

EL CAMINO COLLEGE
MINUTES OF THE COLLEGE CURRICULUM COMMITTEE
April 24, 2007

Present: F. Arce, J. Davidson, P. Gebert, A. Himsel, L. Kjeseth, V. Lloyd, C. Mosqueda,
R. Natividad, S. Panski, V. Rapp, J. Siddiqui, J. Young

Absent (excused): E. Martinez, C. Somin

Ex-Officio Members Present: A. Collette, L. Suekawa

Absent (excused): M. Hall, S. Rodriguez, R. Smith

Absent (unexcused): S. Eggers

Also Present: C. Bredek, S. Cocca, R. Elton-Collett, D. Goldberg, J. Hyman, R. Way

CALL TO ORDER

Chair Young called the College Curriculum Committee meeting to order at 2:30 p.m.

APPROVAL OF MINUTES

L. Kjeseth moved that the minutes of the March 27, 2007, CCC meeting be approved as written and V. Rapp seconded the motion. As there were no corrections, Chair Young called for a vote and the minutes were approved as presented.

CHAIR'S REPORT

Chair Young reported that during spring break, President Fallo informed V. Rapp of concerns he had with some of the curriculum items on the agenda for the April 16th Board of Trustees meeting. Specifically, the President was concerned with the phrase, "for the Older Adult," in the descriptive titles of the non-credit music courses and with the wording of the catalog descriptions for Child Development 117, Physical Education 2abcd, and Psychology 10. The President was advised that the phrase, "for the Older Adult," was in compliance with Title 5 regulations and Education Code requirements; he then agreed that it was appropriate to keep the music courses on the Board agenda. However, because changes to a course are to be initiated by discipline faculty, the catalog description revisions for the other three courses were removed from the Board agenda. J. Young said the course descriptions for Child Development 117, Physical Education 2abcd, and Psychology 10 were now being reviewed by faculty and that the CCC will entertain proposals for these courses at its May 8th meeting.

Continuing with her report, the Chair informed the committee that Chapter 6 of Title 5, which covers courses and programs, is being extensively revised. In May, the revisions will be presented to the Board of Governors for a first reading. Final reading and approval are scheduled for July. Chair Young said an in-depth presentation of the revisions will be presented to the CCC at a future meeting then gave an example of one of the changes. Certificates for credit programs can no longer be called certificates of competence and completion. The

terminology will now be certificate of achievement. Certificates of competence and completion will be for non-credit programs. The Chair noted that this change significantly affects El Camino College.

J. Young concluded her report with a brief overview of her recent attendance at the statewide Academic Senate Plenary Session. She noted that a number of workshops covered the proposed Title 5 changes then said she will provide the CCC with a full report on the plenary session at the next meeting. Chair Young remarked that those departments offering both a certificate of competence and a certificate of completion will have to make decisions regarding how to meld the requirements into one certificate. A. Collette then mentioned that the Title 5 revisions now prohibit low-unit certificates (that is, 12 to 17 units) from being included on transcripts unless they have been formally approved by the Chancellor's Office. The Chair added that the Title 5 revisions also will prohibit colleges from granting transfer studies or general studies majors. L. Suekawa asked if catalog rights will allow currently enrolled students to complete these types of degrees. Chair Young said that catalog rights were not addressed at any of the workshops and that she will investigate this issue.

VICE PRESIDENT OF ACADEMIC AFFAIRS' REPORT

F. Arce stated that the majority of the College's certificates are vocational and related to employment opportunities. He added that the Child Development program has good examples of vocational education certificates and suggested that faculty refer to these when making adjustments to the certificates in their departments.

CURRICULUM REVIEW

INDUSTRY AND TECHNOLOGY PROPOSALS:

R. Way began the presentation by introducing S. Cocca, faculty coordinator for the division, and R. Elton-Collett, support staff. The dean then explained that the proposals before the committee represent a project, supported by a consortium that includes Southern California Edison and the Los Angeles Department of Water and Power, designed to prepare students for employment or career advancement in the utility and electrical power generation and distribution industries. At the conclusion of his remarks, R. Way asked that review begin with the Electronics and Computer Hardware Technology 62 proposal. After CCC members received the division's errata sheet, agreement was reached for revisions to this course's discipline, catalog description, and Section V of the outline. Continuing, the committee reviewed Electronics and Computer Hardware Technology 64 next. During the brief discussion, revisions were accepted for the catalog description and Section V of the course outline. The CCC then agreed to minor revisions to the discipline and catalog description for Electronics and Computer Hardware Technology 68 as well as to a revision for Section V of the outline. R. Way and the committee concluded the division's review with the proposal for the Electronics and Computer Hardware Technology certificate of completion. As there were no questions about this proposal, V. Lloyd moved, and J. Siddiqui seconded, that the Industry and Technology proposals be approved. The motion carried. L. Kjeseth then moved that the conditions of enrollment be approved. P. Gebert seconded the motion, which carried.

BUSINESS PROPOSALS:

V. Rapp, while distributing an errata sheet, thanked the committee members who had forwarded to her, prior to today's meeting, suggestions regarding the division's proposals. She said that the

Computer Information Systems faculty found the suggestions extremely helpful. Review then began with Computer Information Systems 30. During the discussion of this course, revisions were accepted for the proposal form, the catalog description, and Sections II, III, IV, and V of the course outline. Next, Computer Information Systems 133 was reviewed and after a brief discussion, the committee agreed to revisions for the proposal form, the catalog description, and Sections IV and VII of the outline. The CCC then turned to the proposal for Computer Information Systems 134. During the review of this course, agreement was reached for revisions to the proposal form, the catalog description, and Sections II, III, IV, V, and VII of the course outline. Next, Dean Rapp directed the committee's attention to the proposed revisions to Sections II, III, V, and VII of the course outline for Computer Information Systems 142 and after a brief discussion, the revisions were accepted. Continuing with the review of the Business proposals, the CCC agreed to minor revisions for Computer Information Systems 143. These included a change to the proposal form as well as adjustments to the catalog description and Sections IV and V of the outline. The dean then outlined the minor changes to the proposal for the Computer Information Systems major. These were accepted by the CCC. The division's presentation concluded with the proposal to delete the Database Administration option from the Computer Information Systems certificates of competence and completion. V. Rapp explained that the Chancellor's Office did not approve this option and the Computer Information Systems Department did not want to pursue revising the certificates to meet the Chancellor's Office's requirements. Therefore, the Database Administration option needs to be deleted from the certificates. At the end of the brief discussion of the certificates, P. Gebert moved that the proposals for Computer Information Systems 30, 133, 134, 142, and 143, as well as the Computer Information Systems major, be approved. J. Siddiqui seconded the motion, which carried. L. Kjeseth moved, and V. Lloyd seconded, that the conditions of enrollment be approved. This motion carried. Chair Young then asked for a motion to delete the Database Administration option from the Computer Information Systems certificates of competence and completion. V. Lloyd made the motion and it was seconded by R. Natividad. The motion carried.

MATHEMATICAL SCIENCES PROPOSALS:

Dean Goldberg began the division's presentation by thanking committee members for forwarding suggestions for the Mathematical Sciences proposals. He then introduced C. Bredek of the Mathematics Department and J. Hyman of the Computer Science Department to the committee. After an errata sheet was distributed, review began with Computer Science 1. D. Goldberg outlined the revisions for the proposal form and Sections II, IV, and V of the course outline. After the CCC agreed to the revisions, the dean asked that review continue with the Computer Science 40 proposal. As the CCC discussed this course, agreement was reached for revisions to the proposal form, the catalog description, and Sections II, IV, and VII of the outline. V. Rapp informed the CCC that G. Scott of the Computer Science Department has ensured Computer Information Systems faculty that Computer Science 40, Introduction to UNIX and LINUX Operating Systems, will be taught purely as an Computer Science course and that subject matter will not cross over to Computer Information Systems topics. Dean Goldberg then directed the committee's attention to the proposals for Mathematics 41A and 41B. After common revisions regarding the proposal forms and the catalog descriptions for these two courses were agreed to, a minor revision to Section V of the course outline for Mathematics 41A was accepted. Next, the committee reviewed the Distance Education proposals for Mathematics 41A and 41B. After the CCC accepted revisions to the proposal forms, review of the Mathematical Sciences proposals concluded with Mathematics 150. During the brief discussion of this course, the CCC agreed to minor revisions for the proposal form, the catalog description,

and Section VI of the outline. P. Gebert then moved, and V. Lloyd seconded, that the proposals for Computer Science 1 and 40 and Mathematics 41A, 41B, and 150 be approved. The motion carried. L. Kjeseth moved that the conditions of enrollment be approved; V. Lloyd seconded the motion, which carried. R. Natividad then moved, and P. Gebert seconded, that the Distance Education versions for Mathematics 41A and 41B be approved. The motion carried.

PROPOSAL REVIEWED BY CCC CHAIR AND VICE PRESIDENT OF ACADEMIC AFFAIRS:

Chair Young directed the committee's attention to the proposal for the inactivation of Computer Science 25. The Chair explained to CCC representatives that they ordinarily do not receive a copy of this type of proposal because she and F. Arce, with the help of A. Collette, review the proposal for the inactivation then provide a justification for recommended CCC action. However, as part of the CCC's ongoing training, and to illustrate how the process works, members received both a proposal form and the Chair's and Vice President's recommended action and justification for approval for the inactivation of Computer Science 25. Chair Young then reviewed the justification for approval with the CCC. As there were no questions, V. Rapp moved that the inactivation of Computer Science 25 be approved. R. Natividad seconded the motion, which carried.

At 3:45 p.m., L. Kjeseth moved, and P. Gebert seconded, that the meeting be adjourned. The motion carried.

EL CAMINO COLLEGE COLLEGE CURRICULUM COMMITTEE

Proposed Curriculum Changes April 24, 2007

BUSINESS DIVISION

CHANGES IN DESCRIPTIVE TITLE, TRANSFER STATUS, CONDITIONS OF ENROLLMENT (Prerequisite, Corequisite, Recommended Preparation, or Enrollment Limitation), CATALOG DESCRIPTION; COURSE REVIEW

Current Status/Proposed Change

1. Computer Information Systems 30 – Introduction to e-Commerce
Recommended Preparation: Computer Information Systems 13; eligibility for English ~~2R~~ 84
~~No Transfer CSU~~ Transfer CSU
This introductory course in e-commerce will acquaint the student with fundamentals of e-commerce. The primary focus will be the study of current e-commerce practices, business models, techniques and opportunities for conducting business via the Internet. This course will help to prepare students for employment as webmasters, website designers, and e-commerce business managers.

Recommendation:

Computer Information Systems 30 – Introduction to eCommerce
Recommended Preparation: Computer Information Systems 13; eligibility for

English 84

Transfer CSU

This introductory course will acquaint the student with fundamentals of eCommerce. The primary focus will be the study of current eCommerce practices, business models, techniques and opportunities for conducting business via the Internet. This course will help to prepare students for employment as webmasters, website designers, and eCommerce business managers.

CHANGES IN CATALOG DESCRIPTION, TRANSFER STATUS; COURSE REVIEW

1. Computer Information Systems 133 – Web Programming Concepts

Current Status/Proposed Change

~~No Transfer CSU~~ Transfer CSU

~~This course provides~~ Students examine the fundamental concepts and structures of programming for the Web using client-side mark-up languages and scripting languages. ~~Topics included are problem solving, program design and~~ Students learn how to use standard documentation, testing and debugging techniques, and web-based programming tools such as conditional structures, variables, classes, objects, functions, events, arrays, windows, frames, and forms in order to create eBusiness applications. Additional topics include the introduction to XML, databases as used in the development of web-based programming, and utilizing Web Services.

Recommendation:

Transfer CSU

Students examine the fundamental concepts and structures of programming for the Web using client-side mark-up languages and scripting languages. Students learn how to use standard documentation, testing and debugging techniques, and web-based programming tools such as conditional structures, variables, classes, objects, functions, events, arrays, windows, and forms in order to create eBusiness applications. Additional topics include the introduction to XML, databases as used in the development of web-based programming, and utilizing Web Services.

2. Computer Information Systems 134 – Web Programming

~~No Transfer CSU~~ Transfer CSU

This introductory programming course incorporates the basic concepts of web programming, problem solving, programming logic, and design techniques using Microsoft.Net web programming languages. The student will be able to obtain information from an e-client and send information to the e-client by building dynamic data-driven web applications. Skills will be applied to the creation of a Web Service. Emphasis is placed on emerging web programming skills and technologies to prepare students for advanced programming applications and to enter the E-eBusiness industry.

Recommendation:

Transfer CSU

This introductory programming course incorporates the basic concepts of web programming, problem solving, programming logic, and design techniques using Microsoft.Net web programming languages. The student will be able to obtain information from an e-client and send information to the e-client by building dynamic data-driven web applications. Skills will be applied to the creation of a Web Service.

Emphasis is placed on emerging web programming skills and technologies to prepare students for advanced programming applications and to enter the eBusiness industry.

CHANGE IN TRANSFER STATUS; COURSE REVIEW

1. Computer Information Systems 143 – LAN and WAN Router Configurations Cisco 4
~~No Transfer CSU~~ Transfer CSU

Recommendation:

Transfer CSU

**CHANGES IN TRANSFER STATUS, CONDITIONS OF ENROLLMENT
(Prerequisite, Corequisite, Recommended Preparation, or Enrollment Limitation);
COURSE REVIEW**

1. Computer Information Systems 142 – Implementing and Administering Network Routers
Cisco 3

Current Status/Proposed Change

Prerequisite: Computer Information Systems 141 with a minimum grade of C or equivalent (Successful completion of the ~~CompTIA Network+ Certification~~ Cisco CCNA “Semesters” 1 and 2 is an equivalent.)

~~No Transfer~~ CSU Transfer CSU

Recommendation:

Prerequisite: Computer Information Systems 141 with a minimum grade of C or equivalent (Successful completion of Cisco CCNA “Semesters” 1 and 2 is an equivalent.)
Transfer CSU

CHANGE IN MAJOR

1. Computer Information Systems

Current Status/Proposed Change

~~Computer Information Systems 13, 18, 19; one of the following groups: Computer Information Systems 26 and 28 OR 46 and 47 OR 140 and 141; two of the following courses: Computer Information Systems 16, 17, 27, 29, 30, 80, 83, 133, 134, 142, 143~~

Total Units: 21-22

Recommendation:

~~Computer Information Systems 13, 18, 19; one of the following groups: Computer Information Systems 26 and 28 OR 46 and 47 OR 140 and 141; two of the following courses: Computer Information Systems 16, 17, 27, 29, 30, 80, 83, 133, 134, 142, 143~~

Total Units: 21-22

CHANGE IN CERTIFICATE OF COMPETENCE

1. Computer Information Systems

Current Status/Proposed Change

Cisco Networking Administration Option:

A minimum of nine Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 15-16 units

~~Database Administration Option (pending approval by the California Community Colleges System Office):~~

~~A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 19 units.~~

~~Computer Information Systems 18, 28, 29, 80, 83; one of the following: Computer Information Systems 16, 19, 46~~

~~Total Units: 19~~

E-Commerce Option (pending approval by the California Community Colleges System Office):

A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 30-31 units.

Business 25; Computer Information Systems 19, 30, 44, 133, 134, 135, Law 31; choose two from the following courses: Business 12, 14, 18, Computer Information Systems 16, 28, 29 80

Total Units: 30-31

Microcomputer Applications Option:

A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 30-33 units.

CIS – Microcomputer Applications Option Requirements:

Computer Information Systems 13, 18, 26, 28, 40; Computer Information Systems 16 or 133; three courses from: Computer Information Systems 27, 29, 46, 80, 83, 134; one course from: Business 55, Computer Information Systems 19, 30

Total Units: 30-33

Microcomputer Support and Network Management Option:

A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 33-34 units.

Computer Information Systems 13, 19, 40; four courses from the following: Computer Information Systems 16, 19, 29, 20, 80, 83; one of the following groups: Computer Information Systems 140, 141, 142, and 143 OR Computer Information Systems 46, 47, 48, and 49

Total Units: 33-34

Web Programming Option:

A minimum of twelve Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 17 units. Computer Information Systems 30, 133, 134; two courses: Business 12, Computer Information Systems 28, Law 31

Total Units: 17

Windows Networking Option (pending approval by the California Community Colleges System Office):

A minimum of nine Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 18 units. Computer Information Systems 46, 47, 48, 49; one of the following groups: Computer Information Systems 28 and 83 or Computer Information Systems 140 and 141
Total Units: 18

Recommendation:

Cisco Networking Administration Option:

A minimum of nine Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 15-16 units

E-Commerce Option (pending approval by the California Community Colleges System Office):

A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 30-31 units. Business 25; Computer Information Systems 19, 30, 44, 133, 134, 135, Law 31; choose two from the following courses: Business 12, 14, 18, Computer Information Systems 16, 28, 29 80
Total Units: 30-31

Microcomputer Applications Option:

A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 30-33 units.

CIS – Microcomputer Applications Option Requirements:

Computer Information Systems 13, 18, 26, 28, 40; Computer Information Systems 16 or 133; three courses from: Computer Information Systems 27, 29, 46, 80, 83, 134; one course from: Business 55, Computer Information Systems 19, 30
Total Units: 30-33

Microcomputer Support and Network Management Option:

A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 33-34 units. Computer Information Systems 13, 19, 40; four courses from the following: Computer Information Systems 16, 19, 29, 20, 80, 83; one of the following groups: Computer Information Systems 140, 141, 142, and 143 OR Computer Information Systems 46, 47, 48, and 49
Total Units: 33-34

Web Programming Option:

A minimum of twelve Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 17 units. Computer Information Systems 30, 133, 134; two courses: Business 12, Computer Information Systems 28, Law 31

Total Units: 17

Windows Networking Option (pending approval by the California Community Colleges System Office):

A minimum of nine Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 18 units. Computer Information Systems 46, 47, 48, 49; one of the following groups; Computer Information Systems 28 and 83 or Computer Information Systems 140 and 141

Total Units: 18

CHANGE IN CERTIFICATE OF COMPLETION**1. Computer Information Systems***Current Status/Proposed Change***Cisco Networking Administration Option:**

A minimum of nine Computer Information Systems units must be completed at El Camino College and a grade point average of 2.0 (C) is necessary in the required 15-16 units

Computer Information Systems 140, 141, 142, 143; one course from the following
Computer Information Systems 16, 80, 133

Total Units: 15-16

~~Database Administration Option (pending approval by the California Community Colleges System Office):~~

~~A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 2.0 (C) is necessary in the required 19 units.~~

~~Computer Information Systems 18, 28, 29, 80, 83; one course from the following:
Computer Information Systems 16, 19, 46~~

~~Total Units: 19~~

E-Commerce Option (pending approval by the California Community Colleges System Office):

A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 2.0 (C) is necessary in the required 30-31 units.

Business 25; Computer Information Systems 19, 30, 44, 133, 134, 135, Law 31; choose two from the following courses: Business 12, 14, 18, Computer Information Systems 16, 28, 29 80

Total Units: 30-31

Web Programming Option:

A minimum of twelve Computer Information Systems units must be completed at El Camino College and a grade point average of 2.0 (C) is necessary in the required 17 units. Computer Information Systems 30, 133, 134; two courses from: Business 12, Computer Information Systems 28, Law 31

Total Units: 17

Recommendation:**Cisco Networking Administration Option:**

A minimum of nine Computer Information Systems units must be completed at El Camino College and a grade point average of 2.0 (C) is necessary in the required 15-16 units

Computer Information Systems 140, 141, 142, 143; one course from the following Computer Information Systems 16, 80, 133

Total Units: 15-16

E-Commerce Option (pending approval by the California Community Colleges System Office):

A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 2.0 (C) is necessary in the required 30-31 units.

Business 25; Computer Information Systems 19, 30, 44, 133, 134, 135, Law 31; choose two from the following courses: Business 12, 14, 18, Computer Information Systems 16, 28, 29 80

Total Units: 30-31

Web Programming Option:

A minimum of twelve Computer Information Systems units must be completed at El Camino College and a grade point average of 2.0 (C) is necessary in the required 17 units. Computer Information Systems 30, 133, 134; two courses from: Business 12, Computer Information Systems 28, Law 31

Total Units: 17

INDUSTRY AND TECHNOLOGY

NEW COURSES

1. Electronics and Computer Hardware Technology 62 – Introduction to the Electric Power Industry

Units: 2 Lecture: 1.5 hours Lab: 1.5 hours Faculty Load: 17.5%

Credit, degree applicable; Transfer CSU

In this course, students are introduced to electric power generation and transmission. Topics will emphasize employment opportunities in the powerline industry. The course will include a general overview of the types of power systems, electricity generation, basic electrical theory, history of power generation and distribution, power system protection, system reliability, and power industry governance.

2. Electronics and Computer Hardware Technology 64 –Electric Power Industry Safety

Units: 2 Lecture: 2 hours Faculty Load: 13.333%

Credit, degree applicable; Transfer CSU

This course addresses OSHA (Occupational Safety and Health Administration) regulations for the electric power generation and distribution industry. The topics covered include OSHA regulations for the utility industry, personal protective equipment, fall protection, hazardous material handling, fire protection, hand and power tools, and electrical distribution safety components. Students successfully completing the course will be eligible to take the examination for the OSHA (30 hr) safety-training certificate.

3. Electronics and Computer Hardware Technology 68 –Electric Power Transmission and Distribution Systems

Units: 3 Lecture: 3 hours Faculty Load: 20%

Credit, degree applicable; Transfer CSU

This course provides an in-depth study of the electrical components used in the transmission of electricity from generation to the user. Students will study switchyards and substations as well as learn the operation of transformers, circuit breakers, regulators, capacitor banks, tap changers, disconnects, current and potential transformers, and lightning arrestors. The various types of electrical conductors, structures, and insulators used in the transmission of electricity will also be studied.

CHANGE IN CERTIFICATE OF COMPLETION

1. Electronics and Computer Hardware Technology

Current Status/Proposed Change

A Certificate of Completion in one of the following options will be granted upon the completion of the courses with a grade average of C. At least 50% of the courses required for the Certificate of Completion must be completed at El Camino College.

Communications Equipment Technician Option:

Electronics and Computer Hardware Technology 11, 22, 110, 120, 124, 150, 152, 193; one course from: Electronics and Computer Hardware Technology 95abcd (~~one semester~~), 140, 190, 191, 194, Computer Information Systems 13

Total Units: 27-29

Computer Hardware Electronics Technician Option:

Electronics and Computer Hardware Technology 11, 22, 110, 130, 140, 142, 144; two courses from: Electronics and Computer Hardware Technology 95abcd (one semester), 131, 191, 194, Computer Information Systems 13, 40

Total Units: 29-31

Computer Hardware Technician Option:

Electronics and Computer Hardware Technology 130, 140, 142, 144

Total Units: 15

Electronics Engineering Technician Option:

Electronics and Computer Hardware Technology 11, 22, 110, 120, 124, 130, 140, 190; two courses from: Electronics and Computer Hardware Technology 95abcd (one semester), 142, 144, 150, 152, 190, 191, 192, 193, 194

Total Units: 30-34

Electronics Technician Option:

Electronics and Computer Hardware Technology 11, 22, 110, 120, 140
Total Units: 16

Industrial Computer Control Technician Option:

Electronics and Computer Hardware Technology 11, 22, 110, 120, 124, 130, 140, 191, 192, Machine Tool Technology 10A; one course from: Electronics and Computer Hardware Technology 95abcd (~~one semester~~), 131, 142, 190
Total Units: 34-36

Powerline Industry Readiness Option:

Construction Technology 172, Electronics and Computer Hardware Technology 62, 64, 68, 110
Total Units: 14

Recommendation:

A Certificate of Completion in one of the following options will be granted upon the completion of the courses with a grade average of C. At least 50% of the courses required for the Certificate of Completion must be completed at El Camino College.

Communications Equipment Technician Option:

Electronics and Computer Hardware Technology 11, 22, 110, 120, 124, 150, 152, 193; one course from: Electronics and Computer Hardware Technology 95abcd, 140, 190, 191, 194, Computer Information Systems 13
Total Units: 27-29

Computer Hardware Electronics Technician Option:

Electronics and Computer Hardware Technology 11, 22, 110, 130, 140, 142, 144; two courses from: Electronics and Computer Hardware Technology 95abcd (one semester), 131, 191, 194, Computer Information Systems 13, 40
Total Units: 29-31

Computer Hardware Technician Option:

Electronics and Computer Hardware Technology 130, 140, 142, 144
Total Units: 15

Electronics Engineering Technician Option:

Electronics and Computer Hardware Technology 11, 22, 110, 120, 124, 130, 140, 190; two courses from: Electronics and Computer Hardware Technology 95abcd (one semester), 142, 144, 150, 152, 190, 191, 192, 193, 194
Total Units: 30-34

Electronics Technician Option:

Electronics and Computer Hardware Technology 11, 22, 110, 120, 140
Total Units: 16

Industrial Computer Control Technician Option:

Electronics and Computer Hardware Technology 11, 22, 110, 120, 124, 130, 140, 191, 192, Machine Tool Technology 10A; one course from: Electronics and Computer Hardware Technology 95abcd, 131, 142, 190

Total Units: 34-36

Powerline Industry Readiness Option:

Construction Technology 172, Electronics and Computer Hardware Technology 62, 64, 68, 110

Total Units: 14

MATHEMATICAL SCIENCES DIVISION

INACTIVATE COURSE

1. Computer Science 25 – Programming in C

CHANGE IN CATALOG DESCRIPTION; COURSE REVIEW

1. Computer Science 1 – Problem Solving and Program Design Using C++
Current Status/Proposed Change

This course is an introduction to problem solving and program design using structured, top-down algorithmic development techniques applied to the solution of numeric and nonnumeric problems. Software engineering topics such as analysis, design, implementation, testing, documentation, and maintenance of software are discussed. Laboratory work will be done using the C++ computer language.

Recommendation:

This course is an introduction to problem solving and program design using structured, top-down algorithmic development techniques applied to the solution of numeric and nonnumeric problems. Software engineering topics such as analysis, design, implementation, testing, documentation, and maintenance of software are discussed. Laboratory work will be done using the C++ computer language.

CHANGES IN DESCRIPTIVE TITLE, CREDIT STATUS, TRANSFER STATUS, CATALOG DESCRIPTION; COURSE REVIEW

Current Status/Proposed Change

1. Computer Science 40 – Introduction to UNIX and LINUX Operating Systems

Credit, ~~not~~ degree applicable

~~No Transfer CSU~~ Transfer CSU

This course covers UNIX and LINUX operating system concepts and includes: basic commands, file structures, editors, file management utilities, ~~shell scripts~~, shell programming, process control, and remote messaging, as well as network and system administration.

Recommendation:

Computer Science 40 – Introduction to UNIX and LINUX Operating Systems

Credit, degree applicable

Transfer CSU

This course covers UNIX and LINUX operating system concepts and includes basic commands, file structures, editors, file management utilities, shell programming, process control, and remote messaging, as well as network and system administration.

CHANGE IN CATALOG DESCRIPTION; COURSE REVIEW

1. Mathematics 41A – Elementary Algebra, Part I

Current Status/Proposed Change

~~This course includes~~ Students examine the study connections between the order of operations on real numbers, and the solutions and applications of linear elementary algebraic ideas of variables, expressions, and equations, and inequalities, polynomials, and coordinate graphing of linear equations. Students explore the four fundamental representations of relations between two variables: verbal, algebraic, graphical, and numerical. Linear relations serve as the primary example, but students also study quadratic and absolute value relations. Students are expected to master basic algebraic manipulation skills, including combining like terms, expanding products, and elementary factoring.

~~Note: Students enrolled in this course are required to participate in group activities.~~

~~Note: Mathematics 41A/41B and 41B together are equivalent to Mathematics 40~~ is a two course elementary algebra sequence that is intended for students who would benefit from slower-paced instruction. Mathematics 41B serves as a prerequisite course for Mathematics 70.

Recommendation:

Students examine the connections between the order of operations on real numbers and the elementary algebraic ideas of variables, expressions, and equations. Students explore the four fundamental representations of relations between two variables: verbal, algebraic, graphical, and numerical. Linear relations serve as the primary example, but students also study quadratic and absolute value relations. Students are expected to master basic algebraic manipulation skills, including combining like terms, expanding products, and elementary factoring.

Note: Mathematics 41A/41B is a two course elementary algebra sequence that is intended for students who would benefit from slower-paced instruction. Mathematics 41B serves as a prerequisite course for Mathematics 70.

2. Mathematics 41B – Elementary Algebra, Part II

Current Status/Proposed Change

~~This~~ Students in this course ~~continues~~ explore the ~~study of introductory algebraic concepts of relation and includes the solutions and applications of systems of its four fundamental representations:~~ verbal, algebraic, graphical, and numerical. Students show mastery of more advanced algebraic manipulation skills, including extracting roots, completing the square, and more advanced factoring. Students examine and solve linear equations, factoring techniques, simplification of rational and radical expressions, and the solution of systems of linear equations, and quadratic equations, as well as reciprocal and square root equations.

~~Note: Students enrolled in this course are required to participate in group activities.~~

Note: ~~Mathematics 41A/41B and 41B together are equivalent to Mathematics 40~~ is a two course elementary algebra sequence that is intended for students who would benefit from slower-paced instruction. Mathematics 41B serves as a prerequisite course for Mathematics 70.

Recommendation:

Students in this course explore the concepts of relation and its four fundamental representations: verbal, algebraic, graphical, and numerical. Students show mastery of more advanced algebraic manipulation skills, including extracting roots, completing the square, and more advanced factoring. Students examine and solve linear equations, systems of linear equations, and quadratic equations, as well as reciprocal and square root equations.

Note: Mathematics 41A/41B is a two course elementary algebra sequence that is intended for students who would benefit from slower-paced instruction. Mathematics 41B serves as a prerequisite course for Mathematics 70.

CHANGES IN DESCRIPTIVE TITLE, CATALOG DESCRIPTION; COURSE REVIEW

Current Status/Proposed Change

1. Mathematics 150 – Elementary ~~Probability and Statistics with Probability~~
~~This~~ The focus of this course includes calculation and analysis of is the basic practice of statistics, including descriptive statistics, inferential statistics, and the role probability plays in statistical analysis. Students calculate and interpret statistical parameters with hand-held using graphing calculators and with statistical testing capabilities and statistical software, for personal computers. Topics as well as by hand. Major topics include methods of data collection and simulation; measures of central tendency, and variability, normal and binomial relative position; graphical summaries of data; linear regression and correlation; distributions, sets, sample space and Venn diagrams, including normal and binomial distributions; probability theory; confidence intervals, hypothesis testing, chi-square analysis, analysis of variance, linear regression and correlation, and non-parametric tests inferential statistical methods. Students 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.

Recommendation:

Mathematics 150 – Elementary Statistics with Probability

The focus of this course is the basic practice of statistics, including descriptive statistics, inferential statistics, and the role probability plays in statistical analysis. Students calculate and interpret statistical parameters using graphing calculators with statistical testing capabilities and 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 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.

NEW DISTANCE EDUCATION COURSE VERSIONS

1. Mathematics 41A – Elementary Algebra, Part I (Online)
2. Mathematics 41B – Elementary Algebra, Part II (Online)