

**EL CAMINO COLLEGE**  
**MINUTES OF THE COLLEGE CURRICULUM COMMITTEE**  
**December 6, 2016**

**CALL TO ORDER**

Meeting called to order at 2:35 p.m. by Chair Carr.

**Members:**

*Present:* M. Anderson, M. Chaban, A. Carr, R. Donegan, E. French-Preston, A. Hockman,  
L. Houske, K. Iino, J. Minei, J. Shankweiler, A. Sharp

*Absent:* S. Bartiromo, S. Rodriguez, C. Striepe

**Ex-Officio Members:**

*Present:* Q. Chapman, L. Clowers

*Absent:* S. Navid, N. Ohia, A. Osanyinpeju, L. Suekawa, L. Young

**Guests:** W. Cox, M. Granich, T. Lew, L. Linka, J. Ng

**I. APPROVAL OF MINUTES**

The committee approved the minutes of the College Curriculum Committee of October 11 and October 25, 2016.

**II. CURRICULUM REVIEW**

**A. Full Program Review**

The committee reviewed the following programs, which are ready for final action:

1. Anthropology AA-T Degree
2. Anthropology A.A. Degree
3. Biology AS-T Degree
4. Chemistry AS-T Degree
5. Kinesiology AA-T Degree
6. Mathematics AS-T Degree
7. Mathematics A.S. Degree
8. Music A.A. Degree
9. Office Administration: Office Systems Option A.S. Degree
10. Physical Education A.A. Degree
11. Physical Science A.S. Degree
12. Computer Information Systems: Computer User Support Specialist Certificate of Achievement
13. Computer Information Systems: Database Management Certificate of Achievement
14. Digital Arts: Motion Graphics Certificate of Achievement

The committee reviewed the following program inactivations, which are ready for final action:

1. Digital Arts Certificate of Achievement
2. Digital Arts: Digital Photography Certificate of Achievement
3. Digital Arts: Illustration Certificate of Achievement

## **B. Full Course Review**

The committee reviewed the following courses, which are ready for final action:

1. Administration of Justice 115 (AJ 115)
2. Art 209 (ART 209)
3. English 60 (ENGL 60)
4. English 61 (ENGL 61)
5. English 62 (ENGL 62)
6. English 63 (ENGL 63)
7. English 64 (ENGL 64)
8. English 65 (ENGL 65)
9. English 66 (ENGL 66)
10. English 67 (ENGL 67)
11. History 114 (HIST 114)
12. Mathematics 120 (MATH 120)
13. Mathematics 150H (MATH 150H)
14. Music 269abcd (MUSI 269abcd)
15. Physical Education 240A (PE 240A)
16. Physical Education 240B (PE 240B)
17. Physical Education 240C (PE 240C)
18. Psychology 8 (PSYC 8)

## **C. Standard Review/Consent Agenda Proposals**

The committee reviewed the following course, which is ready for final action:

1. Fire and Emergency Technology 136 (FTEC 136)

The committee reviewed the following course inactivations, which are ready for final action:

1. Academic Strategies 20 (AS 20)
2. Academic Strategies 22 (AS 22)
3. Academic Strategies 23 (AS 23)
4. Academic Strategies 25 (AS 25)
5. Academic Strategies 30 (AS 30)
6. Academic Strategies 33 (AS 33)
7. Academic Strategies 35 (AS 35)
8. Academic Strategies 36 (AS 36)
9. Business 41 (BUS 41)
10. Physical Education 65abc (PE 65abc)

## **Curriculum Discussion**

### **A. Full Program Review**

#### **Behavioral and Social Sciences Division**

It was moved by L. Houske to approve program proposal changes for Anthropology AA-T and Anthropology A.A. degrees. K. Iino seconded, and the motion carried.

#### **Business Division**

It was moved by J. Minei to approve program revisions for Office Systems Option A.S. Degree and new certificates for Computer User Support Specialist Certificate of Achievement and the Database Management Certificate of Achievement. R. Donegan seconded, and the motion carried.

#### **Fine Arts Division**

The Music A.A. Degree was originally tabled at the November 22 meeting until approval of new course proposal Music 269abcd. The new course was added as an elective under the instrumental music area. In addition, the committee recommended the statement on repeatability be removed. Associate Dean W. Cox concurred with the recommendation.

It was moved by L. Houske to approve program revisions for Music A.A. Degree, Digital Arts Certificate of Achievement, and the inactivation of Certificates of Achievement for Digital Photography, Digital Arts Illustration, and Digital Arts Motion Graphics. K. Iino seconded, and the motion carried.

#### **Health Sciences and Athletics Division**

It was moved by J. Minei to approve program revisions for Kinesiology AA-T and Physical Education A.A. degrees. A. Sharp seconded, and the motion carried

#### **Mathematical Sciences Division**

It was moved by A. Sharp to approve program revisions for Mathematics AS-T and Mathematics A.S. degrees. A. Hockman seconded, and the motion carried.

#### **Natural Sciences Division**

It was moved by M. Chaban to approve the new program proposals for Biology AS-T and Chemistry AS-T degrees, including the program revisions for Physical Science A.S. degree. K. Iino seconded, and the motion carried.

## **B. Full Course Review**

### **Behavioral and Social Sciences Division**

It was moved by L. Houske to approve reactivation of History 114 and revisions to Psychology 8 proposal. M. Chaban seconded, and the motion carried.

### **Fine Arts Division**

The committee recommended Art 209 be revisited in spring 2017 to address the C-ID requirements. Associate Dean W. Cox concurred with the recommendation.

It was moved by E. French-Preston to approve Art 209 proposal and new course proposal Music 269abcd. L. Houske seconded, and the motion carried.

It was moved by A. Sharp to approve new distance education proposal for Art 209. L. Houske seconded, and the motion carried.

### **Health Sciences and Athletics Division**

It was moved by E. French-Preston to approve new course proposal for Physical Education 240B and revisions to Physical Education 240A and Physical Education 240C proposals. J. Minei seconded, and the motion carried.

### **Humanities Division**

It was moved by A. Sharp to approve the eight new English courses (English 60, 61, 62, 63, 64, 65, 66 and 67). The English courses will replace eight Academic Strategies courses (Academic Strategies 20, 23, 25, 30, 33, 35 and 36) M. Chaban seconded, and the motion carried.

### **Industry and Technology Division**

It was moved by A. Sharp to approve Administration of Justice 115 proposal. L. Houske seconded, and the motion carried.

### **Mathematical Sciences Division**

It was moved by R. Donegan to approve the new honors course for Mathematics 150H and revisions to Mathematics 120 proposal. A. Hockman seconded, and the motion carried.

## **C. Standard Review/Consent Agenda Proposals**

It was moved by K. Iino to approve the standard review/consent agenda proposals including course inactivations for the Academic Strategies courses (Academic Strategies 20, 22, 23, 25, 30, 33, 35 and 36). A. Sharp seconded, and the motion carried.

### **III. VICE PRESIDENT'S REPORT**

Vice President Academic Affairs – Dr. Shankweiler – No Report

### **IV. CHAIR'S REPORT**

College Curriculum Committee (CCC) Chair – A. Carr

Chair Carr expressed appreciation for the committee's hard work and thanked those who have submitted their curriculum plans for spring 2017, which are due by Friday, December 9. Chair Carr will be available for meetings and email communication during winter break.

### **V. CURRICULUM ADVISOR REPORT**

Curriculum Advisor – Q. Chapman

The first meeting of the spring semester will include a discussion on training needs. The committee should email Q. Chapman for any training suggestions.

### **VI. ANNOUNCEMENTS**

Chair Carr informed the committee that P. Sorunke has accepted a new position in the Nursing department. The committee, especially Chair Carr and Q. Chapman, expressed their sincere appreciation for her dedication to the committee and assistance with curriculum functions.

### **VII. ADJOURNMENT**

Chair Carr called a motion to adjourn the meeting. K. Iino moved, E. French-Preston seconded, and the motion carried. The meeting adjourned at 3:55 p.m.

**EL CAMINO COLLEGE**  
**COLLEGE CURRICULUM COMMITTEE**  
**December 6, 2016**  
**Approved Curriculum Changes Proposed for 2017-2018**

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**BEHAVIORAL AND SOCIAL SCIENCES**

**Course Reactivations; Course Review, Distance Education Review, Transfer Status**

1. History 114 – History of the Asian American in the United States  
Units: 3.0    Lecture hours: 3.0    Lab hours: 0    Faculty Load: 20.00%  
Recommended Preparation: eligibility for English 1A  
Grading Method: Letter  
Credit Status: Associate Degree Credit  
CSU Transfer  
Proposed UC Transfer

This course surveys Asian American history in the United States from 1848 to the present, focusing on the historical interaction of diverse Asian American groups with American politics, culture, society and the economy. Unique Asian American communities and the historical factors that have formed and shaped them will also be examined.

**Course Review; Distance Education Review, Change in Conditions of Enrollment (Pre/Corequisite, Recommended Preparation or Enrollment Limitation)**

1. Psychology 8 – Social Psychology  
*Current Status/Proposed Changes*  
Prerequisite: Psychology 5 or Psychology 5H with a minimum grade of C in prerequisite

Recommended Preparation: eligibility for English 1A

*Recommendation*

Prerequisite: Psychology 5 or Psychology 5H with a minimum grade of C in prerequisite

Recommended Preparation: eligibility for English 1A

## Change in Major; Program Description, Course Requirements

### 1. Anthropology AA-T Degree

#### *Current Status/Proposed Changes*

The anthropology program provides a foundation in the fields of socio-cultural anthropology, biological anthropology, and archaeology as they relate to the physical and behavioral aspects of the world's populations of the past and the present. Students in this program will be able to discern the basic issues facing anthropologists, apply the methodologies that anthropologists use to approach the problems in the field, and critically evaluate the record of past accomplishments. Competencies will be assessed regularly through examinations and projects.

The Associate in Arts for Transfer (AA-T) is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing the AA-T are given priority consideration for admission to the CSU system, but not to a particular campus or major. In order to earn an AA-T, students must complete:

- ~~1) a minimum of 18 semester units in the major with a grade of C or better~~
- ~~2) 60 required semester units of CSU transferable coursework with a minimum GPA of 2.0~~
- ~~3) the CSU General Education Breadth requirements or Intersegmental General Education Transfer Curriculum (IGETC)~~

- 1) Completion of 60 semester units that are eligible for transfer to the California State University.
- 2) The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education - Breadth requirements.
- 3) A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district.
- 4) Obtainment of a minimum grade point average of 2.0.
- 5) A grade of "C" or better in all courses required for the major or area of emphasis.

Students who have completed the AA-T will have a strong academic foundation in the field and will be prepared for upper division baccalaureate study at the university. The coursework will satisfy most of the lower-division requirements at many institutions within the California State University system. Students transferring to a UC, private, or out of state university should consult with an El Camino College counselor when planning to complete the degree since transfer requirements may be slightly different than those required for the AA-T.

<b>Major Requirements</b>		<b>Units</b>
<b>Required Core: 9 units</b>		
ANTH 1	Introduction to Physical Anthropology	3
ANTH 2	Introduction to Cultural Anthropology	3
ANTH 3	Introduction to Archaeology	3
<b>List A: <del>(select one)</del> 3-4 units</b>		
ANTH 4	Language and Culture	3
PSYC 9A	Introduction to Elementary Statistical Methods for the Study of Behavior	4
or		
SOCI 109	Introduction to Elementary Statistical Methods for the Study of Behavior	4
or		
MATH 150	Elementary Statistics with Probability	4
or		
<u>MATH 150H</u>	<u>Honors Elementary Statistics and Probability</u>	<u>4</u>
<b>List B: <del>(select one or two)</del> 3-4 units</b>		
<b>Any course from List A not already used</b>		
ANAT 32	General Human Anatomy	4
GEOG 8	Introduction to Geographic Information Systems	4
GEOL 1	Physical Geology	3
and		
GEOL 3	Physical Geology Laboratory	1
<b>List C: <del>(select one)</del> 3-4 units</b>		
<b>Any course from List A or List B not already used</b>		
ANTH 5	Physical Anthropology Laboratory	1
ANTH 6	Native Peoples of North America	3
ANTH 7	Native Peoples of South America	3
ANTH 8	Ancient Civilizations of Mesoamerica	3
ANTH 9	Women, Culture, and Society	3
ANTH 11	Anthropology of Religion, Magic and Witchcraft	3
ANTH 12	Ancient Civilizations of the World	3
GEOG 2	Cultural Geography	3
GEOG 5	World Regional Geography	3
or		
<u>GEOG 5H</u>	<u>Honors World Regional Geography</u>	<u>3</u>
HIST 122	United States Social History: Cultural Pluralism in America	3
HIST 178	History of China	3
HIST 183	Introduction to African History, Prehistory to 1885	3
HIST 184	Introduction to African History, 1885 to the Present	3



SOCI 101	Introduction to Sociology	3
SOCI 107	Issues of Race and Ethnicity in the United States	3
SOCI 108	Global Perspectives on Race and Ethnicity	3

**Total Units: 18-21**

### **Change in Major; Course Requirements**

1. Anthropology A.A. Degree  
*Current Status/Proposed Changes*

<b>Major Requirements</b>		<b>Units</b>
<b>Required Core: 12 units</b>		
ANTH 1	Introduction to Physical Anthropology	3
ANTH 2	Introduction to Cultural Anthropology	3
ANTH 3	Introduction to Archaeology	3
ANTH 4	Language and Culture	3
<b>7-9 units from:</b>		
ANTH 5	Physical Anthropology Laboratory	1
ANTH 6	Native Peoples of North America	3
ANTH 7	Native Peoples of South America	3
ANTH 8	Ancient Civilizations of Mesoamerica	3
ANTH 9	Women, Culture, and Society	3
<del>ANTH 10</del>	<del>Medical Anthropology</del>	<del>3</del>
ANTH 11	Anthropology of Religion, Magic and Witchcraft	3
ANTH 12	Ancient Civilizations of the World	3
<del>ANTH 20A</del>	<del>Introduction to Museum Studies</del>	<del>3</del>
GEOG 5	World Regional Geography	3
<u>or</u>		
<u>GEOG 5H</u>	<u>Honors World Regional Geography</u>	<u>3</u>

**Total Units: 19-21**

## **BUSINESS**

### **Inactivate Course**

1. Business 41 – Records/Information Management

### **New Certificates**

1. Computer User Support Specialist Certificate of Achievement

A Certificate of Achievement will be granted upon completion of all program requirements. A minimum of 12 units must be completed at El Camino College.

<b>Certificate Requirements</b>		<b>Units</b>
BUS 28	Written Business Communications	3
BUS 29	Oral Business Communications	3
BUS 60A	Microcomputer Keyboarding	1
CIS 11	Help Desk Operations	3
CIS 13	Computer Information Systems	3
CIS 26	Using Microsoft Excel	3
CIS 40	Personal Computer Operations	3

**Total Units: 19**

2. Database Management Certificate of Achievement

A Certificate of Achievement will be granted upon completion of all program requirements. At least 15 units of the certificate requirements must be completed at El Camino College.

<b>Certificate Requirements</b>		<b>Units</b>
CIS 13	Computer Information Systems	3
CIS 18	Systems Analysis and Design	3
CIS 28	Database Management Using Microsoft Access	3
CIS 29	Advanced Database Applications	3
CIS 80	Database Programming	4
CIS 119	Computer Security and Forensics	3
CIS 134	ASP.NET with C# Business Web Programming	4

**Total Units: 23**

## Change in Major; Course Requirements, Total Units

### 1. Office Administration: Office Systems Option A.S. Degree

*Current Status/Proposed Changes*

#### Major Requirements

**Units**

A minimum of 18 units of the major requirements must be completed at El Camino College.

BUS 27	Effective English for Business	3
BUS 28	Written Business Communications	3
<u>BUS 29</u>	<u>Oral Business Communications</u>	<u>3</u>
<del>BUS 40</del>	<del>Career Planning</del>	<del>2</del>
<del>BUS 41</del>	<del>Records/Information Management</del>	<del>2</del>
BUS 43	Business Office Administration	3
<del>BUS 52A</del>	<del>Microsoft Word Applications I</del>	<del>3</del>
<del>BUS 52B</del>	<del>Microsoft Word Applications II</del>	<del>2</del>
BUS 60A	Microcomputer Keyboarding I	1
BUS 60B	Microcomputer <u>Keyboarding II</u> and Document Processing	1
<del>BUS 60C</del>	<del>Microcomputer Document Formatting</del>	<del>4</del>
<u>CIS 2</u>	<u>Office Applications</u>	<u>3</u>
CIS 13	Computer Information Systems	3
<u>CIS 28</u>	<u>Database Management Using Microsoft Access</u>	<u>3</u>

**Total Units: ~~26~~ 23**

## FINE ARTS

### New Course

#### 1. Music 269abcd – Guitar Ensemble

Units: 1.0    Lecture hours: 2.0    Lab hours: 0    Faculty Load: 13.33%

Recommended Preparation: Music 147A and Music 147B

Grading Method: Letter

Credit Status: Associate Degree Credit

CSU Transfer

Proposed UC Transfer

Guitar ensemble is designed for guitarists who read standard musical notation in addition to basic chords. This class will include the rehearsal and performance of

guitar ensemble literature from the Renaissance to the present, including music of the Baroque, Classical and Romantic eras, as well as jazz and rock styles.

Note: Students must provide their own acoustic or classical guitars.

## Course Review

1. Art 209 – History of African Art

## New Distance Education Online Course Version

1. Art 209 – History of African Art

## Change in Major; Course Requirements

1. Music A.A. Degree  
*Current Status/Proposed Changes*

Major Requirements		Units
<b>Required Core: 20 units</b>		
MUSI 103A	Theory and Musicianship I	4
MUSI 103B	Theory and Musicianship II	4
MUSI 131A	Beginning Piano I	2
<del>MUSI 190ABCD*</del>	<del>Applied Music/Individual Lessons</del>	<del>4</del>
<u>MUSI 190A</u>	<u>Applied Music I</u>	<u>1</u>
<u>MUSI 190B</u>	<u>Applied Music II</u>	<u>1</u>
<u>MUSI 190C</u>	<u>Applied Music III</u>	<u>1</u>
<u>MUSI 190D</u>	<u>Applied Music IV</u>	<u>1</u>
MUSI 215A	Music History/Literature	3
MUSI 215B	Music History/Literature	3

Note: Four semesters of Applied Music is required for music majors.

**Each music student is required to choose an area to fulfill 30 units of the degree.**

### Vocal: select 10 units

MUSI 102A	Beginning Sightsinging	2
MUSI 120	Voice Class I	2
MUSI 220	Voice Class II	2

### select 4 units from:

MUSI 102B	Advanced Sightsinging	2
MUSI 221	Introduction to Lyric Diction for Singers	2

MUSI 222ABCD	Opera Workshop	2
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**Keyboard: select 10 units**

MUSI 131B	Beginning Piano II	2
MUSI 203	Theory and Musicianship III	4
MUSI 231A	Intermediate Piano I	2
MUSI 231B	Intermediate Piano II	2
MUSI 232	Advanced Piano	2

**Instrumental Music: select 10 units**

MUSI 203	Theory and Musicianship III	4
MUSI 260ABCD	Woodwind Ensembles	1
MUSI 261ABCD	Brass Ensembles	1
MUSI 262ABCD	Percussion Ensembles	1
<del>MUSI 263ABCD</del>	<del>Clarinet Choir</del>	<del>1</del>
<u>MUSI 264ABCD</u>	<u>String Ensembles</u>	<u>1</u>
<u>MUSI 269ABCD</u>	<u>Guitar Ensembles</u>	<u>1</u>

**select 2 units from:**

MUSI 143	Beginning Woodwind Instruments	2
MUSI 144	Beginning Brass Instruments	2
MUSI 145	Beginning Percussion Instruments	2
MUSI 146	Beginning String Instruments	2
MUSI 147A	Beginning Guitar	2
MUSI 147B	Beginning Guitar II	2
MUSI 247	Intermediate Guitar	2
MUSI 102A	Beginning Sightsinging	2
or		
MUSI 102B	Advanced Sightsinging	2

~~Note: one semester each of MUSI 260ABCD, MUSI 261ABCD, MUSI 262ABCD, and MUSI 263ABCD may be counted for credit toward the major.~~

**Commercial Music: select 10 units**

MUSI 105	Commercial/Jazz Theory Musicianship	3
MUSI 130	Beginning Jazz Improvisation	2

**select 2 units from:**

MUSI 147A	Beginning Guitar	2
MUSI 147B	Beginning Guitar II	2
MUSI 247	Intermediate Guitar	2

**select 3 units from:**

MUSI 113	Survey of Jazz	3
MUSI 116	History of Rock Music	3
MUSI 117	Music of the Beatles	3

**General Music: select 10 units**

**select 4 units from:**

MUSI 120	Voice Class I	2
MUSI 147A	Beginning Guitar	2
MUSI 147B	Beginning Guitar II	2

**select 6 units from:**

MUSI 102A	Beginning Sightsinging	2
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or

MUSI 102B	Advanced Sightsinging	2
MUSI 112	Music Cultures of World	3

or

<u>MUSI 112H</u>	<u>Honors Music Cultures of the World</u>	<u>3</u>
MUSI 116	History of Rock Music	3
MUSI 117	Music of the Beatles	3
MUSI 203	Theory and Musicianship III	4

**Total Units: 30**

**Change in Certificate; Program Title, Course Requirements, Total Units**

*Current Status/Proposed Changes*

1. Digital Arts: ~~Computer Animation~~ Certificate of Achievement

A Certificate of Achievement will be granted upon completion of all program requirements. A minimum of 12 units required for the certificate must be completed at El Camino College.

<b>Certificate Requirements</b>	<b>Units</b>
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**~~Required Core: 26-5-6~~ units from:**

ART 110	Drawing Fundamentals I	3
<u>ART 129</u>	<u>Fundamentals of Color</u>	<u>3</u>
ART 130	Two-Dimensional Design I	3
ART 131	Lettering and Typography I	3
<u>ART 160</u>	<u>Three-Dimensional Design</u>	<u>3</u>
<u>PHOT 101</u>	<u>Elementary Photography</u>	<u>2</u>
<u>FILM 120</u>	<u>Introduction to Film/Video Production</u>	<u>3</u>
<del>ART 141</del>	<del>Digital Art Fundamentals</del>	<del>3</del>
<del>ART 142</del>	<del>Digital Photography</del>	<del>3</del>
<del>ART 144</del>	<del>3D Modeling and Animation</del>	<del>3</del>
<del>ART 145</del>	<del>Interactive Media Design</del>	<del>3</del>
<del>ART 147</del>	<del>Motion Graphics</del>	<del>3</del>
<del>ART 195</del>	<del>Portfolio and Career Planning for Artists and Designers</del>	<del>3</del>

**2-3 units from:**

<u>ART 101</u>	<u>Art and Visual Culture: A Global Perspective</u>	<u>3</u>
<u>ART 150</u>	<u>The Art of Photography</u>	<u>3</u>
or		
<u>PHOT 150</u>	<u>The Art of Photography</u>	<u>3</u>
<u>FILM 105</u>	<u>Media Aesthetics</u>	<u>3</u>
<u>PHOT 101</u>	<u>Elementary Photography</u>	<u>2</u>

**6 units from:**

<u>ART 141</u>	<u>Digital Art Fundamentals</u>	<u>3</u>
<u>ART 142</u>	<u>Digital Photography Fundamentals</u>	<u>3</u>
<u>ART 143</u>	<u>Digital Publishing Fundamentals</u>	<u>3</u>

**6 units from:**

<u>ART 144</u>	<u>3D Modeling and Animation</u>	<u>3</u>
<u>ART 145</u>	<u>Interactive Media Design Web Animation and Games</u>	<u>3</u>
<u>ART 146</u>	<u>Designing for the World Wide Web</u>	<u>3</u>
<u>ART 147</u>	<u>Motion Graphics</u>	<u>3</u>
<u>ART 160</u>	<u>Three Dimensional Design</u>	<u>3</u>
<u>ART 217</u>	<u>Life Drawing I</u>	<u>3</u>
<u>ART 282</u>	<u>Life Sculpture</u>	<u>3</u>

**6-7 units from:**

<u>ART 132</u>	<u>Advertising Design I</u>	<u>3</u>
<u>ART 133</u>	<u>Graphic Design</u>	<u>3</u>
<u>ART 152</u>	<u>Rendering</u>	<u>3</u>
<u>ART 153</u>	<u>Illustration I</u>	<u>3</u>
<u>ART 181</u>	<u>Beginning Sculpture</u>	<u>3</u>
<u>ART 217</u>	<u>Life Drawing I</u>	<u>3</u>
<u>ART 222</u>	<u>Fundamentals of Painting I</u>	<u>3</u>
<u>ART 253</u>	<u>Illustration II</u>	<u>3</u>
<u>ART 290</u>	<u>Screen Printing</u>	<u>3</u>
<u>CIS 133</u>	<u>Mashup JavaScript, jQuery and AJAX</u>	<u>4</u>
<u>CIS 136</u>	<u>Building Mobile Apps</u>	<u>3</u>
<u>FILM 109</u>	<u>Introduction to Media Writing</u>	<u>3</u>
<u>FILM 113</u>	<u>Screenplay Analysis</u>	<u>3</u>
<u>PHOT 102</u>	<u>Basic Photography</u>	<u>3</u>
<u>PHOT 204</u>	<u>Portraiture</u>	<u>3</u>
<u>THEA 113</u>	<u>Introduction to Acting</u>	<u>3</u>

**2-5 units from:**

<u>ART 96</u>	<u>Cooperative Work Experience Education</u>	<u>2-4</u>
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ART 99	Independent Study	1-3
<u>ART 195</u>	<u>Portfolio and Career Planning for Artists and Designers</u>	<u>3</u>

**Total Units: ~~36-37~~ 31-33**

### **Inactivate Programs**

1. Digital Arts: Digital Photography Certificate of Achievement
2. Digital Arts: Illustration Certificate of Achievement
3. Digital Arts: Motion Graphics Certificate of Achievement

## **HEALTH SCIENCES AND ATHLETICS**

### **New Course**

1. Physical Education 240B – Intermediate Swimming  
Units: 1.0    Lecture hours: 0    Lab hours: 3.0    Faculty Load: 15.00%  
Prerequisite: Physical Education 240A with a minimum grade of C or equivalent skill  
Grading Method: Both  
Credit Status: Associate Degree Credit  
CSU Transfer  
Proposed UC Transfer  
El Camino College AA/AS General Education – Area 5  
Proposed CSU General Education – Area E

This course is designed to teach intermediate level swimming skills. Emphasis is on enhancing stroke efficiency in freestyle, backstroke, elementary backstroke, and sidestroke. The fundamental mechanics of breaststroke and butterfly will be introduced. Additional emphasis will be placed on water safety skills and fitness.  
Note: Letter grade or pass/no pass option.

### **Course Review; Change in Course Number**

#### *Current Status/Proposed Changes*

1. Physical Education 240A – Beginning Swimming  
*Recommendation*  
Physical Education 240A – Beginning Swimming



## Course Review; Changes in Course Number, Descriptive Title, Conditions of Enrollment (Prerequisite), Catalog Description

### *Current Status/Proposed Changes*

1. Physical Education ~~241~~ 240C – ~~Intermediate~~/Advanced Swimming  
Prerequisite: Physical Education ~~240~~ 240B with a minimum grade of C or equivalent skill

This course is designed for ~~intermediate~~ and advanced swimmers. ~~Emphasis is on refinement of Instruction, practice, and refinement will be emphasized for freestyle, backstroke, elementary backstroke, and sidestroke through instruction and practice. Butterfly and breaststroke skills, as well as flip turns, butterfly and breaststroke. Competitive turns for all four strokes will be discussed and practiced. Cardiovascular interval training techniques and exercise programs will be discussed and practiced. Aquatic activities such as water polo, diving, and aquatic games will be introduced.~~  
Note: Letter grade or pass/no pass option.

### *Recommendation*

Physical Education 240C – Advanced Swimming

Prerequisite: Physical Education 240B with a minimum grade of C or equivalent skill

This course is designed for advanced swimmers. Instruction, practice, and refinement will be emphasized for freestyle, backstroke, butterfly and breaststroke. Competitive turns for all four strokes will be discussed and practiced. Cardiovascular interval training techniques and exercise programs will be discussed and practiced. Aquatic activities such as water polo, diving, and aquatic games will be introduced.  
Note: Letter grade or pass/no pass option.

## Inactivate Course

1. Physical Education 65abc – Men's Intercollegiate Tennis Team

## Change in Major; Course Requirements

1. Kinesiology AA-T Degree  
*Current Status/Proposed Changes:*

### **Major Requirements**

### **Units**

#### **Required Core: 11 units**

PE 277 Introduction to Kinesiology and Physical Education  
and

3

#### **Select Option 1 or Option 2**

**Option 1**

ANAT 32	General Human Anatomy	4
PHYO 31	Human Physiology	4
or		

**Option 2**

APHY 34A	Anatomy and Physiology I	4
APHY 34B	Anatomy and Physiology II	4
and		

**Required Core: 3-5 Units****Movement-Based Courses**

Select a maximum of one course from any two to three categories:

**Aquatics**

PE 240A	Beginning Swimming	1
PE 240B	Intermediate Swimming	1
PE 240C 241	Intermediate/Advanced Swimming	1
PE 250	Techniques of Surfboard Riding	1

**Combative**

PE 221	Combative Arts and Self Defense	1
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**Dance**

DANC 130A	Modern Dance Technique I	2
DANC 167	Social and Ballroom Dance	1
DANC 168	Latin Social Dance	2
DANC 250	Pilates Mat Class	3

**Fitness**

PE 10	Body Conditioning and Physical Fitness	1
PE 54	Weight Training	1
PE 245	Water Aerobics	1
PE 249	Swimming for Fitness	1
PE 257	Yoga for Health and Fitness	1
PE 254	Aerobic Fitness	1

**Individual Sports**

PE 204	Badminton	1
PE 208	Bowling	1
PE 224	Golf	1
PE 251	Tennis	1

**Team Sports**

PE 4	Basketball	1
PE 74	Soccer	1
PE 253	Volleyball	1

**List A (select two): 7-9 units**

BIOL 10	Fundamentals of Biology	4
<u>or</u>		
<u>BIOL 10H</u>	<u>Honors Fundamentals of Biology</u>	<u>4</u>
CHEM 1A	General Chemistry I	5
<u>or</u>		
CHEM 4	Beginning Chemistry	5
<u>or</u>		
<u>CHEM 4H</u>	<u>Honors Beginning Chemistry</u>	<u>5</u>
<u>or</u>		
CHEM 21A	Survey of General and Organic Chemistry	4
FAID 1	First Aid, Cardiopulmonary Resuscitation (CPR) and Basic Emergency Care	3
PHYS 2A	General Physics	4
MATH 150	Elementary Statistics with Probability	4
<u>or</u>		
<u>MATH 150H</u>	<u>Honors Elementary Statistics and Probability</u>	<u>4</u>
<u>or</u>		
PSYC 9A	Introduction to Elementary Statistical Methods for the Study of Behavior	4
<u>or</u>		
SOCI 109	Introduction to Elementary Statistical Methods for the Study of Behavior	4

**Total Units: 21-25**

## Recommended Electives:

CH 1	Personal and Community Health Issues
NFOO 11	Nutrition
PE 272	Care and Prevention of Athletic Injuries
PE 280	Exercise and Nutrition Programs for Fitness and Weight Management
PSYC 5	General Psychology
<u>or</u>	
<u>PSYC 5H</u>	<u>Honors General Psychology</u>

2. Physical Education A.A. Degree  
*Current Status/Proposed Changes:*

<b>Major Requirements</b>		<b>Units</b>
<b>Required Core: 16 units</b>		
ANAT 30	Essentials of Anatomy and Physiology	4
PSYC 5	General Psychology	3
<u>or</u>		
<u>PSYC 5H</u>	<u>Honors General Psychology</u>	<u>3</u>
PE 277	Introduction to Kinesiology and Physical Education	3
PE 280	Exercise and Nutrition Programs for Fitness and Weight Management	3
FAID 1	First Aid, Cardiopulmonary Resuscitation (CPR) and Basic Emergency Care	3

**Plus 4 units of activity-units distributed over a minimum of 3 categories to include:**

Aquatics, Combatives, Dance, Fitness, Individual/Dual Activities, Intercollegiate Sports, and Team Activities

**Aquatics**

PE 240A	Beginning Swimming	1
PE 240B	Intermediate Swimming	<u>1</u>
PE 240C 241	<del>Intermediate</del> /Advanced Swimming	<u>1</u>
PE 244	Springboard Diving	1
PE 247	Swimming, Lifeguard Training	1
PE 248	Swimming, Water Safety Instructor	2
PE 249	Swimming for Fitness	1
PE 402	Adapted Swimming and Hydroexercise	1

**Combatives**

PE 18	Boxing	1
PE 220	Naginata - A Japanese Martial Art	1
PE 221	Combative Arts and Self Defense	1

**Dance**

DANC 110	Beginning Dance	2
DANC 120A	Beginning Ballet A	2
DANC 120B	Beginning Ballet B	2
DANC 130A	Beginning Modern Dance A	2
DANC 130B	Beginning Modern Dance B	2
DANC 140	Jazz Dance I	2
DANC 161	Tap Dance I - Beginning	1

DANC 162	Hip Hop Dance	2
DANC 164	World Dance	1
DANC 165	African Dance	1
DANC 167	Social and Ballroom Dance	1
DANC 168	Latin Social Dance	2
DANC 220A	Intermediate Ballet A	2
DANC 230A	Intermediate Modern Dance A	2
DANC 240	Jazz Dance II	2
DANC 250	Pilates Mat Class	3
DANC 261	Tap Dance II - Intermediate	2
DANC 262	Commercial Dance	2
DANC 265	Intermediate African Dance	2
DANC 268	Intermediate Latin Social Dance	2

### **Fitness**

PE 2	Walking for Fitness	1
PE 10	Body Conditioning and Physical Fitness	1
PE 54	Weight Training	1
PE 135ABCD	Sport-Specific, Periodized Training for Athletes	1
PE 245	Water Aerobics	1
PE 254	Aerobic Fitness	1
PE 257	Yoga for Health and Fitness	1
PE 258	Power Vinyasa Yoga	1
PE 259	Circuit Training	1
PE 260	Basic Principles of Fitness and Weight Control	1
PE 400	Adapted Fitness	1
PE 401	Adapted Strength Training	1
PE 404	Adapted Cardiovascular Fitness	1
PE 409	Adapted Yoga	1

### **Individual/Dual Activities**

PE 47	Introduction to Indoor Rock Climbing	1
PE 204	Badminton	1
PE 208	Bowling	1
PE 224	Golf	1
PE 251	Tennis	1

### **Intercollegiate Sports**

PE 5ABC	Men's Intercollegiate Baseball Team	3
PE 6ABC	Off-Season Training for Men's Intercollegiate Baseball	1
PE 15ABC	Men's Intercollegiate Basketball Team	3
PE 16ABC	Off-Season Training for Men's Intercollegiate Basketball Team	1
PE 20ABC	Intercollegiate Cross Country Teams	3

PE 21ABC	Off-Season Training for Intercollegiate Cross Country Teams	1
PE 35ABC	Men's Intercollegiate Football Team	3
PE 36ABC	Off-Season Training for Men's Intercollegiate Football Team	1
PE 45ABC	Men's Intercollegiate Golf Team	3
PE 46ABC	Off-Season Training for Men's Intercollegiate Golf Team	1
PE 57ABC	Intercollegiate Swimming Teams	3
PE 58ABC	Off-Season Training for Intercollegiate Swimming Teams	1
PE 60ABC	Women's Intercollegiate Soccer Team	3
PE 61ABC	Off-Season Training for Women's Intercollegiate Soccer Team	1
<del>PE 65ABC</del>	<del>Men's Intercollegiate Tennis Team</del>	<del>3</del>
PE 66ABC	Off-Season Training for Men's Intercollegiate Tennis Team	1
PE 70ABC	Men's Intercollegiate Soccer Team	3
PE 71ABC	Off-Season Training for Men's Intercollegiate Soccer Team	1
PE 75ABC	Intercollegiate Track and Field Teams	3
PE 76ABC	Off-Season Training for Intercollegiate Track and Field Teams	1
PE 80ABC	Men's Intercollegiate Volleyball Team	3
PE 81ABC	Off-Season Training for Men's Intercollegiate Volleyball Team	1
PE 85ABC	Men's Intercollegiate Water Polo Team	3
PE 86ABC	Off-Season Training for Men's Intercollegiate Water Polo Team	1
PE 87ABC	Women's Intercollegiate Water Polo Team	3
PE 105ABC	Women's Intercollegiate Basketball Team	3
PE 106ABC	Off-Season Training for Women's Intercollegiate Basketball Team	1
PE 110ABC	Women's Intercollegiate Volleyball Team	3
PE 111ABC	Off-Season Training for Women's Intercollegiate Volleyball	1
PE 115ABC	<del>Women's Intercollegiate Tennis Teams</del>	<del>3</del>
PE 116ABC	Off-Season Training for Women's Intercollegiate Tennis Team	1
PE 120ABC	Women's Intercollegiate Softball Team	3
PE 121ABC	Off-Season Training for Women's Intercollegiate Softball Team	1
PE 132ABC	Women's Intercollegiate Badminton Team	2-3
PE 133ABC	Off-season Training for Women's Intercollegiate Badminton Team	1
PE 140ABC	Intercollegiate Sand Volleyball Team	3
<b>Team Activities</b>		
PE 4	Basketball	1
PE 7	Baseball	1
PE 74	Soccer	1
PE 233	Pep Squad and Cheer	1
PE 234AB	Pep Squad and Cheer Competition	1
PE 253	Volleyball	1
PE 255	Beach Volleyball	1

## **Total Units: 22-23**

Physical Education Electives: 2-3 units

PE 201	Introduction to Adapted Physical Education
PE 217	Sports Officiating
PE 270	Fitness and Sports Nutrition
PE 272	Care and Prevention of Athletic Injuries
PE 275	Sport Psychology
PE 290	Personal Fitness Trainer

## **HUMANITIES**

### **New Courses**

1. English 60 – Prewriting Workshop

Units: 2.0    Lecture hours: 2.0    Lab hours: 0    Faculty Load: 13.33%

Grading Method: Pass/No Pass

Credit Status: Non-Degree Credit

In this course, students will learn strategies to increase their understanding and use of prewriting and planning techniques, which are important first steps in successfully completing college writing assignments.

Note: Pass/No Pass

2. English 61 – Test-Taking Strategies

Units: 2.0    Lecture hours: 2.0    Lab hours: 0    Faculty Load: 13.33%

Grading Method: Pass/No Pass

Credit Status: Non-Degree Credit

In this course, students examine how testing instruments (such as true/false, multiple choice, and essay questions) are structured. Students learn techniques designed to increase success on various types of achievement tests.

Note: Pass/No Pass

3. English 62 – Vocabulary Building for College Students

Units: 2.0    Lecture hours: 2.0    Lab hours: 0    Faculty Load: 13.33%

Grading Method: Pass/No Pass

Credit Status: Non-Degree Credit

This course is designed to increase the student's vocabulary in reading, listening, writing, and speaking by introducing words and concepts that are essential to

academic success. A systematic method for continued vocabulary development is emphasized.

Note: Pass/No Pass

4. English 63 – Spelling Techniques

Units: 2.0    Lecture hours: 2.0    Lab hours: 0    Faculty Load: 13.33%

Grading Method: Pass/No Pass

Credit Status: Non-Degree Credit

This course is designed to help students identify and correct common spelling errors and to provide practice using the appropriate rules of spelling necessary for college-level writing.

Note: Pass/No Pass

5. English 64 – Memory Techniques

Units: 2.0    Lecture hours: 2.0    Lab hours: 0    Faculty Load: 13.33%

Grading Method: Pass/No Pass

Credit Status: Non-Degree Credit

This course is designed to introduce the student to methods of memory improvement and to provide practice in the techniques and their application to individual learning situations.

Note: Pass/No Pass

6. English 65 – Listening and Notetaking Strategies

Units: 2.0    Lecture hours: 2.0    Lab hours: 0    Faculty Load: 13.33%

Grading Method: Pass/No Pass

Credit Status: Non-Degree Credit

This course is designed for the student who needs to improve listening for comprehension. They will learn to take organized notes, identifying main and subordinate points into meaningful categories.

Note: Pass/No Pass

7. English 66 – Sentence Errors and Punctuation

Units: 2.0    Lecture hours: 2.0    Lab hours: 0    Faculty Load: 13.33%

Grading Method: Pass/No Pass

Credit Status: Non-Degree Credit

This course focuses on students locating and correcting in their own writing the most common and troublesome sentence structure errors. The correct use of punctuation is reviewed and practiced.



Note: Pass/No Pass

8. English 67 – Thinking Skills for College Courses

Units: 2.0    Lecture hours: 2.0    Lab hours: 0    Faculty Load: 13.33%

Grading Method: Pass/No Pass

Credit Status: Non-Degree Credit

This course is designed to instruct students on how to analyze and use information, identify patterns, find the relationships in analogies, and draw logical conclusions with precision and accuracy.

Note: Pass/No Pass

**Inactivate Courses**

1. Academic Strategies 20 – Prewriting Workshop
2. Academic Strategies 22 – Vocabulary Building for College Students
3. Academic Strategies 23 – Spelling Techniques
4. Academic Strategies 25 – Thinking Skills for College Courses
5. Academic Strategies 30 – Test-Taking Strategies
6. Academic Strategies 33 – Memory Techniques
7. Academic Strategies 35 – Listening and Notetaking Strategies
8. Academic Strategies 36 – Sentence Errors and Punctuation

**INDUSTRY AND TECHNOLOGY**

**CTE Two-Year Course Review; Distance Education Review, Change in Conditions of Enrollment (Recommended Preparation)**

1. Administration of Justice 115 – Community and Human Relations

*Current Status/Proposed Changes*

Recommended Preparation: ~~eligibility for English 4A~~ A

*Recommendation*

Recommended Preparation: English A

**CTE Two-Year Course Review; Change in Catalog Description**

1. Fire and Emergency Technology 136 – Special Patient Emergencies

*Current Status/Proposed Changes*

This course focuses on emergencies, which involve unresponsive patients, ~~pediatrics~~ from pediatric to geriatrics patients, and methods for resuscitating these victims.

Discussions include obstetrical and behavioral problems as well as circumstances surrounding paramedic critical incident stress.

#### *Recommendation*

This course focuses on emergencies, which involve unresponsive patients, from pediatric to geriatric patients, and methods for resuscitating these victims. Discussions include obstetrical and behavioral problems as well as circumstances surrounding paramedic critical incident stress.

## **MATHEMATICAL SCIENCES**

### **New Course**

1. Mathematics 150H – Honors Elementary Statistics and Probability  
Units: 4.0    Lecture hours: 4.0    Lab hours: 0    Faculty Load: 26.67%  
Prerequisite: Mathematics 67 or Mathematics 73 or Mathematics 80 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment

Grading Method: Letter

Credit Status: Associate Degree Credit

CSU Transfer

Proposed UC Transfer

El Camino College AA/AS General Education – Area 6

Proposed CSU General Education –Area B4

Proposed IGETC – Area 2A

This honors course, intended for students in the Honors Transfer Program, will include practice of statistics, including descriptive statistics, inferential statistics, and the role probability plays in statistical analysis. Students will calculate and interpret various descriptive statistics using graphing calculators with statistical testing capabilities or statistical software, as well as by hand. Major topics include methods of data collection and simulation; measures of central tendency, variability, and relative position; graphical summaries of data; linear regression and correlation; distributions, including normal and binomial distributions; probability theory; and inferential statistical methods. Students will choose, justify, use, and interpret the results of inferential techniques, such as confidence intervals, hypothesis tests, goodness of fit, analysis of variance, and nonparametric tests. This course emphasizes extensive, rigorous demonstrations of understanding the concepts of statistics. Students will also complete at least one project demonstrating an application or synthesis of topics covered in the course.

Note: Students may take either Mathematics 150 or Mathematics 150H. Duplicate credit will not be awarded for Mathematics 150 and Mathematics 150H.

Note: The maximum UC credit allowed for students completing Mathematics 150 and Psychology 9A or Mathematics 150 and Sociology 109 is one course.

### **Course Review; Distance Education Review, Change in Conditions of Enrollment (Prerequisite), Catalog Description**

#### **1. Mathematics 120 – Nature of Mathematics**

##### *Current Status/Proposed Changes*

Prerequisite: Mathematics ~~67~~ or Mathematics 73 or Mathematics 80 with minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment

This course surveys general ideas and concepts of mathematics, including mathematics of finance, set theory, combinatorics, probability, statistics, voting systems, logic and applications of Euclidean geometry.

##### *Recommendation*

Prerequisite: Mathematics 73 or Mathematics 80 with minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment

This course surveys general ideas and concepts of mathematics, including mathematics of finance, set theory, combinatorics, probability, statistics, voting systems, logic and applications of Euclidean geometry.

### **Change in Major; Course Requirements**

#### **1. Mathematics AS-T Degree**

##### *Current Status/Proposed Changes:*

##### **Major Requirements**

##### **Units**

##### **Required Core: 15 units**

MATH 190	Single Variable Calculus and Analytic Geometry I	5
MATH 191	Single Variable Calculus and Analytic Geometry II	5
MATH 220	Multi-Variable Calculus	5

##### **List A: 5 units**

MATH 270	Differential Equations with Linear Algebra	5
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**List B: 4-5 units** ~~one course from:~~

CSCI 1	Problem Solving and Program Design Using C++	4
CSCI 2	Introduction to Data Structures	5
CSCI 3	Computer Programming with Java	4
MATH 150	Elementary Statistics with Probability	4
<u>or</u>		
<u>MATH 150H</u>	Honors Elementary Statistics and Probability	4
MATH 210	Introduction to Discrete Structures	4
PHYS 1A	Mechanics of Solids	4
PHYS 3A	General Physics with Calculus	5

**Total Units: 24-25**

2. Mathematics A.S. Degree

*Current Status/Proposed Changes:*

<b>Major Requirements</b>		<b>Units</b>
<b><u>Required Core: 20 units</u></b>		
MATH 190	Single Variable Calculus and Analytic Geometry I	5
MATH 191	Single Variable Calculus and Analytic Geometry II	5
MATH 220	Multi-Variable Calculus	5
MATH 270	Differential Equations with Linear Algebra	5

**4-5 units** ~~one course from:~~

CSCI 1	Problem Solving and Program Design Using C++	4
CSCI 2	Introduction to Data Structures	5
CSCI 3	Computer Programming with Java	4
MATH 150	Elementary Statistics with Probability	4
<u>or</u>		
<u>MATH 150H</u>	Honors Elementary Statistics and Probability	4
MATH 210	Introduction to Discrete Structures	4
PHYS 1A	Mechanics of Solids	4
PHYS 3A	General Physics with Calculus	5

**Total Units: 24-25**

## NATURAL SCIENCES

### NEW MAJORS

#### 1. Biology AS-T Degree

The program is designed to provide students the opportunity to obtain a degree upon successful completion of the requirements of a biology transfer major. This major may include biology, botany, zoology, microbiology, molecular biology, or anatomy and physiology. The student in this program will master cell anatomy and physiology, molecular and Mendelian genetics, and the anatomy, morphology, physiology, life histories, ecology, and evolutionary aspects of archaeobacteria, eubacteria, protist, fungi, and plant and animal kingdoms. Competency will be measured by exams and lab practicum exams, and in the performance of such laboratory skills as dissections, microbiological techniques, microscopy, and electrophoresis.

The Associate in Science in Biology for Transfer (AS-T) is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing the AS-T are given priority consideration for admission to the CSU system, but not to a particular campus or major. In order to earn an AS-T degree, students must complete:

- 1) Completion of 60 semester units that are eligible for transfer to the California State University.
- 2) The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education - Breadth Requirements.
- 3) A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district.
- 4) Obtainment of a minimum grade point average of 2.0.
- 5) A grade of "C" or better in all courses required for the major or area of emphasis.

Students who have completed the AS-T will have a strong academic foundation in the field and will be prepared for upper division baccalaureate study at the university. The coursework will satisfy most of the lower-division requirements at many institutions within the California State University system. Students transferring to a UC, private, or out of state university should consult with an El Camino College counselor when planning to complete the degree since transfer requirements may be slightly different than those required for the AS-T.

Major Requirements		Units
<b>Required Core: 10 units</b>		
BIOL 101	Principles of Biology I	5
or		
BIOL 101H	Honors Principles of Biology I	5

BIOL 102	Principles of Biology II	5
or		
BIOL 102H	Honors Principles of Biology II	5

**List A: 23-25 units**

CHEM 1A	General Chemistry I	5
CHEM 1B	General Chemistry II	5
MATH 190	Single Variable Calculus and Analytic Geometry I	5
or		
MATH 165	Calculus for Business and Social Sciences	5
PHYS 2A	General Physics	4
and		
PHYS 2B	General Physics	4
or		
PHYS 1A	Mechanics of Solids	4
and		
PHYS 1C	Electricity and Magnetism	4
or		
PHYS 3A	General Physics with Calculus	5
and		
PHYS 3B	General Physics with Calculus	5

**Total Units: 33-35**

2. Chemistry AS-T Degree

The chemistry program is designed to provide students the opportunity to obtain a degree upon successful completion of the requirements of a chemistry transfer major. The student will acquire the ability to apply fundamental theories and principles of atomic and molecular structure and to understand energy concepts and kinetics in both inorganic and organic reactions. Laboratories are designed to complement the lecture material providing the student with a foundation in quantitative and qualitative chemical techniques. Competencies will be assessed regularly by examining student abilities to predict chemical reactions, explain observed properties and behaviors, write reaction mechanisms, and perform standard laboratory procedures.

The Associate in Science in Chemistry for Transfer (AS-T) is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing the AS-T are given priority consideration for admission to the CSU system, but not to a particular campus or major. In order to earn an AS-T degree, students must complete:

- 1) Completion of 60 semester units that are eligible for transfer to the California State University.
- 2) The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education - Breadth Requirements.
- 3) A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district.
- 4) Obtainment of a minimum grade point average of 2.0.
- 5) A grade of "C" or better in all courses required for the major or area of emphasis.

Students who have completed the AS-T will have a strong academic foundation in the field and will be prepared for upper division baccalaureate study at the university. The coursework will satisfy most of the lower-division requirements at many institutions within the California State University system. Students transferring to a UC, private, or out of state university should consult with an El Camino College counselor when planning to complete the degree since transfer requirements may be slightly different than those required for the AS-T.

<b>Major Requirements</b>		<b>Units</b>
CHEM 1A	General Chemistry I	5
CHEM 1B	General Chemistry II	5
CHEM 7A	Organic Chemistry I	5
CHEM 7B	Organic Chemistry II	5
PHYS 1A	Mechanics of Solids	4
PHYS 1C	Electricity and Magnetism	4
MATH 190	Single Variable Calculus and Analytic Geometry I	5
MATH 191	Single Variable Calculus and Analytic Geometry II	5

**Total Units: 38**

### **Change in Major; Course Requirements**

1. Physical Science A.S. Degree  
*Current Status/Proposed Changes*

<b>Major Requirements</b>		<b>Units</b>
<b>Required Core: 7-10 units</b>		
One of the following two-semester sequences:		
CHEM 1A	General Chemistry I	5
CHEM 1B	General Chemistry II	5
or		
PHYS 1A	Mechanics of Solids	4

PHYS 1B	Fluids, Heat and Sound	3
or		
PHYS 1A	Mechanics of Solids	4
PHYS 1C	Electricity and Magnetism	4
or		
PHYS 2A	General Physics	4
PHYS 2B	General Physics	4
or		
PHYS 3A	General Physics with Calculus	5
PHYS 3B	General Physics with Calculus	5
<b>10-13 units from:</b>		
ASTR 12	Astronomy Laboratory	1
ASTR 20	The Solar System	3
or		
<u>ASTR 20H</u>	<u>Honors The Solar System</u>	<u>3</u>
ASTR 25	Stars and Galaxies	3
or		
<u>ASTR 25H</u>	<u>Honors Stars and Galaxies</u>	<u>3</u>
CHEM 4	Beginning Chemistry	5
or		
<u>CHEM 4H</u>	<u>Honors Beginning Chemistry</u>	<u>5</u>
CHEM 7A	Organic Chemistry I	5
CHEM 7B	Organic Chemistry II	5
CSCI 1	Problem Solving and Program Design Using C++	4
<u>GEOG 1</u>	<u>Physical Geography</u>	<u>3</u>
GEOL 1	Physical Geology	3
GEOL 2	History of Planet Earth	3
GEOL 3	Physical Geology Laboratory	1
GEOL 4	History Planet Earth Laboratory	1
GEOL 15	Natural Disasters	3
MATH 150	Elementary Statistics with Probability	4
or		
<u>MATH 150H</u>	<u>Honors Elementary Statistics and Probability</u>	<u>4</u>
MATH 180	Pre-calculus	5
MATH 190	Single Variable Calculus and Analytic Geometry I	5
MATH 191	Single Variable Calculus and Analytic Geometry II	5
MATH 220	Multi-Variable Calculus	5
MATH 270	Differential Equations with Linear Algebra	5
<u>OCEA 10</u>	<u>Introduction to Oceanography</u>	<u>4</u>
or		
<u>OCEA 10H</u>	<u>Honors Introduction to Oceanography</u>	<u>4</u>
PHYS 1C	Electricity and Magnetism	4



PHYS 1D  
**Total Units: 20**

Optics and Modern Physics

4