Science 1, 2, 3, 4, 10, 15P, 23, 30, 40, 60; Engineering 1, 9; Geography 1, 6, 9; Geology 1, 2, 3, 4, 6, 15, 30, 32, 34, 36; Mathematics 150, 160, 161, 170, 180, 190, 191, 210, 220, 270; Oceanography 10; Physics 1A, 1B, 1C, 1D, 2A, 2B, 3A, 3B, 11, 12; Physical Science 25~~

~~Social and Behavioral Sciences Option:~~

~~These courses emphasize an appreciation and understanding of how members of diverse societies operate or have operated as individuals and social groups. Students will develop an awareness of methods of inquiry and will attain critical thinking skills relating to the ways in which people act and interact within social and cultural contexts. In addition, students will study the perspectives, concepts, principles, theories, and methodologies of disciplines within social and behavioral sciences.~~

~~A minimum of one course from at least two different subjects.~~

~~Select 18 units from:~~

~~Administration of Justice 100, 103, 107, 111, 115; Anthropology 2, 3, 4, 6, 7, 8, 9, 10, 11; Child Development 3, 9; Economics 1, 2, 5; Education 101, 201; Geography 2, 5, 7; History 1A, 1B, 3, 4, 5A, 5B, 8, 9, 11, 12A, 12B, 14A, 14B, 16A, 16B, 17, 18A, 18B, 19, 22, 25, 27, 30, 32, 37; History of Science 11; Political Science 1, 2, 3, 5, 6, 8, 10; Psychology 2, 3, 5, 7, 8, 9A, 9B, 10, 12, 15, 16, 21, 22; Sociology 101, 102, 104, 107, 109, 110, 112, 115~~

*Recommendation:*

Completion of the General Studies degree does not guarantee acceptance into a four year university. Students planning to transfer to a CSU or UC should follow the CSUGE Breadth or IGETC pattern and complete transferable coursework that relates to the major

at the CSU or UC campus. For further information and course selection, please consult with an academic counselor.

**Associate Degree in General Studies:**

**A. General Education:** choose one of the following patterns

- AA General Education Requirements (minimum of 24 units and the math competency)
- CSUGE Breadth (39 units) - this general education pattern will fulfill lower-division general education requirements at the CSU campuses.
- IGETC (34 units) - this general education pattern will fulfill lower-division requirements at the CSU, UC and some private colleges and universities.

**B. Area of Emphasis:**

- A minimum of 18 units are required in one Area of Emphasis listed below.
- A minimum of one course from two different disciplines is required in the emphasis.
- The courses selected in the emphasis may also be used to fulfill general education areas on the Associate Degree, CSUGE Breadth, or IGETC.

**C. Electives:**

Elective units may be necessary to obtain the 60 degree applicable units that are required for the Associate Degree.

**1. Arts and Humanities**

These courses emphasize the appreciation of arts and humanities through cultural activities and artistic expression of human beings. Students will evaluate and interpret the ways in which people through the ages in different cultures have responded to themselves and the world around them in artistic and cultural creation. Students interested in transferring to a four year university will have a basic foundation for further studies in areas such as arts, history, communications, English, foreign language, film studies, literature, history, journalism, or philosophy. This emphasis may be useful for students interested in possible career paths in fine arts, education, administration, or public service.

**Select 18 units with at least one course in Arts and one course in Humanities.**

**Arts:**

- Architecture 104
- Art 1, 2, 3, 4, 5A, 5B, 6, 7, 9, 108, 150
- Dance 1, 3, 5
- Film/Video 1, 3
- Music 1, 11, 12, 13, 15A, 15B
- Theatre 1, 4, 8



**Humanities:**

Sign Language/Interpreter Training 15, 16, 17A, 17B

English 1B, 1C, 10, 11, 12, 15A, 15B, 18, 20, 21, 22, 23, 24A, 24B, 25A, 26, 27, 28, 29, 30, 31, 32abc, 33, 34, 35, 36, 38, 39, 40A, 40B, 41A, 41B, 42, 43, 44, 46, 47

Film/Video 52, 53, 54abc

History 1A, 1B, 5A, 5B, 8, 9, 12A, 12B, 14A, 14B, 16A, 16B, 17, 18A, 18B, 19, 22, 25, 27, 30, 32, 37, 140, 141

History of Science 11

Humanities 1

Journalism 1, 12

Languages: Chinese 1, 2, 24; Italian 1, 2, 24; Japanese 1, 2, 3, 4, 25; French 1, 2, 3, 4, 5, 6, 24, 35; German 1, 2, 3, 4, 5, 24; Spanish 1, 2, 3, 4, 5, 6, 24, 52A, 52B

Philosophy 2, 3, 5, 7, 8, 10, 11, 23

Speech Communication 1, 3, 4, 5, 8, 9, 12, 14

**2. Fine and Applied Arts**

These courses will emphasize the nature of artistic activities and expression of art through analysis, examination, performance, and technical development. Students will incorporate techniques, engage in performance, and learn to value aesthetic understanding and integrate these concepts when constructing value judgments. Students transferring to a four year university will have a basic foundation for further studies in areas such as architecture, art, digital media, creative writing, dance, film, music, performing arts, photography, studio art, or theatre arts. This emphasis may be useful for students interested in possible career paths in design, graphic arts, visual arts, photography, stage technician, musician, education, television, journalism, or acting.

**Select 18 units from at least two disciplines.**

Architecture, 104, 150A, 150B, 199ab

Art 1, 2, 3, 4, 5A, 5B, 6, 7, 9, 10ab, 11abcd, 17ab, 18abcd, 19ab, 22ab, 23abcd, 31abcd, 37ab, 41ab, 61ab, 81ab, 82abcd, 141abcd, 142abcd, 143abcd

Dance 1, 3, 5, 22ab, 23abcd, 32ab, 33abcd, 42ab, 43abcd

English 24A, 24B, 25A, 32abc, 38

Film/Video 1, 3, 4, 20, 21, 22, 32ab, 52, 53, 54abc

Music 1, 2A, 2B, 3A, 3B, 3C, 7, 8A, 8B, 11, 12, 13, 15A, 15B, 18ab, 19abcd, 23abcd, 31A, 31B, 31C, 31D

Photography 1, 2, 51, 150

Theatre 1, 4, 8, 14A, 14B, 30, 84, 88, 90, 94

**3. Communication, Media, and Languages**

These courses will emphasize the study of communication, culture, and the skills needed to communicate effectively in oral, written, or visual forms. Students transferring to a four year university will have a basic foundation for further studies in communication studies, media studies, journalism, English, or modern languages. This emphasis may be useful for students interested in possible career paths in broadcasting, public relations, advertising, journalism, interpreter, photography, technical writing, or radio and television.

**Select 18 units from at least two disciplines.**

Anthropology 4

Art 143abcd

English 1B, 1C, 10, 11, 12, 15A, 15B, 18, 20, 21, 22, 23, 24A, 24B, 25A, 26, 27, 28, 29, 30, 31, 32abc, 33, 34, 35, 36, 38, 39, 40A, 40B, 41A, 41B, 42, 43, 44, 46, 47

Film/Video 20, 22, 24, 28ab, 32ab, 52, 53, 54abc

Journalism 1, 12

Library 1, 10

Photography 1, 11ab, 51

Languages: Sign Language/Interpreter Training 15, 16, 17A, 17B; Chinese 1, 2, 24; Italian 1, 2, 24; Japanese 1, 2, 3, 4, 25; French 1, 2, 3, 4, 5, 6, 24, 35; German 1, 2, 3, 4, 5, 24; Spanish 1, 2, 3, 4, 5, 6, 24, 52A, 52B

Speech Communication 1, 3, 4, 5, 8, 9, 12, 14

**4. Social and Behavioral Sciences**

These courses emphasize an appreciation and understanding of how members of diverse societies operate or have operated as individuals and social groups. Courses in the social and behavioral sciences will help students to develop an awareness of methods of inquiry and stimulate critical thinking about the ways in which people act and interact within social and cultural contexts. Students will study the perspectives, concepts, principles, theories, and methodologies of disciplines within social and behavioral sciences. Students transferring to a four year university will have a basic foundation for further studies in areas such as American studies, anthropology, criminal justice, child development, economics, geography, history, political science, psychology, or sociology. This emphasis may be useful for students interested in possible career paths in education, history, social work, public administration, public service agencies, library science, economics, or social policy.

**Select 18 units from at least two disciplines.**

Administration of Justice 100, 103, 107, 111, 115

American Studies 1, 3, 7

Anthropology 2, 3, 4, 6, 7, 8, 9, 10, 11

Child Development 3, 9

Economics 1, 2, 5

Education 201

Geography (excluding physical geography) 2, 5, 7

History 1A, 1B, 5A, 5B, 8, 9, 12A, 12B, 14A, 14B, 16A, 16B, 17, 18A, 18B, 19, 22, 25, 27, 30, 32, 37, 140, 141

History of Science 11

Political Science 1, 2, 3, 5, 6, 8, 10

Psychology 2, 3, 5, 7, 8, 9A, 9B, 10, 12, 15, 16, 21, 22 (same as Physical Education 275)

Sociology 101, 102, 104, 107, 109, 110, 112, 115

**5. Biological and Physical Sciences**

These courses emphasize the physical universe, its life forms, and its natural phenomena. Courses in the sciences will help students develop an understanding of the scientific method and the relationship between science and other human activities. Students transferring to a

four year university will a basic foundation for further studies in areas such as biology (biochemistry, biophysics, molecular and cell biology, marine biology, microbiology), chemistry, physical and earth sciences (astronomy, geology, physical geography, oceanography), or physics. This emphasis may be useful for students interested in possible career paths in life sciences, physiology, exercise science, physical sciences, or earth sciences.

**Select 18 units with at least one course in Biological Science and one course from Physical Science.**

**Biological Sciences:**

Anatomy 30, 32  
 Anthropology 1, 5  
 Biology 8, 10, 11, 12, 15, 16, 17, 18, 101, 102, 103  
 Microbiology 33  
 Physiology 31

**Physical Sciences:**

Astronomy 12, 20, 25  
 Chemistry 4, 1A, 1B, 7A, 7B, 20, 21A, 21B  
 Geography 1, 6, 9  
 Geology 1, 2, 3, 4, 6, 15, 30, 32, 34, 36  
 Oceanography 10  
 Physics 1A, 1B, 1C, 1D, 2A, 2B, 3A, 3B, 11, 12  
 Physical Science 25

**6. Kinesiology and Wellness**

These courses emphasize lifelong understanding and the development of a student's physiological, psychological, and social well-being. Students transferring to a four year university will have a basic foundation for further studies in areas such as physical education, recreation, nutrition, or allied health fields. This emphasis may be useful for students interested in possible career paths in athletic training, personal training, management, exercise science, sports nutrition, and education.

**Select 18 units from at least two disciplines.**

Anatomy 30, 32  
 Biology 10, 101, 102  
 Chemistry 4, 1A, 20, 21A, 21B  
 Contemporary Health 1  
 First Aid 1  
 Fire and Emergency Technology 140, 141  
 Human Development 10  
 Microbiology 33  
 Nutrition 11, 15  
 Physical Education 217, 270, 272, 275, 277, 280, 290  
 Physics 2A, 2B, 11

Physiology 31  
 Psychology 2, 5, 7, 12, 16, 22  
 Sociology 101

**INDUSTRY AND TECHNOLOGY DIVISION**

**NEW COURSE**

1. Administration of Justice 132 – Crime Scene Investigation  
 Units: 3            Lecture: 3 hours            Faculty Load: 20.00%  
 Recommended Preparation: Administration of Justice 100  
 Credit, degree applicable; Transfer CSU; Letter grade  
 This course provides students with the basic understanding of Crime Scene Investigation (CSI), the workings of a CSI unit and will present an overview of the relationship that exists between forensic science and law enforcement. The course includes a study of crime scene examination, crime scene documentation, DNA and trace evidence analysis, and evidence collection procedures. Students learn to prepare a case for prosecution and testify in court.

**COURSE REVIEW; CHANGES IN DESCRIPTIVE TITLE, CATALOG DESCRIPTION**

*Current Status/Proposed Change*

1. Architecture 121abcd – ~~Advanced~~ Three-Dimensional Architectural AutoCAD-Computer Aided Design  
 This is ~~an advanced~~ a course in three-dimensional (3-D) computer aided design (CAD) using the various CAD software including AutoCAD Architectural Desktop software and Revit. Students will create detailed three dimensional massing computer models of buildings, generating floor plans, building sections, elevations, details and learn how to insert various library elements into drawings to create construction documents. Camera angles to form perspectives as well as animated videos of modeled buildings will be covered. schedules, as well as computer animations and renderings of 3-D models. Students will use Building Information Modeling (BIM) in design, analysis and documentation of their buildings.

*Recommendation:*

Architecture 121abcd –Three-Dimensional Architectural Computer Aided Design  
 This is a course in three-dimensional (3-D) computer aided design (CAD) using various CAD software including AutoCAD and Revit. Students will create detailed three dimensional computer models of buildings, generating floor plans, building sections, elevations, details and schedules, as well as computer animations and renderings of 3-D models. Students will use Building Information Modeling (BIM) in design, analysis and documentation of their buildings.

*Current Status/Proposed Change*

2. Computer Aided Design/Drafting 10abcd – ~~Introduction to Mechanical Computer Aided Design/Drafting~~ Wireframe with Surfaces, Solid Modeling and Assemblies  
~~This In this course is an introduction to~~ students create three-dimensional (3-D) wireframe and surfaced models, solid models, assembly and two-dimensional (2-D) computer aided design/drafting (CADD). Students will gain experience in the preparation of engineering level drawings. Previous skills with computers are not required. Models or assemblies are displayed on a 2-D drawing format and orthographically projected with dimensions added. Shading, rendering and solid model modification is also available in the 2-D mode. Auxiliary, detail and section views are also created with such commands as Solview and Soldraw.

*Recommendation:*

Computer Aided Design/Drafting 10abcd –Wireframe with Surfaces, Solid Modeling and Assemblies

In this course students create three-dimensional (3-D) wireframe and surfaced models, solid models, assembly and two-dimensional (2-D) drawings. Models or assemblies are displayed on a 2-D drawing format and orthographically projected with dimensions added. Shading, rendering and solid model modification is also available in the 2-D mode. Auxiliary, detail and section views are also created with such commands as Solview and Soldraw.

**CHANGE IN MAJOR**

1. Computer Aided Design/Drafting

*Current Status/Proposed Change*

At least 50% of the major requirements for the Associate in Science Degree must be completed at El Camino College.

Computer Aided Design/Drafting 5, 10abcd\*, ~~27abcd\*~~, 28abcd\*, 31abcd\*, 32abcd\*, 33abcd\*, 34abcd\*, 37abcd\*, 45, 47, 49, Technical Mathematics 1; ~~two units from: Computer Aided Design/Drafting 26abcd\*, 33abcd\*, 37abcd\*~~; one course from the following: Electronics and Computer Hardware Technology 11, ~~21~~, 22, Machine Tool Technology ~~13A~~, 16ab, 46, 101abcd, Welding 15ab\*, Art 141abcd\*, 144abcd\*, Computer Information Systems 13

(\*one semester of)

Total Units: 33-34

*Recommendation:*

At least 50% of the major requirements for the Associate in Science Degree must be completed at El Camino College.

Computer Aided Design/Drafting 5, 10abcd\*, 28abcd\*, 31abcd\*, 32abcd\*, 33abcd\*, 34abcd\*, 37abcd\*, 45, 47, 49, Technical Mathematics 1; one course from the following: Electronics and Computer Hardware Technology 11, 22, Machine Tool Technology 16ab, 46, 101abcd, Welding 15ab\*, Art 141abcd\*, 144abcd\*, Computer Information Systems 13

(\*one semester of)  
Total Units: 33-34

**CHANGE IN CERTIFICATE OF ACHIEVEMENT**

1. Computer Aided Design/Drafting

*Current Status/Proposed Change*

A Certificate of Achievement will be granted upon completion of the courses listed below. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.

Computer Aided Design/Drafting 5, 10abcd\*, ~~27abcd\*~~, 28abcd\*, 31abcd\*, 32abcd\*, 33abcd\*, 34abcd\*, 37abcd\*, 45, 47, 49, Technical Mathematics 1; ~~two units from: Computer Aided Design/Drafting 26abcd\*, 33abcd\*, 37abcd\*~~; one course from the following: Electronics and Computer Hardware Technology ~~11, 21~~, 22, Machine Tool Technology ~~13A~~, 16ab, 46, 101abcd, Welding 15ab\*, Art 141abcd\*, 144abcd\*, Computer Information Systems 13

(\*one semester of)  
Total Units: 33-34

*Recommendation:*

A Certificate of Achievement will be granted upon completion of the courses listed below. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.

Computer Aided Design/Drafting 5, 10abcd\*, 28abcd\*, 31abcd\*, 32abcd\*, 33abcd\*, 34abcd\*, 37abcd\*, 45, 47, 49, Technical Mathematics 1; one course from the following: Electronics and Computer Hardware Technology 11, 22, Machine Tool Technology 16ab, 46, 101abcd, Welding 15ab\*, Art 141abcd\*, 144abcd\*, Computer Information Systems 13

(\*one semester of)  
Total Units: 33-34

**NEW CERTIFICATE OF ACCOMPLISHMENT**

1. Computer Aided Design/Drafting

A Certificate of Accomplishment will be granted upon completion of the courses listed below:

AutoCad Mechanical Drafting Trainee  
Computer Aided Design/Drafting 5, 10abcd\* (\*one semester of)  
Total Units: 6

**MATHEMATICAL SCIENCES**

**COURSE REVIEW**

1. Mathematics 73 – Intermediate Algebra for General Education

2. Mathematics 80 – Intermediate Algebra for Science, Technology, Engineering and Mathematics

**NEW DISTANCE EDUCATION COURSE VERSIONS FOR EXISTING COURSES**

1. Mathematics 73 – Intermediate Algebra for General Education (Online)
2. Mathematics 80 – Intermediate Algebra for Science, Technology, Engineering and Mathematics (Online)

**COURSE REVIEW; CATALOG DESCRIPTION**

1. Mathematics 115 – Probability and Statistics for Prospective Elementary School Teachers  
*Current Status/Proposed Change*

~~This In this course, is designed for students who plan to become prospective elementary school teachers, and will emphasize group and hands-on activities, the use of computer software, and graphing calculators in the exploration~~ student focus on the conceptual and procedural understanding of probability and statistics, and probability. Topics include creating and interpreting ~~During the statistics portion of the course, students investigate the creation and interpretation of graphs, random variables and sampling, measures of central tendency and dispersion, analysis of experiments including hypothesis testing, design of experiments, and data gathering. In addition, During the probability portion of the course, students explore the basic laws of probability, logic and set theory including dependent, independent, and mutually exclusive events, odds, and expected values will be explored~~ outcomes. Group activities and hands-on activities, as well as the use of graphing calculators and statistical software, are integrated throughout the course.

*Recommendation:*

In this course, designed for prospective elementary school teachers, student focus on the conceptual and procedural understanding of probability and statistics. During the statistics portion of the course, students investigate the creation and interpretation of graphs, random variables and sampling, measures of central tendency and dispersion, analysis of experiments including hypothesis testing, design of experiments, and data gathering. During the probability portion of the course, students explore the basic laws of probability, including dependent, independent, and mutually exclusive events, odds, and expected outcomes. Group activities and hands-on activities, as well as the use of graphing calculators and statistical software, are integrated throughout the course.

2. Mathematics 116 – Geometry and Measurement for Prospective Elementary School Teachers

*Current Status/Proposed Change*

~~This In this course, is designed for prospective elementary school teachers, and emphasizes problem solving with particular~~ students focus on constructing tables and recognizing patterns. Topics include the conceptual and procedural understanding of geometry and measurement. Students explore ~~informal geometry, congruence similarity,~~

constructions, transformations, tessellations, and measurement involving both English and metric units in one, two, and three dimensions. ~~Problem solving will include the use of~~ The use of appropriate units in real-world geometric situations is emphasized throughout the course. Group activities, hands-on activities and use of computer software and hands-on activities are integrated throughout the course.

*Recommendation:*

In this course, designed for prospective elementary school teachers, students focus on the conceptual and procedural understanding of geometry and measurement. Students explore informal geometry, congruence similarity, constructions, transformations, tessellations, and measurement involving both English and metric units in one, two, and three dimensions. The use of appropriate units in real-world geometric situations is emphasized throughout the course. Group activities, hands-on activities and use of computer software are integrated throughout the course.

## INACTIVATE MAJOR

1. Mathematics General – Associate in Science Degree

## CHANGE IN CATALOG PROGRAM DESCRIPTION; CHANGE IN MAJOR

1. Mathematics – Associate in Science Degree

*Current Status/Proposed Change*

~~The degree is designed for students planning to transfer provides the student with a major sufficient depth to support a lifelong interest in mathematics, and is suitable for the student will acquire the ability to apply the principles of differential and integral who plans to transfer in mathematics. The core of the major is the calculus sequence, in which the student will acquire a conceptual understanding of the principles of differential and integral calculus for functions of one and several variables, differential equations, and linear algebra. Competencies as well as the ability to apply calculus techniques in a variety of applications. A minimum of one additional course is required to provide the student with greater breadth in mathematics. Competency will be assessed by evaluating through problem solving involving limits; derivatives and integrals of real and vector-valued functions of one and several variables; areas and volumes; line, surface, and volume integrals; numerical methods; sequences and series; ordinary differential equations; power series solutions; Laplace transforms; eigenvectors; vector spaces; and application problems. Students will have the student's ability to utilize computer algebra systems in solve a wide range of calculus and other mathematical problems solving.~~

At least 8 units for this degree must be completed at El Camino College.

Mathematics 190, 191, 220; 4 units from: Mathematics 140, 150, 210, 270, Physics 1A,

Computer Science 1

Total Units: 19-20



*Recommendation:*

The degree provides the student with sufficient depth to support a lifelong interest in mathematics, and is suitable for the student who plans to transfer in mathematics. The core of the major is the calculus sequence, in which the student will acquire a conceptual understanding of the principles of differential and integral calculus for functions of one and several variables, as well as the ability to apply calculus techniques in a variety of applications. A minimum of one additional course is required to provide the student with greater breadth in mathematics. Competency will be assessed by evaluating the student's ability to solve a wide range of calculus and other mathematical problems.

At least 8 units for this degree must be completed at El Camino College.

Mathematics 190, 191, 220; 4 units from: Mathematics 140, 150, 210, 270, Physics 1A, Computer Science 1

Total Units: 19-20

## NATURAL SCIENCES DIVISION

### NEW COURSES

1. Anatomy and Physiology 34A – Anatomy and Physiology I

Units: 4      Lecture: 3 hours    Lab: 5 hours      Faculty Load: 45.00%

Prerequisite: Chemistry 4, Chemistry 20, or Chemistry 21A, or equivalent or concurrent enrollment

Credit, degree applicable; Transfer CSU; Letter grade

This is the first semester of the two-semester Anatomy and Physiology lecture and lab course. It is an in-depth course examining major organ systems, their morphology and functions as well as some of their common pathologies. Topics include an introduction to the human body, chemical and biochemical principles, cell morphology and function, cell division, genetics and histology. In the first semester, the students study the integumentary, skeletal, and muscular systems, as well as the first half of the nervous system. Laboratory investigations include models of the human body and dissection of higher vertebrates, in addition to physiological experiments. The course is designed for science, health-related, pre-nursing (Bachelor of Science in Nursing), and pre-professional majors.

2. Anatomy and Physiology 34B - Anatomy and Physiology II

Units: 4      Lecture: 3 hours    Lab: 5 hours      Faculty Load: 45.00%

Prerequisite: Anatomy and Physiology 34A

Credit, degree applicable; Transfer CSU; Letter grade

This is the second semester of the two-semester Anatomy and Physiology lecture and lab course. Topics examined include: special senses, autonomic nervous system, endocrine system, cardiovascular system, lymphatic system and immunity, respiratory system, digestive system and nutrition, cellular respiration, urinary system, fluid, electrolyte, and acid-base balance, reproductive system, genetic conditions and disorders, embryology

and development. Laboratory investigations include models of the human body and dissection of higher vertebrates, in addition to physiological experiments. The course is designed for science, health-related, pre-nursing (Bachelor of Science in Nursing), and pre-professional majors.

## COURSE REVIEW; CHANGE IN CATALOG DESCRIPTION

### 1. Chemistry 7A – Organic Chemistry I

#### *Current Status/Proposed Change*

This course involves a comprehensive study of the major classes of aliphatic ~~and aromatic~~ hydrocarbons; and of organic halides, ~~and~~ alcohols and ethers. This includes nomenclature, structure, properties, stereochemistry, reactions, synthetic methods, and spectroscopy. Emphasis is placed on a systematic approach to understanding the material through the use of bonding theories, energy concepts, kinetics, and reaction mechanisms. In the laboratory, emphasis is on techniques of separation and purification of organic compounds, common organic reactions, and spectroscopy.

#### *Recommendation:*

This course involves a comprehensive study of the major classes of aliphatic hydrocarbons and of organic halides, alcohols and ethers. This includes nomenclature, structure, properties, stereochemistry, reactions, synthetic methods, and spectroscopy. Emphasis is placed on a systematic approach to understanding the material through the use of bonding theories, energy concepts, kinetics, and reaction mechanisms. In the laboratory, emphasis is on techniques of separation and purification of organic compounds, common organic reactions, and spectroscopy.

### 2. Chemistry 7B – Organic Chemistry II

#### *Current Status/Proposed Change*

This course involves a comprehensive study of aromatic compounds and the major classes of oxygen-containing and nitrogen-containing organic compounds. This includes nomenclature, structure, properties, stereochemistry, reactions, synthetic methods, and spectroscopy. Emphasis is placed on a systematic approach to understanding the material through the use of bonding theories, energy concepts, kinetics, and reaction mechanisms. ~~The A~~ study of biochemistry focuses primarily on ~~carbohydrates, amino acids, proteins, and lipids, carbohydrates, amino acids and proteins.~~ In the laboratory, emphasis is on ~~common~~ qualitative organic analysis, common organic reactions, and multi-step synthesis, ~~and qualitative organic analysis.~~

#### *Recommendation:*

This course involves a comprehensive study of aromatic compounds and the major classes of oxygen-containing and nitrogen-containing organic compounds. This includes nomenclature, structure, properties, stereochemistry, reactions, synthetic methods, and spectroscopy. Emphasis is placed on a systematic approach to understanding the material through the use of bonding theories, energy concepts, kinetics, and reaction mechanisms. A study of biochemistry focuses primarily on lipids, carbohydrates, amino acids and

proteins. In the laboratory, emphasis is on qualitative organic analysis, common organic reactions, and multi-step synthesis.

## **COURSE REVIEW; CHANGES IN DESCRIPTIVE TITLE, CATALOG DESCRIPTION**

### *Current Status/Proposed Change*

#### 1. Geology 15 – ~~Geologic Hazards~~ Natural Disasters

This course presents a study of ~~geologic processes~~ natural hazards such as earthquakes, volcanism, hurricanes, landslides and floods and how we can prepare for and possibly ~~control~~ mitigate these ~~hazards~~ phenomena in order to lessen their impact on ~~people~~ society. In addition, this course will ~~study energy and mineral resources of the~~ address global climate change and associated earth science processes, as well as the misuse and the control of pollution of ~~water~~ vital natural resources such as freshwater.

### *Recommendation:*

#### Geology 15 – Natural Disasters

This course presents a study of natural hazards such as earthquakes, volcanism, hurricanes, landslides and floods and how we can prepare for and possibly mitigate these phenomena in order to lessen their impact on society. In addition, this course will address global climate change and associated earth science processes, as well as the misuse and pollution of vital natural resources such as freshwater.

## **CHANGE IN CERTIFICATE OF ACHIEVEMENT**

#### 1. Environmental Horticulture

### *Current Status/Proposed Change*

A Certificate of Achievement will be awarded upon completion of the courses listed below. At least 50% of the requirements for the certificate must be completed at El Camino College.

Horticulture 41, 42, 46, 53, 54, 55, 56; one course from: Biology 8, 15, 16, Horticulture 44, 60, 95abcd

Total Units: 23-25

### *Recommendation:*

A Certificate of Achievement will be awarded upon completion of the courses listed below. At least 50% of the requirements for the certificate must be completed at El Camino College.

Horticulture 41, 42, 46, 53, 54, 55, 56; one course from: Biology 8, 15, 16, Horticulture 44, 60, 95abcd

Total Units: 23-25