### High School Diploma-Art

<table>
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<th>Title</th>
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<tbody>
<tr>
<td>Fine Arts/The Visual Arts</td>
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### High School Diploma - English

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<td>English Composition/Contemporary</td>
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### High School Diploma - Foreign Language

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### High School Diploma - Interdisciplinary Studies

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### Adult Literacy - Adult Basic Education

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### English as a Second Language (ESL) and Citizenship

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<td>VESL/Health Careers</td>
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<td>50-01-90</td>
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<td>ESL Multi-Level/Using Computers and the Internet/CBET</td>
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<td>ESL Multi-Level/Communication at School/CBET 1</td>
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<td>43-13-60</td>
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<td>Desktop Publishing/1</td>
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<td>Graphic Design: Digital Imaging</td>
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Vice-President, Board District 4

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#WEAREDACE
Note to registered recipients of the 2017-2018 Catalog of Authorized Adult Education and Career Technical Education Courses:

Catalogs and addenda are distributed to all Division Schools:

- Principals
- Assistant Principals
- Administrative Assistants
- Adult SIS Personnel

Additional copies of this catalog are available from the Curriculum and Instruction Unit.
COURSE NO. : 20-09-52

Title: FINE ARTS/THE VISUAL ARTS
PROGRAM: High School Diploma
DEPARTMENT: Adult Academic Instruction (Art)
CREDITS: 5       HOURS: 60       COURSE OF STUDY: Visual Arts

COURSE DESCRIPTION:
This competency-based course is designed to introduce the visual elements and principles of design as well as to provide knowledge of the major visual media in two- and three-dimensional art. Included are a historical overview of Western art through the ages, an exploration of careers in the visual arts, and criteria for making informed judgments about works of art. Students are introduced to the creative process through art making activities as well as encouraged to recognize and appreciate art and its expression in their communities.

PREREQUISITES:
1. A minimum of 9.0 reading level as measured on the TABE D 9/10 reading comprehension test
2. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO. : **23-09-71 (Formerly: 23-09-01)**

Title: **ENGLISH 1**

PROGRAM: Adult Literacy/High School Diploma

DEPARTMENT: Adult Secondary Education (English)

CREDITS: 5   HOURS: 60   COURSE OF STUDY: 1:2001 English Language Arts

**COURSE DESCRIPTION:**

This competency-based course is designed to develop reading comprehension, literary analysis, writing, and listening and speaking skills. Students thoroughly review the structure of the sentence and the paragraph. Building on this foundation, they proceed to compose autobiographical, persuasive, and expository essays. Throughout, writing, reading, speaking and listening skills are applied to the analysis of both literary and informational texts. The competencies in this course are aligned with the College and Career Readiness Standards for English Language Arts and the English Language Arts Content Standards for California Public Schools. This course has been approved to satisfy the "b" (English subject area of the UC/CSU “a-g” requirements for freshman admission.

**PREREQUISITES:**

1. A minimum reading level of 9.0 as measured by the TABE D reading comprehension test
2. Writing fluency at an English 1 placement level, determined by a student writing sample and evaluated by the receiving English instructor
3. Mastery of the competencies of Reading 3 (53-03-66)
4. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO. : 23-09-72 (Formerly: 23-09-02)

Title: ENGLISH 2

PROGRAM: Adult Literacy/High School Diploma  DEPARTMENT: Adult Secondary Education (English)

CREDITS: 5  HOURS: 60  COURSE OF STUDY: 1:2001 English Language Arts

COURSE DESCRIPTION:
This competency-based course is designed to develop reading comprehension, literary analysis, writing and listening and speaking skills. After reviewing the structure of the sentence and the paragraph, students explore the writing process, using a rubric to guide the composition and evaluation of the expository essay. Students read and respond to a variety of literary and informational texts and produce a varied portfolio: an essay of literary analysis, a reflective essay, business correspondence and process/technical writing. After studying and evaluating the rhetoric of persuasion, both in a text and in performance, students write and deliver an original persuasive speech. The competencies in this course are aligned with the English-Language Arts Content Standards for California Public Schools. This course has been approved to satisfy the “b” (English subject area of the UC/CSU “a-g” requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 2 placement level, determined by a student writing sample and evaluated by the receiving English instructor
3. Mastery of the competencies of English 1 (23-09-71) Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*

COURSE NO. : 23-10-73 (Formerly: 23-10-03)

Title: ENGLISH 3

PROGRAM: Adult Literacy/High School Diploma  DEPARTMENT: Adult Secondary Instruction (English)

CREDITS: 5  HOURS: 60  COURSE OF STUDY: 1:2001 English Language Arts

COURSE DESCRIPTION:
This competency-based course is designed to develop reading comprehension, literary analysis, writing, listening and speaking skills. After reviewing the writing process and persuasive rhetoric, students grow in their ability to use a rubric to guide the composition and evaluation of the persuasive essay. Students discuss, analyze and interpret poetry, the short story, technical writing, and the screenplay; they produce a varied writing portfolio: a persuasive essay, a descriptive essay, an analysis of conflict and character in the short story, an autobiographical essay, an original poem, a career research report, and a film review. The competencies in this course are aligned with the English-Language Arts Content Standards for California Public Schools. This course has been approved to satisfy the “b” (English subject area of the UC/CSU “a-g” requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 3 placement level, determined by a student writing sample and evaluated by the receiving English instructor
3. Mastery of the competencies of English 2 (23-09-72)
4. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO. : 23-10-74 (Formerly: 23-10-04)

Title: ENGLISH 4

PROGRAM: Adult Literacy/High School Diploma  DEPARTMENT: Adult Secondary Instruction (English)

CREDITS: 5  HOURS: 60  COURSE OF STUDY: 1:2001 English Language Arts

COURSE DESCRIPTION:
This competency-based course is designed to develop reading comprehension, literary analysis, writing, and listening and speaking skills. A diagnostic test of writing skills allows for a thorough review of sentence and paragraph structure, usage, and punctuation. Students discuss, analyze, and interpret the novel, drama, poetry, the short story, news articles and technical writing. After reviewing the writing process and the use of a rubric for essay composition and evaluation, students build a varied portfolio of writing: a persuasive essay, a character sketch, a problem-solution essay, a comparison/contrast essay, interpretations of drama and a novel, an evaluative essay and an original work of fiction. The competencies in this course are aligned with the English-Language Arts Content Standards for California Public Schools. This course has been approved to satisfy the "b" (English subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 4 placement level, determined by a student writing sample and evaluated by the receiving English instructor
3. Mastery of the competencies of English 3 (23-10-73)
4. Recommendation of an instructor and/or a counselor

After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO. : 23-11-75

Title: ENGLISH COMPOSITION/CONTEMPORARY

PROGRAM: Adult Literacy/High School Diploma  DEPARTMENT: Adult Secondary Education (English)

CREDITS: 5  HOURS: 60  COURSE OF STUDY: 1: 2001 English Language Arts

COURSE DESCRIPTION:
This competency-based course is designed to develop reading comprehension, literary analysis, writing, and listening and speaking skills. A particular emphasis on academic, workplace, and reflective/autobiographical composition is integrated with a focus on significant works of American literature. A diagnostic test of editing and proofreading skills facilitates a targeted review of punctuation, usage, and sentence structure. Students discuss, analyze and interpret the short story, poetry, drama, the novel, and works of non-fiction. The Internet is employed as a research tool for enhancing reading and writing tasks. Students review the writing process and fundamentals of composition: the topic sentence, paragraph structure, the thesis statement, and the use of a rubric. Essay form is reviewed through the discussion and analysis of exemplary writing, and students develop a portfolio of depth and variety: a reflective essay, an essay of definition, descriptive and narrative compositions, an essay of literary analysis, a letter of application, and a script for a multimedia presentation. The competencies in this course are aligned with the English-Language Arts Content Standards for California Public Schools. This course has been approved to satisfy the "b" (English subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 4 placement level, determined by a student writing sample and evaluated by the receiving English instructor
3. Mastery of the competencies of English 4 (23-10-74)
4. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

**COURSE NO. : 23-11-76**

**Title:** LITERATURE/AMERICAN

**PROGRAM:** Adult Literacy/High School Diploma  
**DEPARTMENT:** Adult Secondary Education (English)

**CREDITS:** 5  
**HOURS:** 60  
**COURSE OF STUDY:** 1:2001 English Language Arts

**COURSE DESCRIPTION:**

This competency-based course is designed to provide a balanced language arts experience centered on recurrent themes and genres in United States literature from earliest times to the present, reflecting on the diversity of American life. The main emphasis of this course will be analyzing works of fiction and nonfiction for the recognition of theme, symbolism, tone and historical significance. Incorporated into this course will be vocabulary enrichment and listening and speaking skills, as well as a variety of writing activities including narrative, expository, persuasive, informational and descriptive writing that demonstrates research, organization and drafting strategies. The competencies in this course are aligned with the English-Language Arts Content Standards for California Public Schools. This course has been approved to satisfy the “b” (English subject area of the UC/CSU “a-g”) requirements for freshman admission.

**PREREQUISITES:**

1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 4 placement level, determined by a student writing sample and evaluated by the receiving English instructor
3. Mastery of the competencies of English 4 (23-10-74)
4. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

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**COURSE NO. : 23-12-77**

**Title:** ENGLISH COMPOSITION/EXPOSITORY

**PROGRAM:** Adult Literacy/High School Diploma  
**DEPARTMENT:** Adult Secondary Education (English)

**CREDITS:** 5  
**HOURS:** 60  
**COURSE OF STUDY:** 1:2001 English Language Arts

**COURSE DESCRIPTION:**

This competency-based course is designed to develop reading comprehension, literary analysis, writing, and listening and speaking skills. Students review and enrich their understanding of fundamentals of composition: prewriting, outlining, research tools, thesis statement, essay form, writing rubric, proofreading, editing, and revising. Students read and interpret an array of fiction and nonfiction: critical, reflective, and technical essays, the novel, drama, poetry, and the short story. Effective composition skills are fostered through the analysis of exemplary writing and the development of a writing portfolio. The writing portfolio includes a persuasive essay, a narrative, an essay of comparison, a process essay, literary analyses of poetry and the novel, creative writing, an historical investigation report, and a resume. The competencies in this course are aligned with English-Language Arts Content Standards for California Public Schools. This course has been approved to satisfy the "b" (English subject area of the UC/CSU “a-g”) requirements for freshman admission.

**PREREQUISITES:**

1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 4 placement level, determined by a student writing sample and evaluated by the receiving English instructor
3. Mastery of the competencies of English 4 (23-10-74)
4. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO.: **23-12-78**

Title: **LITERATURE/MODERN**

PROGRAM: Adult Literacy/High School Diploma

DEPARTMENT: Adult Secondary Education (English)

CREDITS: 5  

HOURS: 60  

COURSE OF STUDY: 1:2001 English Language Arts

**COURSE DESCRIPTION:**

This competency-based course is designed to provide a balanced language arts experience centered on recurrent themes and genres in modern literature. The main emphasis of this course will be analyzing and interpreting works of fiction, nonfiction, poetry and drama for the recognition of theme, symbolism, tone and historical connection. Incorporated into this course will be vocabulary enrichment and listening and speaking skills, as well as a variety of writing activities including narrative and expository essays, with a focus on essays in response to literature that demonstrate research, organization and drafting strategies. The competencies in this course are aligned with the English-Language Arts Content Standards for California Public Schools. This course has been approved to satisfy the “b” (English subject area of the UC/CSU “a-g” requirements for freshman admission.

**PREREQUISITES:**

1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 4 placement level, determined by a student writing sample and evaluated by the receiving English instructor
3. Mastery of the competencies of English 4 (23-10-74)
4. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO. : 25-60-67
Title: FOREIGN LANGUAGE/Spanish 1A (Former Title: Foreign Language/Spanish 1)
PROGRAM: Adult Literacy/High School Diploma     DEPARTMENT: Adult Academic Instruction (Foreign Languages)
CREDITS: 5       HOURS: 60      COURSE OF STUDY: 1:2006 Foreign Language/American Sign Language

COURSE DESCRIPTION:
This competency-based course emphasizes the receptive communication skills of listening and reading comprehension and the productive language skills of speaking and writing. It emphasizes communication in the Spanish language and provides students with an insight into the structure, vocabulary, and history of the language. It also helps students compare and understand the Hispanic cultures and subcultures. This course has been approved to satisfy the "e" (LOTE- Language Other Than English) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
None

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO. : 25-60-68
Title: FOREIGN LANGUAGE/Spanish 1B (Former Title: Foreign Language/Spanish 2)
PROGRAM: Adult Literacy/High School Diploma     DEPARTMENT: Adult Academic Instruction (Foreign Languages)
CREDITS: 5       HOURS: 60      COURSE OF STUDY: 1:2006 Foreign Language/American Sign Language

COURSE DESCRIPTION:
This competency-based course emphasizes the receptive communication skills of listening and reading comprehension and the productive language skills of speaking and writing. It emphasizes communication in the foreign language and provides students with an insight into the structure, vocabulary, and history of the language. It also assists students in comparing and understanding the Hispanic cultures and subcultures. This course has been approved to satisfy the "e" (LOTE- Language Other Than English) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
Foreign Language/Spanish 1A (25-60-67) or passing of Spanish 1 final exam

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
Course No.: 25-60-79

Title: FOREIGN LANGUAGE/WORK-SITE SPANISH (Former title: Foreign Language/Workplace Spanish)

Program: Adult Literacy/High School Diploma

Credits: 2.5   Hours: 40   Course of Study: 1:2006 Foreign Language/American Sign Language

Course Description:
This competency-based course is designed to prepare school-site employees to function on a basic communications level in Spanish. It is especially intended for those working in, or preparing for clerical positions where communication with Spanish-speaking parents and or students is necessary.

Prerequisites:
None

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
30 High School Diploma - Interdisciplinary Studies

COURSE NO. : 30-50-70
Title: INDIVIDUALIZED INSTRUCTION LAB
DEPARTMENT: Adult Academic Instruction (Interdisciplinary Studies)

COURSE DESCRIPTION:
High school diploma courses are offered through individualized instruction in Learning Centers where the teacher arranges different study programs to meet the individual needs of different learners. Offerings at different schools and centers vary.

PREREQUISITES:
A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test

NOTES:
There is no single course outline used for individualized instruction. Various subjects are offered, each with its own course number. The 30-50-70 number is used only on the "Greenies" of teachers working in these situations.

COURSE NO. : 30-50-74
Title: ADULT SECONDARY EDUCATION/EDUCATION AND CAREER PLANNING
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 0* HOURS: 12 COURSE OF STUDY: High School Diploma

COURSE DESCRIPTION:
This competency-based course is designed to assist Adult Secondary Education students in creating a personal education and career plan. Instructional areas include Personal Information, School Information, School Environment, Curriculum, Program Transitions, Learner Goal-Setting and Learner Persistence, Study Skills and Classroom Environment, Time Management, HSE Readiness and Graduation Requirements.

PREREQUISITES:
None

*This is a non-credit course and may be repeated to learn specific competencies.
### 30-50-75
**Title:** HIGH SCHOOL EQUIVALENCY TEST PREPARATION/TEST-TAKING STRATEGIES  
**PROGRAM:** Adult Literacy/High School Diploma  
**CREDITS:** 0  
**HOURS:** 60  
**COURSE OF STUDY:** High School Diploma

**COURSE DESCRIPTION:**
This competency-based course covers the key concepts of study techniques, strategies in test-taking, visual processing, higher order thinking, and calculator skills as they relate to High School Equivalency Test preparation in the five basic subject areas of language arts, social studies, science, literature and mathematics. This course focuses on test-taking strategies and skills rather than subject content.

**PREREQUISITES:**
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test  
2. Writing fluency at the English 4 (23-01-74) placement level, determined by a student writing sample and evaluated by receiving instructor.  
3. Recommendation of an instructor and/or counselor  
4. Successful completion of Math 1, 2, 3 and Algebra 1A  

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*

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### 30-50-77
**Title:** HIGH SCHOOL EQUIVALENCY TEST PREPARATION  
**PROGRAM:** Adult Literacy/High School Diploma  
**DEPARTMENT:** Adult Academic Instruction  
**CREDITS:** 0  
**HOURS:** 300  
**COURSE OF STUDY:** High School Diploma

**COURSE DESCRIPTION:**
This competency-based course is comprised of a review of the key concepts in the high school curriculum covering the five basic subject areas of language arts and writing, social studies, science, literature, and mathematics.

**PREREQUISITES:**
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test  
2. A minimum grade level equivalency level of 9.0 as measured by the TABE 9/10M or 9/10A mathematics complete battery test  
3. Writing fluency at an English 3 (21-10-73) placement level, determined by a student writing sample and evaluated by the receiving English instructor  
4. Recommendation of an instructor and/or a counselor  

**NOTES:**
The number 30-50-94 is used for reporting hours students generate outside the classroom through the Distance Learning Program.  
**PREREQUISITES:**
*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO. : 31-01-61
Title: INTEGRATED MATHEMATICS/1
PROGRAM: Adult Literacy/High School Diploma DEPARTMENT: Adult Academic Instruction (Mathematics)
CREDITS: 5 HOURS: 60 APPORTIONMENT NO.: 02.021.112

COURSE DESCRIPTION:
This competency-based course focuses on solving mathematical problems in life situations using mental arithmetic, estimation, calculators, and paper and pencil. Included are concepts, operations, and problem solving skills involving whole numbers, decimals, fractions, percents, proportions, probability, number sentences, measurement, perimeter, circumference, area, volume, and graphs.

PREREQUISITES:
A minimum reading level of 7.5 as measured by the TABE D 9/10 reading comprehension test
Competency in Math Review concepts as demonstrated by pretests and course completion
Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO. : 31-01-62
Title: INTEGRATED MATHEMATICS/2
PROGRAM: Adult Literacy/High School Diploma DEPARTMENT: Adult Academic Instruction (Mathematics)
CREDITS: 5 HOURS: 60 APPORTIONMENT NO.: 02.021.112

COURSE DESCRIPTION:
This competency-based course extends problem solving skills to life situations involving whole numbers, decimals, fractions, proportions, percents, probabilities, algebra, geometry, graphs, schedules, and charts. Included are concepts of algebraic expressions, variables, equations, and patterns; geometric concepts, lines, angles, polygons, circles, and patterns; and analysis of graphs, schedules, and charts.

PREREQUISITES:
1. A minimum reading level of 7.5 as measured by the TABE D 9/10 reading comprehension test
2. Competency in Integrated Mathematics/1 (31-01-61) concepts as demonstrated by pretests or course completion

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
**COURSE NO.: 31-02-70**

**Title:** ALGEBRA 1/A  
**PROGRAM:** Adult Literacy/High School Diploma  
**DEPARTMENT:** Adult Academic Instruction (Mathematics)  
**CREDITS:** 5  
**HOURS:** 90  
**COURSE OF STUDY:** 1:2002 Mathematics

**COURSE DESCRIPTION:**
This competency-based course introduces the following concepts and skills in Algebra: expressions, equations, inequalities, formulas, functions, systems of equations. The competencies in this course align with the Algebra 1 Standards for California Public Schools. This course has been approved to satisfy the “c” (mathematics) subject area of the UC/CSU: “a-g” requirements for freshman admission.

**PREREQUISITES:**
1. A grade equivalency (GE) of 9.0 or higher on the TABE 9M Math Complete Battery at the time of enrollment. Students who score below 9.0 are referred to the ABE Math program. (See Math 1, 2, 3 course outlines for placement.)
   OR
   Completion of Math 3 (90% or higher on all assessments), and passage of the TABE 9A Math Complete Battery with a grade equivalency of 9.0 or higher
2. A minimum reading level of 9.0 as measured by the TABE D 9/10 Reading Complete Battery is recommended.

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*

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**COURSE NO.: 31-02-71**

**Title:** ALGEBRA 1/B  
**PROGRAM:** Adult Literacy/High School Diploma  
**DEPARTMENT:** Adult Academic Instruction (Mathematics)  
**CREDITS:** 5  
**HOURS:** 90  
**COURSE OF STUDY:** 1:2002 Mathematics

**COURSE DESCRIPTION:**
This competency-based course introduces the following concepts and skills in Algebra: exponents and exponential functions, polynomials and factoring, quadratic functions and equations, radical expressions and equations, rational expressions, data analysis and probability. The competencies in this course align with the Algebra 1 Common Core Standards for California Public Schools. This course has been approved to satisfy the “c” (mathematics) subject area of the UC/CSU: “a-g” requirements for freshman admission.

**PREREQUISITES:**
1. A grade equivalency (GE) of 9.0 or higher on the TABE 9M Math Complete Battery at the time of enrollment. Students who score below 9.0 are referred to the ABE Math program. (See Math 1, 2, 3 course outlines for placement)
2. Completion of Algebra 1/A
3. A minimum reading level of 9.0 as measured by the TABE D 9/10 Reading Complete Battery is recommended.

**NOTES:**
Concurrently enrolled high school students should meet the same requirements as adult students.

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO.: **31-03-71**

Title: GEOMETRY/1A  
PROGRAM: Adult Literacy/High School Diploma  
DEPARTMENT: Adult Academic Instruction (Mathematics)  
CREDITS: 5  
HOURS: 60  
COURSE OF STUDY: 1:2002 Mathematics

**COURSE DESCRIPTION:**  
This competency-based course introduces the following Geometry concepts and applications: reasoning and proofs, parallel and perpendicular lines, congruent and similar triangles and quadrilaterals. The competencies in this course are aligned with the Geometry Content Standards for California Public Schools. This course has been approved to satisfy the "c" (mathematics) subject area of the UC/CSU "a-g" requirements for freshman admission.

**PREREQUISITES:**  
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test  
2. Successful completion of (31-02-70) Algebra 1/A and (31-02-71) Algebra 1/B  
3. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*

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COURSE NO.: **31-03-72**

Title: GEOMETRY/1B  
PROGRAM: Adult Literacy/High School Diploma  
DEPARTMENT: Adult Academic Instruction (Mathematics)  
CREDITS: 5  
HOURS: 60  
COURSE OF STUDY: 1:2002 Mathematics

**COURSE DESCRIPTION:**  
This competency-based course introduces the following Geometry concepts and applications: area, surface area and volume, relationships within triangles, the Pythagorean Theorem, right angle trigonometry, and circles and transformations. The competencies in this course are aligned with the Geometry Content Standards for California Public Schools. This course has been approved to satisfy the "c" (mathematics) subject area of the UC/CSU "a-g" requirements for freshman admission.

**PREREQUISITES:**  
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test  
2. Successful completion of (31-03-71) Geometry/1A  
3. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO.: 36-05-74
Title: HEALTH
PROGRAM: Adult Literacy/High School Diploma       DEPARTMENT: Adult Academic Instruction (Science and Health)
CREDITS: 5       HOURS: 90
APPORTIONMENT NO.: 02.022.113

COURSE DESCRIPTION:
This competency-based course is designed to prepare students to assume responsibility for maintaining and improving their own health and the health of their families. In this course, students will demonstrate the ability to use the eight overarching content standards of learning essential health concepts, analyzing health influences, accessing valid health information, demonstrating interpersonal communication, decision making, goal setting, health-enhancing behaviors and health promotion. These overarching standards will be applied in the six California Health content areas of a) Alcohol, Tobacco and Other Drugs, b) Nutrition and Physical Activity, c) Growth, Development and Sexual Health, d) Mental, Emotional and Social Health, and f) Injury Prevention and Safety. The competencies in this course are aligned with the Health Content Standards for California Public Schools.

PREREQUISITES:
1. A minimum reading level of 9.0 or higher as measured by the TABE 9D reading comprehension test
2. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO.: 36-09-51
Title: GENERAL SCIENCE/INTEGRATED 1
PROGRAM: Adult Literacy/High School Diploma       DEPARTMENT: Adult Secondary Instruction (Science and Health)
CREDITS: 5       HOURS: 60       COURSE OF STUDY: 1:2003 Science

COURSE DESCRIPTION:
This competency-based course provides students with an introduction to the following scientific concepts and applications: scientific method, stability of ecosystems and population dynamics, evolution, genetics and inheritance, atoms, molecules, elements and bonding, chemical bonding reactions, acids and bases, and kinetic molecular theory and thermodynamics. This course will give students an opportunity to develop skills using scientific equipment to collect, store, and analyze data. This course has been approved to satisfy the "g" (elective) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Successful completion of Algebra 1/A (31-02-70)
3. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE DESCRIPTION:
This competency-based course provides students with an introduction to the following scientific concepts and applications: scientific method, cell biology, physiology and ecology. This course will give students an opportunity to develop skills using scientific equipment to collect, store, and analyze data. The competencies in this course are aligned with the Science Content Standards for California Public Schools. This course has been approved to satisfy the "g" (elective) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Successful completion of Algebra 1/A (31-02-70) and General Science/Integrated 2 (36-09-51)
3. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE DESCRIPTION:
This competency-based course provides students with an introduction to the following scientific concepts and applications: scientific method, cell biology, physiology and ecology. This course will give students an opportunity to develop skills using scientific equipment to collect, store, and analyze data. The competencies in this course are aligned with the Science Content Standards for California Public Schools. This course has been approved to satisfy the "d" (laboratory science) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Successful completion of Algebra 1/A (31-02-70)
3. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO. : **36-09-72**

**Title:** BIOLOGY/2

PROGRAM: Adult Literacy/High School Diploma     DEPARTMENT: Adult Secondary Instruction (Science and Health)

CREDITS: 5     HOURS: 75     COURSE OF STUDY: 1.2034 Biological Science

**COURSE DESCRIPTION:**

This competency-based course provides students with an introduction to the following scientific concepts and applications: genetics and evolution. This course will give students an opportunity to develop skills using scientific equipment to collect, store and analyze data. The competencies in this course are aligned with the Science Content Standards for California Public Schools. This course has been approved to satisfy the “d” (laboratory science) subject area of the UC/CSU “a-g” requirements for freshman admission.

**PREREQUISITES:**

1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Successful completion of Algebra 1/A (31-02-70)
3. Concurrently enrolled in, or completed Algebra 1/B (31-02-71)
4. Completion of Biology/1 (36-09-71)
5. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*

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COURSE NO. : **36-09-73**

**Title:** BIOLOGY/1/LIFE SCIENCE

PROGRAM: Adult Literacy/High School Diploma     DEPARTMENT: Adult Secondary Instruction (Science and Health)

CREDITS: 5     HOURS: 60     COURSE OF STUDY: 1.2034 Biological Science

**COURSE DESCRIPTION:**

This competency-based course provides students with an introduction to the following scientific concepts and applications: scientific method, cell biology, physiology and ecology. This course will give students an opportunity to develop skills using scientific equipment to collect, store and analyze data. The competencies in this course are aligned with the Science Content Standards for California Public Schools.

**PREREQUISITES:**

1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Successful completion of Algebra 1/A (31-02-70)
3. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO.: 36-09-72
Title: BIOLOGY/2
PROGRAM: Adult Literacy/High School Diploma
DEPARTMENT: Adult Secondary Instruction (Science and Health)
CREDITS: 5    HOURS: 75
COURSE OF STUDY: 1.2034 Biological Science

COURSE DESCRIPTION:
This competency-based course provides students with an introduction to the following scientific concepts and applications: genetics and evolution. This course will give students an opportunity to develop skills using scientific equipment to collect, store and analyze data. The competencies in this course are aligned with the Science Content Standards for California Public Schools. This course has been approved to satisfy the "d" (laboratory science) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. Completion of Biology/1/Life Science (36-09-73)
2. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
3. Successful completion of Algebra 1/A (31-02-70)
4. Recommendation of an instructor and/or a counselor

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.

REVISED: July/2006
COURSE NO.: 36-09-73
Title: BIOLOGY/1/LIFE SCIENCE
PROGRAM: Adult Literacy/High School Diploma
DEPARTMENT: Adult Secondary Instruction (Science and Health)
CREDITS: 5    HOURS: 60
COURSE OF STUDY: 1.2034 Biological Science

COURSE DESCRIPTION:
This competency-based course provides students with an introduction to the following scientific concepts and applications: scientific method, cell biology, physiology and ecology. This course will give students an opportunity to develop skills using scientific equipment to collect, store and analyze data. The competencies in this course are aligned with the Science Content Standards for California Public Schools.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Successful completion of Algebra 1/A (31-02-70)
3. Recommendation of an instructor and/or a counselor

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.

REVISED: July/2006
COURSE NO.: 36-10-53
Title: GENERAL SCIENCE/INTEGRATED 3
PROGRAM: Adult Literacy/High School Diploma
DEPARTMENT: Adult Secondary Instruction (Science and Health)
CREDITS: 5    HOURS: 60
COURSE OF STUDY: 1:2003 Science

COURSE DESCRIPTION:
This competency-based course provides students with an introduction to the following scientific concepts and applications: scientific method, organic chemistry and biochemistry, cell structure and function, cell energy, genetics and molecular biology, conservation of matter and stoichiometry, and solutions. This course will give students an opportunity to develop skills using scientific equipment to collect, store, and analyze data. The competencies in this course are aligned with the Science Content Standards for California Public Schools. This course has been approved to satisfy the "g" (elective) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Successful completion of Algebra 1/A (31-02-70)
3. Recommendation of an instructor and/or counselor

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO. : 36-10-54

Title: **GENERAL SCIENCE/INTEGRATED 4**

PROGRAM: Adult Literacy/High School Diploma  DEPARTMENT: Adult Secondary Instruction (Science and Health)

CREDITS: 5  HOURS: 60  COURSE OF STUDY: 1:2003 Science

**COURSE DESCRIPTION:**

This competency–based course provides students with an introduction to the following scientific concepts and applications: scientific method, physiology, linear and circular motion, forces, and gravity, conservation of energy and momentum, light and optics, Earth’s place in the universe, and solar radiation and structure and composition of the atmosphere. This course will give students an opportunity to develop skills using scientific equipment to collect, store, and analyze data. This course has been approved to satisfy the “g” (elective) subject area of the UC/CSU “a-g” requirements for freshman admission.

**PREREQUISITES:**

1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Successful completion of (31-02-70) Algebra 1/A and (36-10-53) General Science/Integrated 3
3. Recommendation of an instructor and/or counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO. : 37-01-70
Title: U. S. HISTORY/1
PROGRAM: Adult Literacy/High School Diploma
DEPARTMENT: Adult Academic Instruction (Social Sciences)
CREDITS: 5  HOURS: 60  COURSE OF STUDY: 1:2004 Social Studies/Social Science

COURSE DESCRIPTION:
This course focuses on major turning points in American history in the twentieth century. It begins with a foundational review of U.S. history: the nation's beginnings, the Civil War and Reconstruction, westward expansion, the Second Industrial Revolution, the Progressive Era and entry into World War I. The course then takes a structured chronological and thematic approach to an in-depth study of the United States in the first half of the twentieth century. Topics covered include minority rights and majority power, the movement towards equal rights for women and minorities, the emergence of a modern corporate economy, the Great Depression and the New Deal, and events leading to U.S. involvement in World War II. The competencies in this course are aligned with the History-Social Science Content Standards for California Public Schools. This course has been approved to satisfy the "a" (history-social science) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 10.0 as measured by the TABE D 9/10 reading comprehension test
2. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO. : 37-01-71
Title: U. S. HISTORY/2
PROGRAM: Adult Literacy/High School Diploma
DEPARTMENT: Adult Academic Instruction (Social Sciences)
CREDITS: 5  HOURS: 60  COURSE OF STUDY: 1:2004 Social Studies/Social Science

COURSE DESCRIPTION:
This course focuses on major turning points in American history in the twentieth century. It takes a structured chronological and thematic approach, beginning with victory in World War II and the post-war world in 1945. Topics covered include the expanding role of the federal government and courts, the maturation of a modern corporate economy, the impact of technology on society and culture, the movement toward equal rights for minorities and women, and the role of the United States as a major world power. The competencies in this course are aligned with the History-Social Science Content Standards for California Public Schools. This course has been approved to satisfy the "a" (history-social science) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 10.0 as measured by the TABE D 9/10 reading comprehension test
2. Completion of U.S. History/1 (37-01-70)
3. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: 37-02-71
Title: WORLD HISTORY/1
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5 HOURS: 60 COURSE OF STUDY: High School Diploma

COURSE: 1:2002 Mathematics

COURSE DESCRIPTION:
This competency-based course begins with a brief look at the dawn of civilization, followed by a study of the early societies of the Near East and Africa and the classical civilizations of India, China, Greece, and Rome. Students then undertake a concurrent geographic and chronological examination of social, cultural, and technological change from 500 A.D. to 1914 in both the Western and non-Western world, including a comparative study of Europe and Japan during the High Middle Ages and the influence of the European Renaissance, Reformation, and Scientific Revolution in our modern world. The course then focuses on a consideration of the impact of Enlightenment ideas on the rise of democratic ideals and explores the rise of nationalism into this century. The course seeks to foster and develop the skills of written expression, interpretation of graphic materials (especially the use and interpretation of maps), and critical thinking. The competencies in this course are aligned with the History-Social Science Content Standards for California Public Schools. This course has been approved to satisfy the “a” (history-social science) subject area of the UC/CSU “a-g” requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 1 placement level, determined by a student writing sample and evaluated by the receiving instructor
3. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO. : 37-02-72

Title: WORLD HISTORY/2
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5       HOURS: 60       COURSE OF STUDY: High School Diploma

COURSE: 1:2004 Social Studies/Social Science

COURSE DESCRIPTION:
This competency-based course examines major factors that have contributed to the shaping of the modern world, including the disparity of ideologies and beliefs, power struggles, and geopolitical differences that have resulted in national and global competition. The course begins with a consideration of the expansion of Western influence, industrialization focusing on England, and the effects of imperialism (using India as an example). The focus on this course is on events of the 20th century, with an emphasis on the interdependence of peoples and cultures of the world and the need for international cooperation and peace. This course seeks to foster and develop the skills of written expression, interpretation of graphic materials (especially the use and interpretation of maps), and critical thinking. This course has been approved to satisfy the “a” (history-social science) subject area of the UC/CSU “a-g” requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 1 placement level, determined by a student writing sample and evaluated by the receiving instructor
3. Successful completion of World History/1 (37-02-71)
4. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO. : 37-04-74

Title: PSYCHOLOGY
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5       HOURS: 60       COURSE OF STUDY: High School Diploma

COURSE: 1:2004 Social Studies/Social Science

COURSE DESCRIPTION:
This competency-based course provides an introduction to the field of psychology through an exploration of basic methodology and the biopsychological, cognitive, developmental, and sociocultural domains of the discipline. After a brief survey of the history of psychology and a review of research and statistical evaluation, students will investigate key areas of inquiry including: biological bases of behavior; sensation and perception; motivation and emotion; learning and memory; thinking and language; states of consciousness; lifespan development; personality and assessment; psychological disorders and their treatment; and social and cultural dimensions of behavior. This course has been approved to satisfy the “g” (college elective) subject area of the UC/CSU “a-g” requirements for freshman admission.

PREREQUISITES:
1. A minimum of 10.0 reading level as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 4 placement level, determined by a student writing sample and evaluated by the receiving instructor
3. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: 37-04-77

Title: LIFE SKILLS

PROGRAM: Adult Literacy/High School Diploma

CREDITS: 5  HOURS: 60  COURSE OF STUDY: High School Diploma

COURSE: 1:2004 Social Studies/Social Science

COURSE DESCRIPTION:
This competency-based course is designed to assist students in creating a personal education and career plan. Students will assess their personal skills and aptitudes, explore related career choices, and create a plan for entry-level work. Students will further outline a plan for ongoing training and education, gain a basic understanding of skills and attitudes needed to be successful in any job, and explore some of the factors that impact the workplace. Students leave the course with a career portfolio including a timeline with short-term and long-term goals.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 1 placement level, determined by a student writing sample and evaluated by the receiving instructor
3. Recommendation of an instructor and/or counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

REVISED: March/2010

COURSE NO.: 37-04-78

Title: PARENT EDUCATION

PROGRAM: Adult Literacy/High School Diploma

CREDITS: 5  HOURS: 60  COURSE OF STUDY: High School Diploma

COURSE DESCRIPTION:
This competency-based course is designed to assist students/parents in formulating guidelines for effective parenting that are compatible with their values and the physical, emotional and cognitive developmental needs of children. Emphasis will be placed on the prime role of the parent as teacher, nurturer, and the provider of guidance and structure to the child. Students will learn to recognize developmental tasks and needs of the maturing child and to strengthen their positive parenting skills.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 1 placement level, as determined by a student writing sample and evaluated by the receiving instructor
3. Recommendation of an instructor and/or counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: 37-06-70

Title: U. S. GOVERNMENT

PROGRAM: Adult Literacy/High School Diploma

CREDITS: 5  HOURS: 60  COURSE OF STUDY: High School Diploma

COURSE DESCRIPTION:
This competency-based course offers a comprehensive survey of the United States government including: development, basic principles, and the amendment processes of the Constitution; organization, responsibilities, and duties of the United States government; major purposes of government; basic constitutional problems faced by adults in a changing society; politics of the nation; practices of the federal government; the rights and responsibilities of adults in a democracy. The competencies in this course are aligned with the History-Social Science Content Standards for California Public Schools. This course has been approved to satisfy the "a" (history-social science) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 10.0 as measured by the TABE D 9/10 reading comprehension test
2. Writing fluency at an English 4 placement level, determined by a student writing sample and evaluated by the receiving instructor
3. Successful completion of U.S. History/1 (37-01-70) and U.S. History 2 (37-01-71) is recommended.
4. Recommendation of an instructor and/or a counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

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COURSE NO.: 37-09-71

Title: ECONOMICS

PROGRAM: Adult Literacy/High School Diploma  DEPARTMENT: Adult Academic Instruction (Social Sciences)

CREDITS: 5  HOURS: 60  COURSE OF STUDY: 1:2004 Social Studies/Social Science

COURSE DESCRIPTION:
This competency-based course provides an understanding of the basic principles of economics and how they are applied to macroeconomic systems. Topics include an analysis of the role of the consumer in those economics systems, the role of private and public sectors of the economy, market command, and mixed systems, the dynamic relationship between supply and demand, factors of production, and the role of government in maintaining market equilibrium. Government revenue and expenditures and taxation and provision of government services are examined. Finally, the interrelationship of international trade and associated benefits and problems of global economic systems are explored. The competencies in this course are aligned with the History-Social Science Content Standards for California Public Schools. This course has been approved to satisfy the "g" (elective) subject area of the UC/CSU "a-g" requirements for freshman admission.

PREREQUISITES:
1. A minimum reading level of 9.0 as measured by the TABE D 9/10 reading comprehension test
2. Completion of Integrated Mathematics/1 (31-01-61)
3. Recommendation of an instructor and/or counselor

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO. : 53-03-60
Title: ADULT BASIC EDUCATION/EDUCATION AND CAREER PLANNING
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 0*     HOURS: 12     COURSE OF STUDY: Adult Basic Education
COURSE: 1:1007 Employability and Life Skills
COURSE DESCRIPTION:
This competency-based course is designed to assist Adult Basic Education students in creating a personal education and career plan. Instructional areas include Personal Information, School Information, School Environment, Curriculum, Program Transitions, Learner Goal-Setting and Learner Persistence, Study Skills and Classroom Environment, and Time Management.

PREREQUISITES:
None

NOTES:
Completers should not be marked for this course.

*This is a non-credit course and may be repeated to learn specific competencies.

COURSE NO. : 53-03-64
Title: READING 1
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5     HOURS: 450     COURSE OF STUDY: Adult Basic Education
COURSE: 1:1001
COURSE DESCRIPTION:
This competency-based course provides teacher-directed instruction in basic reading skills for four grade levels — Levels 0 (non-reader), 1, 2, and 3.
• Phonemic awareness
• Oral fluency
• Decoding and word recognition
• Listening and oral skills
• Integrating reading and writing academic skills
• Community and workplace skills

Adults are provided with the basic reading skills that integrate the College and Career Readiness Standards (CCRS) for Listening, Speaking, Reading, and Writing: the Model Program Standards for Adult Basic Education; and the Comprehensive Adult Student Assessment (CASAS) Test competencies

PREREQUISITES:
English proficiency ("Students may be native-born English speakers or fluent non-native speakers of English")
COURSE NO.: 53-03-65

Title: READING 2

PROGRAM: Adult Literacy/High School Diploma

CREDITS: 5  HOURS: 300  COURSE OF STUDY: Adult Basic Education

COURSE: 1:1001 English Language Arts

COURSE DESCRIPTION:

Emphasis is placed on

- The four components of reading (alphabetics, fluency, vocabulary, comprehension);
- Listening and oral skills
- Integrating reading and writing
- Reference and study skills
- Community and workplace skills

Adults are provided with the basic reading skills that integrate the College and Career Readiness Standards (CCRS) for Listening, Speaking, Reading, and Writing; the Model Program Standards for Adult Basic Education; and the Comprehensive Adult Student Assessment System (CASAS) Test Competencies.

The ultimate goal of this course is to help adult students acquire the competencies needed to fulfill their roles as family members, community members, and workers.

PREREQUISITES:

English proficiency ("Students may be native-born English speakers or fluent non-native speakers of English")
Ability to read at a minimum 4.0 grade level

COURSE NO.: 53-03-66

Title: READING 3

PROGRAM: Adult Literacy/High School Diploma

CREDITS: 5  HOURS: 300  COURSE OF STUDY: Adult Basic Education

COURSE: 1:1001 English Language Arts

COURSE DESCRIPTION:

This competency-based teacher-directed course provides instruction in basic reading for two grade levels — Levels 7 and 8. Emphasis is placed on: the four components of reading (alphabetics, fluency, vocabulary, comprehension) writing listening and oral skills  academic and pre-High School Equivalency Exam skills community and workplace skills. Adults are provided with the basic reading skills that integrate the College and Career Readiness Standards (CCRS) for Listening, Speaking, Reading, and Writing; the Model Program Standards for Adult Basic Education; and the Comprehensive Adult Student Assessment System (CASAS) Test competencies.

The ultimate goal of this course is to help adult students acquire the competencies needed to fulfill their roles as family members, community members, and workers.

PREREQUISITES:

English proficiency ("Students may be native-born English speakers or fluent non-native speakers of English")
Ability to read at a minimum 7.0 grade level.
COURSE NO.: 53-03-75
Title: MATH 1
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5  HOURS: 180  COURSE OF STUDY: Adult Basic Education
COURSE: 1:1002 Mathematics
COURSE DESCRIPTION:
This competency-based course offers an introduction to the basic mathematics concepts, including: whole numbers, whole number addition and subtraction, whole number addition and subtraction application, decimal addition and subtraction, decimal addition and subtraction application, whole number multiplication, whole number division, whole number multiplication and division application, decimal multiplication and division, decimal multiplication and division application, fractions, fraction multiplication and division with application, and fraction addition and subtraction with application. The competencies are aligned with the Mathematics Content Standards for California Public Schools, Kindergarten through Seventh Grade, with an emphasis on the Number Sense strand. Included in this course are assignments for High School Equivalency Exam preparation.
PREREQUISITES:
Total grade level equivalency (GE) of 0-6.9 on the TABE 9/10 M complete battery math assessment.
NOTES:
To ensure success in ABE math, students should have attained an intermediate reading level of 5.0 or higher on the TABE 9/10 before enrolling. The 180 hours indicated for the completion of this course are based on a student entering at GE level 0 and having to complete all assignments. However, most students enter the math program with some math skills and may not need 180 hours to complete Math 1. This course includes assessments and other mechanisms for ongoing evaluation of students so that advancement and placement occur on a regular basis and students do not remain in the program for more time than needed. The completion time will differ for each student.
*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
### COURSE NO.: 53-03-76

**Title:** MATH 2  
**PROGRAM:** Adult Literacy/High School Diploma  
**CREDITS:** 5  
**HOURS:** 180  
**COURSE OF STUDY:** Adult Basic Education

**COURSE: 1:1002 Mathematics**  
**COURSE DESCRIPTION:**  
This competency-based course offers an introduction to the mathematics concepts including: whole number estimation of addition and subtraction/multiplication and division, decimal and fraction estimation, ratio and proportion, percents, percent application, percent estimation, probability, statistics and analyzing data, and measurement. The competencies are aligned with the Mathematics Content Standards for California Public Schools Kindergarten through Seventh Grade with an emphasis on the following strands: Number Sense, Statistics, Data Analysis and Probability, and Measurement. Included in this course are assignments for High School Equivalency Exam preparation.

**PREREQUISITES:**  
1. Completion of Math 1 (53-03-75), with a score of 90% or higher on each assessment or  
2. Total grade level equivalency (GE) of 7.0-8.9 on TABE 9/10 M complete battery math assessment.

**NOTES:**  
To ensure success in ABE math, students should have attained an intermediate reading level of 5.0 or higher on the TABE 9/10 before enrolling. The 180 hours indicated for the completion of this course are based on a student having to complete all assignments. This course includes assessments and other mechanisms for ongoing evaluation of students so that advancement and promotion occur on a regular basis and students do not remain in the program for more time than needed. The completion time will differ for each student.  

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*

### COURSE NO.: 53-03-77

**Title:** MATH 3  
**PROGRAM:** Adult Literacy/High School Diploma  
**CREDITS:** 5  
**HOURS:** 120  
**COURSE OF STUDY:** Adult Basic Education

**COURSE: 1:1002 Mathematics**  
**COURSE DESCRIPTION:**  
This competency-based course offers an introduction to the mathematics concepts including: points, lines, angles, polygons, exponents, square roots, Pythagorean theorem, perimeter, area, circumference, volume, integers, equations, inequalities, number lines and graphing. The competencies are aligned with the Mathematics Content Standards for California Public Schools Kindergarten through Seventh Grade with an emphasis on the following strands: Geometry and Measurement (Geometry) and Algebra and Functions. Included in this course are assignments for High School Equivalency Exam preparation.

**PREREQUISITES:**  
1. Completion of Math 2 (53-03-76), with a score of 90% or higher on each assessment.  
2. A minimum of 5.0 on the complete battery or survey on TABE 9/10 D Reading assessment is recommended.

**NOTES:**  
To ensure success in ABE math, students should have attained an intermediate reading level of 5.0 or higher on the TABE 9/10 before enrolling. The 120 hours indicated for the completion of this course are based on a student having to complete all assignments. This course includes assessments and other mechanisms for ongoing evaluation of students so that advancement and promotion occur on a regular basis and students do not remain in the program for more time than needed. The completion time will differ for each student.  

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
Title: BASIC LANGUAGE ARTS - BEGINNING
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5      HOURS: 1200    COURSE OF STUDY: Adult Basic Education
COURSE: 1:1001 English Language Arts

COURSE DESCRIPTION:
This competency-based course provides instruction in basic language arts for four grade levels -- Level 0 (readiness), 1, 2, and 3. Emphasis is placed on readiness skills, oral and listening skills, composition, mechanics, grammar and usage; writing applications integrated with life skills; critical thinking skills; and reference, location and study skills.

Adults are provided with the basic language skills that integrate the CCRS for listening, speaking, reading, and writing, English-Language Arts Content Standards for California Public Schools, Comprehensive Adult Student Assessment System (CASAS) competencies, and the Model Program Standards for Adult Basic Education. The ultimate goal is to help adult students acquire the competencies needed to fulfill their roles as family members, workers and community members.

The 1200 hours indicated for the completion of this course are based on a student entering as a nonreader and advancing to grade Level 3.9. However, most students enter the language program at various abilities and skill levels and may not need 1200 hours to complete this course outline. The completion time will differ for each student. This course outline also includes applications and mechanisms for ongoing evaluation of the students so that promotion and advancement occur on a regular basis, and the students do not remain in the program for more time than needed.

PREREQUISITES:
None

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

Title: BASIC LANGUAGE ARTS - INTERMEDIATE
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5      HOURS: 450    COURSE OF STUDY: Adult Basic Education
COURSE: 1:1001 English Language Arts

COURSE DESCRIPTION:
This competency-based course provides instruction in basic language arts for three grade levels -- Levels 4, 5 and 6. Emphasis is placed on listening and oral skills, composition, mechanics, grammar and usage; critical thinking skills; and reference and study skills.

Adults are provided with the basic language skills that integrate the CCRS for listening, speaking, reading, and writing, English-Language Arts Content Standards for California Public Schools, Comprehensive Adult Student Assessment System (CASAS) competencies, and the Model Program Standards for Adult Basic Education. The ultimate goal is to help adult students acquire the competencies needed to fulfill their roles as family members, workers and community members.

The 450 hours indicated for the completion of this course are based on a student entering at Level 4.0 and advancing to Level 6.9. However, students enter the language program at various abilities and skill levels and may not need 450 hours to complete this course outline. The completion time will differ for each student. This course outline also includes ongoing evaluation of the students, so that promotion and advancement occur on a regular basis, and the students do not remain in the program for more time than needed.

PREREQUISITES:
Ability to read at a minimum of 4.0 grade level

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: 53-03-83
Title: BASIC LANGUAGE ARTS - ADVANCED
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5       HOURS: 300       COURSE OF STUDY: Adult Basic Education

COURSE: 1:1001 English Language Arts

COURSE DESCRIPTION:
This competency-based course provides instruction in basic language arts for two grade levels — Levels 7 and 8. Emphasis is placed on listening and oral skills, composition, mechanics, grammar and usage; critical thinking skills; skills for content area writing, life and workplace skills; and reference and study skills.

Adults are provided with the basic language skills that integrate the CCRS for listening, speaking, reading, and writing, English-Language Content Standards for California Public Schools, Comprehensive Adult Student Assessment System (CASAS) competencies, and the Model Program Standards for Adult Basic Education. The ultimate goal is to help adult students acquire the competencies needed to fulfill their roles as family members, workers and community members.

The 300 hours indicated for the completion of this course are based on a student entering at Level 7.0 and advancing to Level 8.9. However, students enter the language program at various abilities and skill levels and may not need 300 hours to complete this course outline. The completion time will differ for each student. This course outline also includes ongoing evaluation of the students so that promotion and advancement occur on a regular basis, and the students do not remain in the program for more time than needed.

PREREQUISITES:
Ability to read at a minimum of 7.0 grade level

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO.: 53-04-50
Title: BASIC COMPUTER LITERACY (Former Title: Basic Computer Literacy/Internet Access)
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5       HOURS: 60       COURSE OF STUDY: Adult Basic Education

COURSE: 1:1006 Vocational ABE

COURSE DESCRIPTION:
This competency-based course outline offers instruction in the use of computers for personal use, office functions, educational purposes, Internet access; and provides instruction in basic computer skills with emphasis placed on

• understanding basic computer components;
• developing basic computer skills;
• developing basic word processing skills;
• using a database, spreadsheet and graphics;
• sending and receiving faxes and e-mail; accessing the Internet;
• purchasing a computer; and
• using educational and informational software.

PREREQUISITES:
Minimum reading comprehension level of 4.0 as measured by the TABE D 9/10

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: 53-04-51
Title: VABE/Math/Photovoltaics
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5  HOURS: 90  COURSE OF STUDY: Adult Basic Education
COURSE: 1:1002 Mathematics
COURSE DESCRIPTION:
This competency-based course offers an introduction to the mathematics competencies necessary to prepare a student for the Career Technical Education Photovoltaics course. The competencies are aligned with the Mathematics Content Standards for California Public Schools, Kindergarten through Seventh Grade with an emphasis on the following strands: Number Sense, Statistics, Data Analysis and Probability, and Measurement, Geometry and Algebra and Functions. Course content is selected to support photovoltaic training employment in the photovoltaic installation field.
PREREQUISITES:
A TABE 9M Complete Math Battery GE score of 4.0 or higher
NOTES:
To ensure success in this VABE math course, students should have attained an intermediate reading level of 5.0 or higher on the TABE 9/10 D before enrolling.
*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*

COURSE NO.: 53-04-52
Title: VABE/Math/Energy and Utilities
PROGRAM: Adult Literacy/High School Diploma
CREDITS: 5  HOURS: 90  COURSE OF STUDY: Adult Basic Education
COURSE: 1:1002 Mathematics
COURSE DESCRIPTION:
This competency-based course offers an introduction to the mathematics competencies necessary to prepare a student for Career Technical Education Energy and Utilities courses. The competencies are aligned with the Mathematics Content Standards for California Public Schools, Kindergarten through Seventh Grade with an emphasis on the following strands: Number Sense, Statistics, Data Analysis and Probability, and Measurement, Geometry and Algebra and Functions. Course content is selected to support training employment in the energy and utilities field.
PREREQUISITES:
A TABE 9M Complete Math Battery GE score of 4.0 or higher
NOTES:
To ensure success in this VABE math course, students should have attained an intermediate reading level of 5.0 or higher on the TABE 9/10 D before enrolling.
*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
English as a Second Language (ESL) and Citizenship Course Descriptions
COURSE NO.: 50-01-50

Title: ESL MULTIPLE-LEVEL/EDUCATION AND CAREER PLANNING

PROGRAM: English as a Second Language (ESL & Citizenship)

CREDITS: 0*  HOURS: 6  COURSE OF STUDY: English as a Second Language (ESL)

COURSE: 2:1050 ESL Multi-Level

COURSE DESCRIPTION:
This competency-based course is designed to develop language proficiency in the four skills of listening, speaking, reading and writing for limited-English-speaking adults at a multi-level ESL instructional level. Language skills are developed in the context of everyday life situations, with the goal of communicative competence. Instructional areas of instruction include Personal Information, School Information, School Environment, Curriculum, Program Transitions, Learner Goal-Setting and Learner Persistence, Study Skills and Classroom Environment, and Time Management. The content and instructional strategies of this course reflect the English-as-a-Second-Language Model Standards for Adult Education Programs.

PREREQUISITES:
None

Note:
Completers should not be marked for this course.

*This is a non-credit course and may be repeated to learn specific competencies.

COURSE NO.: 50-01-51*

Title: ESL BEGINNING LOW

PROGRAM: English as a Second Language (ESL & Citizenship)

CREDITS: 5  HOURS: 200  COURSE OF STUDY: English as a Second Language (ESL)

COURSE: 2:1020 ESL Beginning (Low-High)

COURSE DESCRIPTION:
This competency-based course is designed to develop communicative competence in listening, speaking, reading, writing and numeracy for the immediate needs of adult English learners at the beginning low level. A sequential grammatical structure base is integrated in the context of everyday life situations. The content and instructional strategies of this course reflect the English-as-a-Second-Language Model Standards for Adult Education Programs. This course outline contains content in the following areas relevant to Community-Based English Tutoring (CBET): The School Community, Curriculum and Standards, Parent/Teacher Communication, Home Learning Environment, and Tutoring Skills. It also contains activities that promote language learning and teach SCANS skills such as Decision Making, Problem Solving and Participating as a Member of a Team.

PREREQUISITES:
Completion of ESL Beginning Literacy or equivalent skills as measured by the Division placement test

Note:
*Additional course numbers should be assigned according to the chart below:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Title</th>
<th>Hours</th>
<th>Credits</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-01-51</td>
<td>ESL Beginning Low</td>
<td>200</td>
<td>5</td>
<td>Semester</td>
</tr>
<tr>
<td>50-01-82</td>
<td>ESL Beginning Low/a</td>
<td>100</td>
<td>2.5</td>
<td>Trimester</td>
</tr>
<tr>
<td>50-01-83</td>
<td>ESL Beginning Low/b</td>
<td>100</td>
<td>2.5</td>
<td>Trimester</td>
</tr>
<tr>
<td>50-01-91</td>
<td>ESL Beginning Low</td>
<td>200</td>
<td>5</td>
<td>Distance Learning</td>
</tr>
<tr>
<td>50-01-96</td>
<td>ESL Beginning Low</td>
<td>200</td>
<td>5</td>
<td>Distance Learning</td>
</tr>
</tbody>
</table>

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: **50-01-52**

Title: **ESL BEGINNING HIGH**

PROGRAM: English as a Second Language (ESL & Citizenship)

CREDITS: 5  HOURS: 200  COURSE OF STUDY: English as a Second Language (ESL)

**COURSE: 2:1020 ESL Beginning (Low-High)**

**COURSE DESCRIPTION:**

This competency-based course is designed to develop communicative competence in listening, speaking, reading, writing and numeracy for the immediate needs of adult English learners at the beginning high level. A sequential grammatical structure base is integrated in the context of everyday life situations. The content and instructional strategies of this course reflect the English-as-a-Second-Language Model Standards for Adult Education Programs. This course outline contains content in the following areas relevant to Community-Based English Tutoring (CBET): The School Community, Curriculum and Standards, Parent/Teacher Communication, Home Learning Environment, and Tutoring Skills. It also contains activities that promote language learning and teach SCANS skills such as Decision Making, Problem Solving and Participating as a Member of a Team.

**PREREQUISITES:**

Completion of ESL Beginning Low or equivalent skills as measured by the Division placement test or promotional exam

**Note:**

*Additional course numbers should be assigned according to the chart below:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Title</th>
<th>Hours</th>
<th>Credits</th>
<th>Use</th>
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</thead>
<tbody>
<tr>
<td>50-01-52</td>
<td>ESL Beginning High</td>
<td>200</td>
<td>5</td>
<td>Semester</td>
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<tr>
<td>50-01-84</td>
<td>ESL Beginning High/a</td>
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<td>2.5</td>
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<tr>
<td>50-01-85</td>
<td>ESLBeginning High/b</td>
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<td>50-01-92</td>
<td>ESL Beginning High</td>
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<td>5</td>
<td>Distance Learning</td>
</tr>
</tbody>
</table>

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
COURSE NO.: 50-01-53*

Title: ESL INTERMEDIATE LOW

PROGRAM: English as a Second Language (ESL & Citizenship)

CREDITS: 5  HOURS: 200  COURSE OF STUDY: English as a Second Language (ESL)

COURSE: 2:1030 ESL Intermediate (Low-High)

COURSE DESCRIPTION:

This competency-based course is designed to develop communicative competence in listening, speaking, reading, writing and numeracy for the immediate needs of adult English learners at the intermediate low level. A sequential grammatical structure base is integrated in the context of everyday life situations. The content and instructional strategies of this course reflect the English-as-a-Second-Language Model Standards for Adult Education Programs. This course outline contains content in the following areas relevant to Community-Based English Tutoring (CBET): The School Community, Curriculum and Standards, Parent/Teacher Communication, Home Learning Environment, and Tutoring Skills. It also contains SCANS activities that reinforce CBET goals such as Decision Making, Problem Solving and Reasoning.

PREREQUISITES:

Completion of ESL Beginning High or equivalent skills as measured by the Division placement test or promotional exam

Note:

*Additional course numbers should be assigned according to the chart below:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Title</th>
<th>Hours</th>
<th>Credits</th>
<th>Use</th>
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<tbody>
<tr>
<td>50-01-53</td>
<td>ESL Intermediate Low</td>
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<td>Semester</td>
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<td>50-01-86</td>
<td>ESL Intermediate Low/a</td>
<td>100</td>
<td>2.5</td>
<td>Trimester</td>
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<tr>
<td>50-01-87</td>
<td>ESL Intermediate Low/b</td>
<td>100</td>
<td>2.5</td>
<td>Trimester</td>
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<td>50-01-93</td>
<td>ESL Intermediate Low</td>
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<td>5</td>
<td>Distance Learning</td>
</tr>
</tbody>
</table>

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: **50-01-54***

Title: **ESL INTERMEDIATE HIGH/A**

Program: English as a Second Language (ESL & Citizenship)

Credits: 5  HOURS: 200  Course of Study: English as a Second Language (ESL)

Course: 2:1030 ESL Intermediate (Low-High)

Course Description:

This competency-based course is designed to develop communicative competence in listening, speaking, reading, writing, and numeracy for the immediate needs of adult English learners at the intermediate high/a level. A sequential grammatical structure base is integrated in the context of everyday life situations. The content and instructional strategies of this course reflect the English-as-a-Second-Language Model Standards for Adult Education Programs. This course outline contains content in the following areas relevant to Community-Based English Tutoring (CBET): The School Community, Curriculum and Standards, Parent/Teacher Communication, Home Learning Environment, and Tutoring Skills. It also contains SCANS activities that reinforce CBET goals such as Decision Making, Problem Solving and Reasoning.

Prerequisites:

Completion of ESL Intermediate Low or equivalent skills as measured by the Division placement test or promotional exam

Note:

The number 50-01-94 is used for reporting hours students generate outside the classroom through Distance Learning.

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.

---

COURSE NO.: **50-01-55***

Title: **ESL INTERMEDIATE HIGH/B**

Program: English as a Second Language (ESL & Citizenship)

Credits: 5  HOURS: 200  Course of Study: English as a Second Language (ESL)

Course: 2:1030 ESL Intermediate (Low-High)

Course Description:

This competency-based course is designed to develop communicative competence in listening, speaking, reading, writing, and numeracy for the immediate needs of adult English learners at the intermediate high/b level. A sequential grammatical structure base is integrated in the context of everyday life situations. The content and instructional strategies of this course reflect the English-as-a-Second-Language Model Standards for Adult Education Programs. This course outline contains content in the following areas relevant to Community-Based English Tutoring (CBET): The School Community, Curriculum and Standards, Parent/Teacher Communication, Home Learning Environment, and Tutoring Skills. It also contains SCANS activities that reinforce CBET goals such as Decision Making, Problem Solving and Reasoning.

Prerequisites:

Completion of ESL Intermediate High/A or equivalent skills as measured by the Division placement test or promotional exam

Note:

The number 50-01-95 is used for reporting hours students generate outside the classroom through Distance Learning.

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: 50-01-56

Title: ESL ADVANCED LOW

PROGRAM: English as a Second Language (ESL & Citizenship)

CREDITS: 5  HOURS: 200  COURSE OF STUDY: English as a Second Language (ESL)

COURSE: 2:1040 ESL Advanced (Low-High)

COURSE DESCRIPTION:

This competency-based course is designed to develop communicative competence in listening, speaking, reading, writing, and numeracy for the immediate needs of adult English learners at the advanced low level. A sequential grammatical structure base is integrated into academic and career preparation contexts. The content and instructional strategies of this course reflect the English-as-a-Second-Language Model Standards for Adult Education Programs. This course outline contains content in the following areas relevant to Community-Based English Tutoring (CBET): The School Community, Curriculum and Standards, Parent/Teacher Communication, Home Learning Environment, and Tutoring Skills. It also contains SCANS activities that reinforce CBET goals such as Decision Making, Problem Solving and Reasoning.

PREREQUISITES:

Completion of ESL Intermediate High/B or equivalent skills as measured by the Division placement test or promotional exam

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

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COURSE NO.: 50-01-58*

Title: ESL BEGINNING LITERACY

PROGRAM: English as a Second Language (ESL & Citizenship)

CREDITS: 5  HOURS: 200  COURSE OF STUDY: English as a Second Language (ESL)

COURSE: 2:1010 ESL Beginning Literacy

COURSE DESCRIPTION:

This competency-based course is designed to develop communicative competence in listening, speaking, reading, writing, and numeracy for the immediate needs of adult English learners at the beginning literacy level. A sequential grammatical structure base is integrated into the context of everyday life situations. The content and instructional strategies of this course reflect the English-as-a-Second-Language Model Standards for Adult Education Programs. This course outline contains content in the following areas relevant to Community-Based English Tutoring (CBET): The School Community, Curriculum and Standards, Parent/Teacher Communication, Home Learning Environment, and Tutoring Skills. It also contains SCANS activities that reinforce CBET goals such as Decision Making, Problem Solving and Reasoning.

PREREQUISITES:

None

Note:

Additional course numbers should be assigned according to the chart below:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Title</th>
<th>Hours</th>
<th>Credits</th>
<th>Use</th>
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</thead>
<tbody>
<tr>
<td>50-01-58</td>
<td>ESL Beginning Literacy</td>
<td>200</td>
<td>5</td>
<td>Semester</td>
</tr>
<tr>
<td>50-01-59</td>
<td>ESL Beginning Literacy/a</td>
<td>100</td>
<td>2.5</td>
<td>Trimester</td>
</tr>
<tr>
<td>50-01-60</td>
<td>ESL Beginning Literacy/b</td>
<td>100</td>
<td>2.5</td>
<td>Trimester</td>
</tr>
</tbody>
</table>

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: 50-01-61
Title: VESL/BEGINNING LOW-BEGINNING HIGH
PROGRAM: English as a Second Language (ESL & Citizenship)
CREDITS: 5  HOURS: 200  COURSE OF STUDY: English as a Second Language (ESL)
COURSE: 2:1060 ESL Vocational/Workplace
COURSE DESCRIPTION:
This competency-based course is designed to develop communicative competence in listening, speaking, reading and
writing in the context of occupational settings. It is a dual-level course and includes language skill proficiencies and
grammatical structures for the ESL Beginning Low and ESL Beginning High levels. The content and instructional strategies
of this course reflect the English-as-a-Second-Language Model Standards for Adult Education Programs. VESL competency
areas include on-the-job language common to many workplace settings, career planning and educational goals, SCANS
skills and competencies, and language skills for getting, keeping and succeeding on a job.
PREREQUISITES:
None
* After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO.: 50-01-62
Title: VESL/INDUSTRIAL AND TECHNOLOGY/AUTOMOTIVE SERVICE CAREERS
PROGRAM: English as a Second Language (ESL & Citizenship)
CREDITS: 5  HOURS: 200  COURSE OF STUDY: English as a Second Language (ESL)
COURSE: 2:1060 ESL Vocational/Workplace
COURSE DESCRIPTION:
This competency-based course is designed to develop language skills in the context of career preparation in the
automotive service field, including customer service skills. It is a multi-level Vocational ESL course and may be taken prior to
or concurrently with enrollment in automotive career training courses. VESL content includes automotive career pathways,
employability skills, occupation-specific terminology and communication skills, SCANS skills and listening, speaking,
reading and writing skills. Course content is selected to support automotive career training for ESL students and entry-level
employment in the automotive service field.
PREREQUISITES:
ESL Beginning High (50-01-52 or 50-01-92) or a score of 195 or higher on the CASAS test
* After a student has completed this course, he/she may not be allowed to re-enroll in the course.
50 | English as a Second Language (ESL) and Citizenship

COURSE NO.: **50-01-63**

Title: **VESL/BUSINESS/CUSTOMER SERVICE AND OFFICE OCCUPATIONS**

PROGRAM: English as a Second Language (ESL & Citizenship)

CREDITS: 5    HOURS: 200    COURSE OF STUDY: English as a Second Language (ESL)

COURSE: **2:1060 ESL Vocational/Workplace**

COURSE DESCRIPTION:
This competency-based course combines language skill development with language and learning skills for career preparation in the business field. It is a multi-level Vocational ESL course and may be taken prior to or concurrently with enrollment in business education classes. VESL content includes career pathways, occupation-specific terminology and communication skills, SCANS skills, language structures, and listening, speaking, reading and writing language skill proficiencies. Course content is selected to support business career training for ESL students and entry-level employment in customer service and office occupations.

PREREQUISITES:
ESL Beginning High (50-01-52 or 50-01-92) or a score of 195 or higher on the CASAS test

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO.: **50-01-64**

Title: **VESL/HEALTH CAREERS**

PROGRAM: English as a Second Language (ESL & Citizenship)

CREDITS: 5    HOURS: 200    COURSE OF STUDY: English as a Second Language (ESL)

COURSE: **2:1060 ESL Vocational/Workplace**

COURSE DESCRIPTION:
This competency-based course combines language skill development with language and learning skills for career preparation in the health care field. It is a multi-level Vocational ESL course and may be taken prior to or concurrently with enrollment in health careers classes. VESL content includes health career pathways, occupation-specific terminology and communication skills, SCANS skills, and listening, speaking, reading and writing language skill proficiencies. Course content is selected to support health career training for ESL students and entry-level employment in the health care field.

PREREQUISITES:
ESL Beginning High or a score of 195 or higher on the CASAS test

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.
### COURSE NO.: 50-01-70

**Title:** ESL/CITIZENSHIP  
**PROGRAM:** English as a Second Language (ESL & Citizenship)  
**CREDITS:** 0  
**HOURS:** 200  
**COURSE OF STUDY:** English as a Second Language  

**COURSE:** 2:2000 Citizenship Preparation  

**COURSE DESCRIPTION:**  
This competency-based course provides limited English proficient students with an understanding of the naturalization process and the listening, speaking, reading and writing skills it requires. Instruction includes the naturalization process; rights and responsibilities of U.S. citizenship; the N-400 application; the naturalization interview; American history, government and civics; and the English skills needed for becoming a naturalized citizen. The course outline integrates the competency-based components with grammatical structures and includes sample classroom activities.  

**PREREQUISITES:**  
None  

**Note:**  
This course has been revised to reflect changes to the new naturalization test that became effective October 1, 2008.  
* After a student has completed this course, he/she may not be allowed to re-enroll in the course.

---

### COURSE NO.: 50-01-78

**Title:** VESL/SOFT SKILLS (Personal Success “Skills to Pay the Bills”)  
**PROGRAM:** English as a Second Language (ESL & Citizenship)  
**CREDITS:** n/a  
**HOURS:** 20  
**COURSE OF STUDY:** English as a second Language (ESL)  

**COURSE:** 2:1060 ESL Vocational/Workplace  

**COURSE DESCRIPTION:**  
In this competency-based course, students develop personal success skills (also known as transferable, employability, soft, or 21st century skills) using the English language for college, career, and civics. They practice and refine three skill areas: Cognitive skills (language and basic numeracy skills, thinking and information use skills, as well as technology and digital literacies skills), Intrapersonal skills for independent success, and Interpersonal skills for community and team success.  

**PREREQUISITES:**  
ESL Intermediate Low B or a score of 211 or higher on the CASAS test
COURSE NO.: 50-01-90
Title: ESL/CITIZENSHIP: DISTANCE LEARNING
PROGRAM: English as a Second Language (ESL & Citizenship)
CREDITS: 0    HOURS: 60    COURSE OF STUDY: English as a Second Language (ESL)
COURSE: 2:2000 Citizenship Preparation

COURSE DESCRIPTION:
This competency-based course is designed to provide high intermediate through advanced ESL students and English speakers with an understanding of the U.S. History and civics questions they will be asked at the interview.

PREREQUISITES:
Demonstrated competence in the skills of ESL Intermediate Low (50-01-53) as measured by any test approved by the Division.

Note:
Please note that documents included in this course outline are time-sensitive. Citizenship teachers should access updates regularly. Information on the naturalization process, including current forms and support materials, is available at the United States Citizenship and Immigration Services website at http://www.uscis.gov.

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO.: 50-04-51
Title: ESL INTERMEDIATE/LEARNING TO CONVERSE: A CONVERSATION CLASS IN ENGLISH
PROGRAM: English as a Second Language (ESL & Citizenship)
CREDITS: 0    HOURS: 20    COURSE OF STUDY: English as a Second Language (ESL)
COURSE: 2:1030 ESL Intermediate (Low-High)

COURSE DESCRIPTION:
In this competency-based course, students develop communication skills (listening and speaking) in English while discussing real-life problems. Students compare their ideas and values with those of their classmates. Available units include: Neighbors, Honesty, Love and Marriage, Senior Citizens, Medical Questions, and Money. The class is designed for intermediate and advanced level ESL students.

PREREQUISITES:
ESL Beginning High or equivalent skills

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: **50-04-52**

**Title:** ESL MULTI-LEVEL/PRONUNCIATION BASICS  
**PROGRAM:** English as a Second Language (ESL & Citizenship)  
**CREDITS:** 0  
**HOURS:** 20  
**COURSE OF STUDY:** English as a Second Language (ESL)

**COURSE: 2:1050 ESL Multi-Level**

**COURSE DESCRIPTION:**  
This competency-based course provides instruction in pronunciation basics to improve English language proficiency for limited English-speaking adults. Reading comprehension is enhanced by introducing simple spelling and sounding rules for identifying words in written text. The course emphasizes fundamental aspects of pronunciation that build and reinforce listening and speaking skills for students at all levels.

**PREREQUISITES:**  
ESL Beginning Literacy or equivalent skills

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.

---

COURSE NO.: **50-04-53**

**Title:** ESL INTERMEDIATE/ENGLISH VOCABULARY AND IDIOMS  
**PROGRAM:** English as a Second Language (ESL & Citizenship)  
**CREDITS:** 0  
**HOURS:** 15  
**COURSE OF STUDY:** English as a Second Language (ESL)

**COURSE: 2:1030 ESL Intermediate (Low-High)**

**COURSE DESCRIPTION:**  
This competency-based course is designed to develop language proficiency in the four skills of listening, speaking, reading, and writing with special emphasis on vocabulary development. The course introduces high frequency English idioms, fixed expressions and phrasal verbs in context using the book Can You Believe It? Stories and Idioms from Real Life, Book 2. Each 3-hour class should cover one unit of the book. The fifth and final class should include a cumulative review. This course can be repeated up to four times with new content.

**PREREQUISITES:**  
ESL Beginning High or equivalent skills

* After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO.: 50-04-54
Title: ESL MULTI-LEVEL/USING COMPUTERS AND THE INTERNET FOR ENGLISH LANGUAGE PRACTICE
PROGRAM: English as a Second Language (ESL & Citizenship)
CREDITS: 0       HOURS: 30      COURSE OF STUDY: English as a Second Language (ESL)
COURSE: 2: 1050 ESL Multi-Level
COURSE DESCRIPTION:
This competency-based course offers instruction in the use of personal computers and the Internet for Beginning High and above ESL students. Instruction includes basic computer skills, accessing the Internet, and locating and using information on the Internet of interest to ESL students.
PREREQUISITES:
ESL Beginning Low or equivalent skills
* After a student has completed this course, he/she may not be allowed to re-enroll in the course.

COURSE NO.: 50-04-55
Title: ESL MULTI-LEVEL/USING COMPUTERS AND THE INTERNET/CBET
PROGRAM: English as a Second Language (ESL & Citizenship)
CREDITS: 0       HOURS: 30      COURSE OF STUDY: English as a Second Language (ESL)
COURSE: 2: 1050 ESL Multi-Level
COURSE DESCRIPTION:
This competency-based course offers instruction for CBET (Community Based English Tutoring) parents in the use of personal computers and the Internet. Instruction includes basic computer skills parents need to assist their child in school, accessing the Internet, and keeping their children safe online. Students will become familiar with online programs designed to assist K-12 children academically.
PREREQUISITES:
ESL Beginning Low or equivalent skills.
Note:
The primary purpose of this course is the promotion of English language and tutoring skills for English learners who are CBET parents.
* After a student has completed this course, he/she may not be allowed to re-enroll in the course.
<table>
<thead>
<tr>
<th>COURSE NO. :</th>
<th>50-04-56</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td>ESL MULTI-LEVEL/TUTORING THE ELEMENTARY SCHOOL-AGE CHILD/CBET</td>
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<td>PROGRAM:</td>
<td>English as a Second Language (ESL &amp; Citizenship)</td>
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<tr>
<td>CREDITS:</td>
<td>0</td>
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<tr>
<td>HOURS:</td>
<td>34</td>
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<tr>
<td>COURSE OF STUDY:</td>
<td>English as a Second Language (ESL)</td>
</tr>
<tr>
<td>COURSE:</td>
<td>2: 1050 ESL Multi-Level</td>
</tr>
<tr>
<td>COURSE DESCRIPTION:</td>
<td>This competency-based course is designed to provide instruction for CBET (Community Based English Tutoring) parents in English language acquisition tutoring techniques designed to help their elementary school age child (Grades K-5) succeed in school. This course provides practical information on effective study and homework skills, and the role parents play in the education of their child. Parents are provided with training and support in research-based practices and strategies in the areas of oral language, print awareness, phonemic awareness, decoding, vocabulary, reading comprehension, and reading fluency.</td>
</tr>
<tr>
<td>PREREQUISITES:</td>
<td>ESL Beginning Low/A (50-01-51) or equivalent skills.</td>
</tr>
<tr>
<td>Note:</td>
<td>The primary purpose of this course is the promotion of English language and tutoring skills for English learners who are CBET parents.</td>
</tr>
<tr>
<td>* After a student has completed this course, he/she may not be allowed to re-enroll in the course.</td>
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<tr>
<th>COURSE NO. :</th>
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</thead>
<tbody>
<tr>
<td>Title:</td>
<td>ESL MULTI-LEVEL/COMMUNICATION AT SCHOOL/CBET 1</td>
</tr>
<tr>
<td>PROGRAM:</td>
<td>English as a Second Language (ESL &amp; Citizenship)</td>
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<tr>
<td>CREDITS:</td>
<td>0</td>
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<tr>
<td>HOURS:</td>
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<tr>
<td>COURSE OF STUDY:</td>
<td>English as a Second Language (ESL)</td>
</tr>
<tr>
<td>COURSE:</td>
<td>2: 1050 ESL Multi-Level</td>
</tr>
<tr>
<td>COURSE DESCRIPTION:</td>
<td>This competency-based course is designed to provide instruction for CBET (Community Based English Tutoring) parents in effective communication at their child(ren)'s K-12 school. This course provides parents with oral language practice and vocabulary development in the context of parent engagement in the K-12 school setting. This is the first of two courses.</td>
</tr>
<tr>
<td>PREREQUISITES:</td>
<td>Completion of ESL Beginning Literacy or equivalent skills as measured by the Division placement test</td>
</tr>
<tr>
<td>Note:</td>
<td>The primary purpose of this course is the promotion of English language and tutoring skills for English learners who are CBET parents.</td>
</tr>
<tr>
<td><em>After a student has completed this course, he/she may not be allowed to re-enroll in the course.</em></td>
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<tr>
<td>COURSE NO.: 50-04-58</td>
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<tr>
<td>Title: <strong>ESL Multi-Level/Communication at School/CBET 2</strong></td>
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<tr>
<td>PROGRAM: English as a Second Language (ESL &amp; Citizenship)</td>
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<tr>
<td>CREDITS: 0</td>
<td>HOURS: 30</td>
</tr>
</tbody>
</table>

**COURSE DESCRIPTION:**
This competency-based course is designed to provide instruction for CBET (Community Based English Tutoring) parents in effective communication at their child(ren)’s K-12 school. This course provides parents with oral language practice and vocabulary development in the context of parent engagement in the K-12 school setting. This is the second in a series of two courses.

**PREREQUISITES:**
1. Completion of ESL Beginning Literacy or equivalent skills as measured by the Division placement test
2. ESL Multi-Level/Communication at School/CBET 1 is recommended

**Note:**
The primary purpose of this course is the promotion of English language and tutoring skills for English learners who are CBET parents.

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.*
Adults with Disabilities
Course Descriptions
**COURSE NO.:** 43-13-60

**Title:** AMERICAN SIGN LANGUAGE/ENGLISH BILINGUAL EDUCATION FOR THE DEAF: LITERACY  
**PROGRAM:** Adults with Disabilities  
**CREDITS:** 0*  
**HOURS:** 1000  
**COURSE OF STUDY:** Adults with Disabilities (AWD)

**COURSE:** 3:0200 Community Access Skills and Functional Academics

**COURSE DESCRIPTION:**
This competency-based American Sign Language (ASL)/English bilingual course supports the acquisition, learning, and use of ASL and English to meet the needs of diverse learners who are deaf and hard of hearing. It provides instruction from foundational English skills through intermediate English skills and numeracy skills, as well as instruction in communication skills through activities that involve reading, writing and responding to American Sign Language. The course also includes instruction in applying communication (language) skills to everyday life situations.

**PREREQUISITES:**
None

*After a student has completed this course, he/she may not be allowed to re-enroll in the course

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**COURSE NO.:** 43-13-61

**Title:** AMERICAN SIGN LANGUAGE/ENGLISH BILINGUAL EDUCATION FOR THE DEAF: LEVEL 1  
**PROGRAM:** Adults with Disabilities  
**CREDITS:** 0*  
**HOURS:** 1000  
**COURSE OF STUDY:** Adults with Disabilities (AWD)

**COURSE:** 3:0200 Community Access Skills and Functional Academics

**COURSE DESCRIPTION:**
This competency-based American Sign Language (ASL)/English bilingual course supports the acquisition, learning, and use of ASL and English to meet the needs of diverse learners who are deaf and hard of hearing. It provides instruction from foundational English skills through intermediate English skills and numeracy skills, as well as instruction in communication skills through activities that involve reading, writing and responding to American Sign Language. The course also includes instruction in applying communication (language) skills to everyday life situations.

**PREREQUISITES:**
None

*After a student has completed this course, he/she may not be allowed to re-enroll in the course
COURSE NO.: 43-13-62
Title: AMERICAN SIGN LANGUAGE/ENGLISH BILINGUAL EDUCATION FOR THE DEAF: LEVEL 2
PROGRAM: Adults with Disabilities
CREDITS: 0*    HOURS: 1000    COURSE OF STUDY: Adults with Disabilities (AWD)
COURSE: 3:0200 Community Access Skills and Functional Academics
COURSE DESCRIPTION:
This competency-based American Sign Language (ASL)/English bilingual course supports the acquisition, learning, and use of ASL and English to meet the needs of diverse learners who are deaf and hard of hearing. It provides instruction from foundational English skills through intermediate English skills and numeracy skills, as well as instruction in communication skills through activities that involve reading, writing and responding to American Sign Language. The course also includes instruction in applying communication (language) skills to everyday life situations.
PREREQUISITES:
None
*After a student has completed this course, he/she may not be allowed to re-enroll in the course

COURSE NO.: 43-13-63
Title: AMERICAN SIGN LANGUAGE/ENGLISH BILINGUAL EDUCATION FOR THE DEAF: LEVEL 3
PROGRAM: Adults with Disabilities
CREDITS: 0*    HOURS: 1000    COURSE OF STUDY: Adults with Disabilities (AWD)
COURSE: 3:0200 Community Access Skills and Functional Academics
COURSE DESCRIPTION:
This competency-based American Sign Language (ASL)/English bilingual course supports the acquisition, learning, and use of ASL and English to meet the needs of diverse learners who are deaf and hard of hearing. It provides instruction from foundational English skills through intermediate English skills and numeracy skills, as well as instruction in communication skills through activities that involve reading, writing and responding to American Sign Language. The course also includes instruction in applying communication (language) skills to everyday life situations.
PREREQUISITES:
None
*After a student has completed this course, he/she may not be allowed to re-enroll in the course
COURSE NO. : 43-13-62

Title: AMERICAN SIGN LANGUAGE/ENGLISH BILINGUAL EDUCATION FOR THE DEAF: LEVEL 2

PROGRAM: Adults with Disabilities

CREDITS: 0*

HOURS: 1000

COURSE OF STUDY: Adults with Disabilities (AWD)

COURSE: 3:0200 Community Access Skills and Functional Academics

COURSE DESCRIPTION:
This competency-based American Sign Language (ASL)/English bilingual course supports the acquisition, learning, and use of ASL and English to meet the needs of diverse learners who are deaf and hard of hearing. It provides instruction from foundational English skills through intermediate English skills and numeracy skills, as well as instruction in communication skills through activities that involve reading, writing and responding to American Sign Language. The course also includes instruction in applying communication (language) skills to everyday life situations.

PREREQUISITES:
None

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.

REVISED: July/2017

COURSE NO. : 43-13-63

Title: AMERICAN SIGN LANGUAGE/ENGLISH BILINGUAL EDUCATION FOR THE DEAF: LEVEL 3

PROGRAM: Adults with Disabilities

CREDITS: 0*

HOURS: 1000

COURSE OF STUDY: Adults with Disabilities (AWD)

COURSE: 3:0200 Community Access Skills and Functional Academics

COURSE DESCRIPTION:
This competency-based American Sign Language (ASL)/English bilingual course supports the acquisition, learning, and use of ASL and English to meet the needs of diverse learners who are deaf and hard of hearing. It provides instruction from foundational English skills through intermediate English skills and numeracy skills, as well as instruction in communication skills through activities that involve reading, writing and responding to American Sign Language. The course also includes instruction in applying communication (language) skills to everyday life situations.

PREREQUISITES:
None

*After a student has completed this course, he/she may not be allowed to re-enroll in the course.
COURSE NO. : 70-01-50
Title: CTE/Education and Career Planning
JOB TITLE: N/A
CREDITS: 0
HOURS: 12

COURSE DESCRIPTION:
This competency-based course informs students about career planning and assists in the preparation of an individual career plan. It provides information and guidance in identifying vocational interests and choosing an occupation, determining job requirements and planning necessary vocational training, applying employment techniques, meeting employment performance standards, resolving conflicts on the job, and achieving career advancement. This course is aligned with the Performance Standards of the California Department of Education.

PREREQUISITES:
None.

Note:
The course number 70-01-50 is used for reporting hours' students generate through pathway counseling.

* Not eligible for Perkins reporting.
CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements


LANDSCAPING AND GROUNDSKEEPING WORKERS

Nation-wide employment outlook and median earnings:

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<thead>
<tr>
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<tbody>
<tr>
<td>1,167,800</td>
<td>1,239,000</td>
<td>+6%</td>
<td>$26,320</td>
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LANDSCAPING AND GROUNDSKEEPING WORKERS

Nation-wide employment outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>143,800</td>
<td>159,600</td>
<td>+11%</td>
<td>$28,030</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Most workers need no formal education and are trained on the job
- Some positions may require formal education
COURSE NO.: 70-25-70
Title: LANDSCAPING/1
JOB TITLE: Landscaper
CAREER PATHWAY: Ornamental Horticulture
CREDITS: 5
CBEDS TITLE: Introduction Ornamental Horticulture
COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for landscaping. It provides students with technical instruction and practical experience in workplace safety, handling and caring for basic landscaping tools, part one of plant identification, types of soil, planning and maintaining an ornamental garden, basic landscape design, and water management. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Ability to bend over, lift and carry heavy items as required in the industry.
Note:
For Perkins purposes this course has been designated as an introductory course.
*This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 70-25-75
Title: LANDSCAPING/2
JOB TITLE: Landscaper
CAREER PATHWAY: Ornamental Horticulture
CREDITS: 15
CBEDS TITLE: Introduction Ornamental Horticulture
COURSE DESCRIPTION:
This competency-based course is the second in a sequence of three designed for landscaping. It provides students with technical instruction and practical experience in workplace safety, handling and caring for power hand tools, part two of plant identification, soil analysis, landscape irrigation, weed abatement, pruning, plant propagation, and a review of water management. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires completion of the Landscaping/1 (70-25-70) course.
Note:
For Perkins purposes this course has been designated as a concentrator course.
*This course cannot be repeated once a student receives a Certificate of Completion.
**COURSE NO.: 70-25-80**

**Title:** LANDSCAPING/3  
**JOB TITLE:** Landscaper  
**CAREER PATHWAY:** Ornamental Horticulture  
**CREDITS:** 40  
**CBEDS TITLE:** Introduction Ornamental Horticulture  
**CREDITS:** 40  
**HOURS:** 600  
**O*NET-SOC CODE:** 37-3011.00  
**CBEDS NO.:** 4051

**COURSE DESCRIPTION:**
This competency-based course is the last in a sequence of three designed for landscaping. It provides students with technical instruction and practical experience in workplace safety, handling and caring for power equipment, part three of plant identification, techniques in landscape construction and design, soil amendments, turf maintenance, plant fertilization techniques, pest management, greenhouse operations, water management review, employability skills, and entrepreneurship. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires completion of the Landscaping/2 (70-25-75) course.

**Note:**
For Perkins purposes this course has been designated as a **capstone** course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
Industry Sector 2 | Arts, Media and Entertainment

CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements


AUDIPO AND VIDEO EQUIPMENT TECHNICIAN

Nation-wide employment outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>70,900</td>
<td>79,400</td>
<td>+12%</td>
<td>$42,230</td>
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California outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>14,600</td>
<td>16,900</td>
<td>+16%</td>
<td>$47,460</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Training in vocational schools, related on-the-job experience, or an associate's degree

DESKTOP PUBLISHER

Nation-wide employment outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>14,800</td>
<td>11,700</td>
<td>-21%</td>
<td>$41,090</td>
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California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>1,700</td>
<td>1,400</td>
<td>-18%</td>
<td>$47,850</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- No educational requirement
- Most desktop publishers learn on the job, by taking classes online or through vocational schools or community colleges that teach the latest software.
GRAPHIC DESIGNER

Nation-wide employment outlook and median earnings:

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<thead>
<tr>
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<tbody>
<tr>
<td>261,600</td>
<td>265,200</td>
<td>+1%</td>
<td>$47,640</td>
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California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>37,000</td>
<td>41,500</td>
<td>+12%</td>
<td>$54,390</td>
</tr>
</tbody>
</table>

Education requirements for employment:

- A bachelor’s degree in graphic design is usually required.
COURSE NO. : 70-55-70

Title: DESKTOP PUBLISHING/1
JOB TITLE: Desktop Publisher
CAREER PATHWAY: Design, Visual and Media Arts
CREDITS: 5
CBEDS TITLE: Intermediate Graphics Technology

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of two designed for desktop publishing. It provides students with technical instruction and practical experience in grammar application, computer operating systems, the fundamentals of word processing, spreadsheets, and database management, desktop publishing elements and principles, typography, features and functions of professional desktop publishing software programs, proofreading and editing, features and functions of professional graphics software, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 9.0 as measured by the TABE D 9/10 and math skills equivalent to Math 2 (53-03-76), completion of English 3 (23-10-73) or equivalent writing skills as determined by student writing sample evaluated by the instructor, knowledge of Windows operating system, working knowledge of a word processing program and the ability to key 30 words per minute.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator course.
* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO. : 70-55-75

Title: DESKTOP PUBLISHING/2
JOB TITLE: Desktop Publisher
CAREER PATHWAY: Design, Visual and Media Arts
CREDITS: 5
CBEDS TITLE: Intermediate Graphics Technology

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of two designed for desktop publishing. It provides students with technical instruction and practical experience in job planning and development, paste-up techniques, resource management, and entrepreneurial skills. This course also includes reviews in grammar application, desktop publishing elements and principles, proofreading and editing techniques, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Desktop Publishing/1 (70-55-70) course and portfolio.

Note:
For Perkins purposes this course has been designated as a capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 70-65-50
Title: GRAPHIC DESIGN (FUNDAMENTALS)
JOB TITLE: Graphic Designer
CAREER PATHWAY: Design, Visual and Media Arts
CREDITS: 15
CBEDS TITLE: Intermediate Graphics Technology
COURSE DESCRIPTION:
This competency-based course is the first in a sequence of four designed for graphic design. It provides technical instruction and practical experience in workplace safety, the basic principles and techniques of graphic design, print and web typography, color theory and management, elements of illustration, logo design, branding, conceptualization of images through sketching, digital imaging software and their applications, basic word processing and spreadsheet, resource management, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
None.
Note:
For Perkins purposes this course has been designated as an introductory course.
* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 70-65-55
Title: GRAPHIC DESIGN: DIGITAL IMAGING
JOB TITLE: Graphic Designer
CAREER PATHWAY: Design, Visual and Media Arts
CREDITS: 15
CBEDS TITLE: Intermediate Graphics Technology
COURSE DESCRIPTION:
This competency-based course is the second in a sequence of four designed for graphic design. It provides students with technical instruction and practical experience in the use of a variety of hardware, software, and peripherals used in the creation and manipulation of still, two-dimensional images; and the use of electronic input and output devices. This course also includes instruction in resource management and a review of employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires successful completion of the Graphic Design (Fundamentals) (70-65-50) course and portfolio.
Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 70-65-60
Title: GRAPHIC DESIGN: ADVERTISING DESIGN
JOB TITLE: Graphic Designer
CAREER PATHWAY: Design, Visual and Media Arts
CREDITS: 15
CBEDS TITLE: Intermediate Graphics Technology
CREDITS: 15
CBEDS NO.: 5622

COURSE DESCRIPTION:
This competency-based course is the third in a sequence of four designed for graphic design. It provides students with technical instruction and practical experience in fundamental advertising principles, vector-based logo design and illustrations, desktop imaging and desktop publishing applications in pre-press production, electronic file management, website advertising, project presentation and delivery, and proofreading and editing. This course also covers resource management and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Graphic Design: Digital Imaging (70-65-55) course and portfolio.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*

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COURSE NO.: 70-65-65
Title: GRAPHIC DESIGN: WEB DESIGN
JOB TITLE: Web Designer
CAREER PATHWAY: Design, Visual and Media Arts
CREDITS: 15
CBEDS TITLE: Intermediate Graphics Technology
CREDITS: 15
CBEDS NO.: 5622

COURSE DESCRIPTION:
This competency-based course is the last in a sequence of four designed for graphic design. It provides students with technical instruction and practical experience in workplace safety, scanning, graphic formats, color applications, utilizing graphics software, composition and writing for the Internet, proofreading and editing techniques, electronic publishing, using Dreamweaver, web page creation, and designing accessible websites. Instruction also includes resource management and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Graphic Design: Advertising Design (70-65-60) course and portfolio.

Note:
For Perkins purposes this course has been designated as a capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 70-85-60
Title: VIDEO PRODUCTION/1
JOB TITLE: Video Production Assistant
CAREER PATHWAY: Production and Managerial Arts
CREDITS: 5
CBEDS TITLE: Video Production
CBEDS NO.: 5716
O*NET-SOC CODE: 27-4011.00
HOURS: 90

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for video production. It provides students with the technical instruction and practical experiences for aspiring video production assistants in the pre-production, production, and post-production stages of TV and video projects. It focuses on the basic set up and breakdown of camera, sound, and lighting equipment, basic principles of story development, planning and creation of a studio production, and editing of production projects. It also includes the basics of job shadowing, internships, and job placement. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

Note:
For Perkins purposes this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 70-85-70
Title: VIDEO PRODUCTION/2
JOB TITLE: Video Production Crew Member
CAREER PATHWAY: Production and Managerial Arts
CREDITS: 5
CBEDS TITLE: Video Production
CBEDS NO.: 5716
O*NET-SOC CODE: 27-4011.00
HOURS: 90

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of three designed for video production. It provides students with the technical instruction and practical experiences for aspiring video production crew members in the pre-production, production, and post-production stages of TV and video projects. It focuses on the use of the camera, sound, and lighting equipment, the development of “soft,” “hard,” and “feature” stories, the creation of a storyboard, the studio and field production techniques, and the editing and transmitting of a video story. It also includes a review of job shadowing, internship, and job placement techniques as well as resource management. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Video Production/1 (70-85-60) course.

Note:
For Perkins purposes this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 70-85-80
Title: VIDEO PRODUCTION/3
JOB TITLE: Video Production Supervisor
CAREER PATHWAY: Production and Managerial Arts
CREDITS: 5
HOURS: 90
CBEDS TITLE: Video Production
CBEDS NO.: 5716
COURSE DESCRIPTION:
This competency-based course is the last in a sequence of three designed for video production. It provides students with the technical instruction and practical experiences for aspiring video production supervisors in the pre-production, production, and post-production stages of TV and video projects. It focuses on the supervisory tasks involved in camera, sound, and lighting equipment use, soft/hard/feature story development, storyboard creation, studio and field production, and video story editing and transmitting. It also includes a review of resource management and job shadowing, internship, and job placement techniques. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires successful completion of the Video Production/2 (70-85-70) course.
Note:
For Perkins purposes this course has been designated as a capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.
### Industry Sector 3 | Building and Construction Trades

<table>
<thead>
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<th>Title</th>
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<td>Construction Work/1</td>
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<td>71-35-60</td>
<td>Construction Work/2</td>
<td>180</td>
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<td>Tile Technician/1: Tile</td>
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<td>Tile Technician/2: Tile and Marble</td>
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<td>79-10-65</td>
<td>Refrigeration Technician: Service</td>
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<td>79-15-89</td>
<td>Construction Worker: Apprenticeship Preparation</td>
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<td>81</td>
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**CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements**


#### CONSTRUCTION LABORER

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1,159,100</td>
<td>1,306,500</td>
<td>+13%</td>
<td>$33,430</td>
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California outlook and median earnings:

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>114,800</td>
<td>145,000</td>
<td>+26%</td>
<td>$39,320</td>
</tr>
</tbody>
</table>

Education requirements for employment:

- Combination of classroom instruction and on-the-job training

#### HVAC TECHNICIAN

Including heating, air conditioning technician, and refrigeration mechanics and installers

Nation-wide employment outlook and median earnings:

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>292,000</td>
<td>331,600</td>
<td>+14%</td>
<td>$45,910</td>
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</table>

California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>22,300</td>
<td>29,400</td>
<td>+32%</td>
<td>$51,500</td>
</tr>
</tbody>
</table>

Education requirements for employment:

- Technical school training or a formal apprenticeship
Industry Sector 3: Building and Construction Trades

PLUMBER
These statistics combine the outlook for plumbers, pipefitters and steamfitters.

<table>
<thead>
<tr>
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<tr>
<td>425,000</td>
<td>474,100</td>
<td>+12%</td>
<td>$51,450</td>
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California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>40,300</td>
<td>51,900</td>
<td>+29%</td>
<td>$54,260</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Most states require plumbers to be licensed
- Technical training through an apprenticeship program, vocational school or community college

TILE AND MARBLE SETTERS

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>55,100</td>
<td>58,700</td>
<td>+6%</td>
<td>$40,460</td>
</tr>
</tbody>
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California outlook and median earnings:

<table>
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<th></th>
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</thead>
<tbody>
<tr>
<td>12,000</td>
<td>15,900</td>
<td>+33%</td>
<td>$45,290</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- On the job training
COURSE NO. : 71-35-50

Title: CONSTRUCTION WORK/1

JOB TITLE:  Construction Worker

CAREER PATHWAY:  Residential and Commercial Construction

CREDITS: 15

CBEDS TITLE:  Introduction to Building and Construction Trades

CREDITS: HOURS: O*NET-SOC CODE: 47-2061.00

HOURS: 180

CBEDS NO.: 5501

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for construction work. It provides students with technical instruction and practical experience in basic residential, commercial and earthquake retrofitting construction using sustainable and green technology. Instruction includes an orientation and workplace safety, resource management, First Aid/CPR, OSHA 10, tools & equipment, trade mathematics & blueprints, and employability skills. Emphasis is placed on the techniques, tools, and materials required for concrete work, masonry, floor and wall construction, and roof construction. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.

REVISED: August/2017

COURSE NO. : 71-35-60

Title: CONSTRUCTION WORK/2

JOB TITLE:  Construction Worker

CAREER PATHWAY:  Residential and Commercial Construction

CREDITS: 15

CBEDS TITLE:  Introduction to Building and Construction Trades

CREDITS: HOURS: O*NET-SOC CODE: 47-2061.00

HOURS: 180

CBEDS NO.: 5501

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of three designed for construction work. It provides students with technical instruction and practical experience in basic residential, commercial and earthquake retrofitting construction using sustainable and green technology. Instruction includes an introduction, workplace safety, and reviews of resource management, trade mathematics, plumbing, employability skills, Los Angeles Department of Water & Power (DWP) infrastructure, earthquake resistant pipe replacement and drywall installation. It also covers the operation, maintenance, and storage of power tools. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Construction Work/1 (71-35-50) course.

Note:
For Perkins purposes this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.
### COURSE NO.: 71-35-70

**Title:** **CONSTRUCTION WORK/3**  
**JOB TITLE:** Construction Worker  
**CAREER PATHWAY:** Residential and Commercial Construction  
**CREDITS:** 15  
**CBEDS TITLE:** Introduction to Building and Construction Trades  

**COURSE DESCRIPTION:**  
This competency-based course is the third in a sequence of three designed for construction work. It provides students with technical instruction and practical experience in basic residential, commercial and earthquake retrofitting in construction using sustainable and green technology. Instruction includes an introduction, workplace safety, and reviews of resource management, trade mathematics, employability skills, and apprenticeship preparation. Emphasis is placed on the techniques, tools and materials required for finish carpentry, plumbing review and electrical work, roofing, and painting. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**  
Enrollment requires successful completion of the Construction Work/2 (71-35-60) course.

**Note:**  
For Perkins purposes this course has been designated as a **capstone** course.

*This course cannot be repeated once a student receives a Certificate of Completion.*

### COURSE NO.: 71-45-70

**Title:** **PLUMBING/1**  
**JOB TITLE:** Plumber  
**CAREER PATHWAY:** Residential and Commercial Construction  
**CREDITS:** 15  
**CBEDS TITLE:** Introduction to Building and Construction Trades  

**COURSE DESCRIPTION:**  
This competency-based course is the first in a sequence of two designed for plumbing. It provides students with project-based experiences in basic plumbing according to the Uniform Plumbing Code and the Los Angeles Plumbing Code requirements. Technical instruction includes an orientation, workplace safety rules and regulations, resource management, trade mathematics, and employability skills. Emphasis is placed on the proper selection and use of plumbing materials (including sustainable and green products) and tools, pipefitting techniques, components of the sanitary drainage, vent and storm water drainage systems, the sizing techniques for sanitary drainage and vent piping, and plumbing traps. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**  
Enrollment requires successful completion of the Construction Work/1 (71-35-50) course.

**Note:**  
For Perkins purposes this course has been designated as an **introductory/concentrator** course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
### COURSE NO. : **71-45-80**

#### Title: PLUMBING/2

**JOB TITLE:** Plumber  
**CAREER PATHWAY:** Residential and Commercial Construction  
**CREDITS:** 15  
**CBEDS TITLE:** Introduction to Building and Construction Trades  
**CREDITS:** 15  

#### COURSE DESCRIPTION:

This competency-based course is the second in a sequence of two designed for plumbing. It provides students with project-based experiences in basic plumbing according to the Uniform Plumbing Code and the Los Angeles Plumbing Code requirements. Technical instruction includes an introduction, and reviews of workplace safety rules and regulations, resource management, trade mathematics, and employability skills. Emphasis is placed on the sizing techniques for water supply piping, water supply protection, proper selection and use of fixtures and appliances, testing and inspection techniques, and the basic procedures for plumbing a house. Basic entrepreneurial skills and the use of sustainable and green materials and technology are also covered in the instruction. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

#### PREREQUISITES:

Enrollment requires successful completion of Plumbing/1 (71-45-70) course.

**Note:**
For Perkins purposes this course has been designated as a **capstone** course.

* **This course cannot be repeated once a student receives a Certificate of Completion**

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### COURSE NO. : **71-55-80**

#### Title: TILE TECHNICIAN/1: TILE

**JOB TITLE:** Tile and Marble Setters  
**CAREER PATHWAY:** Residential and Commercial Construction  
**CREDITS:** 5  
**CBEDS TITLE:** Residential and Commercial Construction  
**CREDITS:** 5  

#### COURSE DESCRIPTION:

This competency-based course is the first in a sequence of three courses designed for Tile Marble and Granite installation. It provides students with technical instruction and practical experience for the installation of tile using sustainable and green technology. Focus in this competency-based course is on the installation. Instruction also includes an orientation, workplace safety, trade mathematics, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

#### PREREQUISITES:

Minimum math level of 9.0 as measured by the TABE 9/10 and the ability to lift heavy objects.

**Note:**
For Perkins purposes this course has been designated as an **introductory** course.

* **This course cannot be repeated once a student receives a Certificate of Completion**
This competency-based course is the first in a sequence of three courses designed for Tile Marble and Granite installation. It provides students with technical instruction and practical experience for the installation of tile using sustainable and green technology. Focus in this competency-based course is on the installation. Instruction also includes an orientation, workplace safety, trade mathematics, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Minimum math level of 9.0 as measured by the TABE 9/10 and the ability to lift heavy objects.

Note:
For Perkins purposes this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.

This competency-based course is the third in a sequence of three courses designed for Tile, Marble, and Granite installation. It provides students with technical instruction and practical experience for the installation of Tile, Marble and Granite using sustainable and green technology techniques. Focus in this competency-based course is on granite fabrication and installation. Instruction includes an orientation, workplace safety, reviews of resource management, trade mathematics, and employability skills, and an introduction to entrepreneurship. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Tile Technician/2 (71-55-85) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO. : 72-85-60

Title: HVAC/1
JOB TITLE: HVAC Technician
CAREER PATHWAY: Mechanical Systems Installation and Repair
CREDITS: 15
CBEDS TITLE: Heating, Ventilation, Air Conditioning (HVAC) Systems

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for heating, ventilating, and air-conditioning (HVAC). It provides students with project-based experiences in residential and commercial heating systems. Technical instruction includes an orientation, resource management, trade mathematics, and employability skills. Emphasis is placed on the basic theories and applications of electricity and thermodynamics, and the operational, troubleshooting, and maintenance techniques used for heating systems. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

Note:
For Perkins purposes this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO. : 72-85-65

Title: HVAC/2
JOB TITLE: HVAC Technician
CAREER PATHWAY: Mechanical Systems Installation and Repair
CREDITS: 15
CBEDS TITLE: Heating, Ventilation, Air Conditioning (HVAC) Systems

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of three designed for heating, ventilating, and air-conditioning (HVAC) technology. It provides students with project-based experiences in residential and commercial ventilation and refrigeration. Technical instruction includes an introduction and reviews of resource management, employability skills, trade mathematics, and thermodynamics. Emphasis is placed on the generation and modification of electricity for HVAC systems, wiring principles and procedures approved by the National Electrical Code (NEC), operational techniques for ventilation and refrigeration systems, and troubleshooting techniques for refrigeration systems. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires completion of the HVAC/1 (72-85-60) course.

Note:
For Perkins purposes this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **72-85-70**

**Title:** HVAC/3

**JOB TITLE:** HVAC Technician

**CAREER PATHWAY:** Mechanical Systems Installation and Repair

**CREDITS:** 15

**HOURS:** 180

**CBEDS TITLE:** Heating, Ventilation, Air Conditioning (HVAC) Systems

**CBEDS NO.:** 5516

**COURSE DESCRIPTION:**

This competency-based course is the last in a sequence of three designed for heating, ventilating, and air-conditioning (HVAC) technology. It provides students with project-based experiences in air conditioning and integrated systems. Technical instruction includes an introduction, reviews of workplace safety policies and procedures, and employability skills, as well as introductory entrepreneurship. Emphasis is placed on cooling control systems, commercial air conditioning, integrated systems, and lab work focusing on the service, diagnostic, and repair techniques used in the HVAC industry. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires completion of the HVAC/2 (72-85-65) course.

**Note:**

For Perkins purposes this course has been designated as a capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 79-10-60

Title: REFRIGERATION TECHNICIAN (FUNDAMENTALS)

JOB TITLE: Refrigeration Technician

CAREER PATHWAY: Mechanical Systems Installation and Repair

O*NET-SOC CODE: 49-9021.01

CREDITS: 10

HOURS: 120

CBEDS TITLE: Heating, Ventilation, Air Conditioning (HVAC) Systems

CBEDS NO.: 5516

COURSE DESCRIPTION:
This competency-based course is designed to provide training in the refrigeration and air conditioning trade. Instruction includes basic knowledge of refrigeration and air conditioning mechanical theory, operation and maintenance, with emphasis on commercial aspects of refrigeration and air conditioning, including heating systems. This course also includes instruction in employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion

COURSE NO.: 79-10-65

Title: REFRIGERATION TECHNICIAN: SERVICE

JOB TITLE: Refrigeration Technician

CAREER PATHWAY: Mechanical Systems Installation and Repair

O*NET-SOC CODE: 49-9021.01

CREDITS: 10

HOURS: 120

CBEDS TITLE: Heating, Ventilation, Air Conditioning (HVAC) Systems

CBEDS NO.: 5516

COURSE DESCRIPTION:
This competency-based course is designed to provide training in the refrigeration and air conditioning trade. System fundamentals, troubleshooting and repair procedures are emphasized in practical terms. This course also includes instruction in employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion
COURSE NO.: 79-15-89
Title: CONSTRUCTION WORKER: APPRENTICESHIP PREPARATION
JOB TITLE: Construction Worker
CAREER PATHWAY: Residential and Commercial Construction
CREDITS: 25
CBEDS TITLE: Introduction to Building and Construction Trades
COURSE DESCRIPTION:
This competency-based course prepares students to meet the entry-level requirements for apprenticeship trades. This course provides instruction in the relationship of personal and interpersonal skills development to employability, orientation to apprenticeship and apprenticeship preparation, thinking and problem solving skills in the workplace and apprenticeship mathematics. All participants will be exposed to various construction trade applications. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires student to be at least 17 years of age, possess a valid California’s Driver’s license, have reliable transportation, possess a valid Social Security Card and be willing to submit to a drug screening test.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator/capstone course. Contact Central Office CTE Unit before enrolling students.

* This course cannot be repeated once a student receives a Certificate of Completion.
<table>
<thead>
<tr>
<th>ROCP NO.</th>
<th>Title</th>
<th>Hours</th>
<th>Page</th>
</tr>
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<tbody>
<tr>
<td>71-10-80</td>
<td>Accounting Clerk (Upgrade)</td>
<td>120</td>
<td>78</td>
</tr>
<tr>
<td>71-50-84</td>
<td>Typist: Keyboarding/1</td>
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</tr>
<tr>
<td>71-50-86</td>
<td>Typist: Keyboarding/2</td>
<td>60</td>
<td>79</td>
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<tr>
<td>71-50-88</td>
<td>Typist: Keyboarding</td>
<td>100</td>
<td>79</td>
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<tr>
<td>75-15-50</td>
<td>Accounting/1</td>
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<tr>
<td>75-15-60</td>
<td>Accounting/2</td>
<td>90</td>
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<tr>
<td>75-15-70</td>
<td>Tax Preparation</td>
<td>90</td>
<td>81</td>
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<tr>
<td>75-35-50</td>
<td>Administrative Assistant/1: Office Procedures</td>
<td>90</td>
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<tr>
<td>75-35-60</td>
<td>Administrative Assistant/2: Business English</td>
<td>90</td>
<td>82</td>
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<td>75-35-70</td>
<td>Administrative Assistant/3: Business Math</td>
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<td>82</td>
</tr>
<tr>
<td>75-35-80</td>
<td>Computer Operation/1: Foundations</td>
<td>90</td>
<td>83</td>
</tr>
<tr>
<td>75-35-90</td>
<td>Computer Operation/2: Applications</td>
<td>90</td>
<td>83</td>
</tr>
<tr>
<td>75-45-50</td>
<td>Computer Operation/3: Database Management</td>
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<td>75-45-60</td>
<td>Computer Operation/4: Presentations</td>
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<td>84</td>
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<tr>
<td>75-45-70</td>
<td>Computer Operation/5 IC3 Certification Prep.</td>
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<td>85</td>
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<tr>
<td>75-45-80</td>
<td>Microsoft Office Specialist [MOS]/1: Word (Core/Expert Levels)</td>
<td>90</td>
<td>85</td>
</tr>
<tr>
<td>75-45-90</td>
<td>Microsoft Office Specialist [MOS]/2: Excel (Core/Expert Levels)</td>
<td>90</td>
<td>86</td>
</tr>
</tbody>
</table>

CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements


ACCOUNTING, BOOKKEEPING & AUDITING CLERK

These statistics combine the outlook for bookkeepers, accounting and auditing clerks.

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1,760,300</td>
<td>1,611,500</td>
<td>-8%</td>
<td>$38,390</td>
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California outlook and median earnings:

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>192,000</td>
<td>188,600</td>
<td>-2%</td>
<td>$44,050</td>
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</table>

Education requirements for employment:

- High school diploma or equivalent
- Training in a vocational school, related on-the-job experience, or an associate’s degree
Industry Sector 4  Business and Finance

ADMINISTRATIVE ASSISTANT

These statistics reflect the outlook for executive secretaries and executive administrative assistants.

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>2,457,000</td>
<td>2,521,000</td>
<td>+3%</td>
<td>$34,820</td>
</tr>
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</table>

California outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>222,300</td>
<td>245,100</td>
<td>+10%</td>
<td>$39,470</td>
</tr>
</tbody>
</table>

Education requirements for employment:

- High school diploma
- For some jobs, a 1-2 year program at a vocational school or community college

OFFICE CLERK, GENERAL

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>3,062,500</td>
<td>3,158,200</td>
<td>+3%</td>
<td>$30,580</td>
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California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>331,200</td>
<td>363,500</td>
<td>+10%</td>
<td>$32,810</td>
</tr>
</tbody>
</table>

Education requirements for employment:

- High school diploma

SECRETARIES AND ADMINISTRATIVE ASSISTANTS, EXCEPT LEGAL, MEDICAL AND EXECUTIVE

Nation-wide employment outlook and median earnings:

<table>
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</thead>
<tbody>
<tr>
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<td>2,521,100</td>
<td>+3%</td>
<td>$34,820</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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<tbody>
<tr>
<td>222,300</td>
<td>245,100</td>
<td>+10%</td>
<td>$39,470</td>
</tr>
</tbody>
</table>

Education requirements for employment:

- High school diploma or equivalent
- Some college, no degree

TAX PREPARER

Nation-wide employment outlook and median earnings:

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>90,400</td>
<td>91,800</td>
<td>+2%</td>
<td>$36,550</td>
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</table>

California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>12,700</td>
<td>13,400</td>
<td>+6%</td>
<td>$51,170</td>
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Education requirements for employment:

- High school diploma or equivalent
- On-the-job training
COURSE NO.: 71-10-80
Title: ACCOUNTING CLERK (UPGRADE)
JOB TITLE: Accounting Clerk
CAREER PATHWAY: Financial Services
CREDITS: 10
CBEDS TITLE: Accounting/Computer Accounting
COURSE DESCRIPTION:
This competency-based course introduces the principles and processes in manual accounting prior to computerized systems and cycle. It includes automated accounting (calculators and computers used for recording and reporting), critical thinking/problem solving, employability skills, assessment of skills, and ethical decision-making skills which prepare individuals for employment in accounting and related occupations. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires successful completion of Accounting coursework and Typist: Keyboarding (71-50-88). Completion of or concurrent enrollment in advanced typing and formatting with a demonstrated proficiency of 40 words per minute on a five-minute timed writing is also required.
Note:
For Perkins purposes this course has been designated as a capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 71-50-84
Title: TYPIST: KEYBOARDING/1
JOB TITLE: Typist
CAREER PATHWAY: Business Management
CREDITS: 5
CBEDS TITLE: Business Communications
COURSE DESCRIPTION:
This competency-based course is designed to introduce limited English proficient students to computer keyboarding skills. It contains definitions of common computer terminology. The course emphasizes the development of accuracy and speed, proper operation of a microcomputer, computer applications in an office, and basic exploration of employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires proficiency in oral and written English equivalent to completion of ESL Intermediate High/A; or concurrent enrollment in ESL Intermediate High/A (50-01-54).
Note:
For Perkins purposes this course has been designated as an introductory course.
*This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 71-50-86
Title: TYPIST: KEYBOARDING/2
JOB TITLE: Typist
CAREER PATHWAY: Business Management
CREDITS: 5
CBEDS TITLE: Business Communications

COURSE DESCRIPTION:
This competency-based course is designed to introduce students to skills used in office occupations. The course includes computer terminology, operation safety and maintenance, keyboarding review, document formatting and applications, office career preparation, and basic employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of Typist: Keyboarding/1 (71-50-84) or Typist: Keyboarding (71-50-88) course.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 71-50-88
Title: TYPIST: KEYBOARDING
JOB TITLE: Typist
CAREER PATHWAY: Business Management
CREDITS: 5
CBEDS TITLE: Business Communications

COURSE DESCRIPTION:
This competency-based course is an introduction to proper keyboarding techniques, mastery of alphabetic, numeric and symbol keys, and fundamental skill development of speed and accuracy. The course includes production of memoranda, letters in block style, simple tables centered horizontally and vertically, and short unbound reports. The course also emphasizes proper operation of a microcomputer. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
**ACCOUNTING/1**

**JOB TITLE:** Accounting Clerk

**CAREER PATHWAY:** Financial Services

**CREDITS:** 5

**CBEDS TITLE:** Accounting/Computer Accounting

**PREREQUISITES:**
Enrollment requires Algebra and Excel backgrounds.

**NOTE:**
For Perkins purposes this course has been designated as an introductory course.

*This course cannot be repeated once a student receives a Certificate of Completion.*

---

**ACCOUNTING/2**

**JOB TITLE:** Accounting Clerk

**CAREER PATHWAY:** Financial Services

**CREDITS:** 5

**CBEDS TITLE:** Accounting/Computer Accounting

**PREREQUISITES:**
Enrollment requires successful completion of the Accounting/1 (75-15-50) course.

**NOTE:**
For Perkins purposes this course has been designated as a concentrator/capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO. : 75-15-70
Title: TAX PREPARATION
JOB TITLE: Tax Preparer
CAREER PATHWAY: Financial Services
CREDITS: 5
CBEDS TITLE: Accounting/Computer Accounting

COURSE DESCRIPTION:
This competency-based course is a part of a sequence designed for accounting. It provides students with technical instruction and practical experience in tax preparation. It covers an orientation, workplace safety, resource management, business math, employability skills, and entrepreneurship. Emphasis is placed on the principles of taxation, the purposes of the federal, state, and local tax laws, the tax characteristics of various business entities, and the principles and procedures related to income tax preparation and filing, including tax calculations and deductions. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires accounting experience and basic computer skills.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO. : 75-35-50
Title: ADMINISTRATIVE ASSISTANT/1: OFFICE PROCEDURES
JOB TITLE: Administrative Assistant
CAREER PATHWAY: Business Management
CREDITS: 5
CBEDS TITLE: Business Communications

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for administrative assistant training. It provides students with technical instruction and practical experience in office procedures. It includes an orientation, workplace safety procedures, resource management, business ethics and attitudes, and employability skills. Emphasis is placed on the proper use of office tools and equipment including electronic calculating machines and reprographic equipment, telephone etiquette, email and mail processing, data and records management, the appropriate use of reference materials, and travel arrangements. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes this course has been designated an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **75-35-60**

**Title:** ADMINISTRATIVE ASSISTANT/2: BUSINESS ENGLISH

**JOB TITLE:** Administrative Assistant

**CAREER PATHWAY:** Business Management  
**CREDITS:** 5  
**CBEDS TITLE:** Business Communications  
**O*NET-SOC CODE:** 43-6014.00  
**HOURS:** 90  
**CBEDS NO.:** 4623

**COURSE DESCRIPTION:**

This competency-based course is the second in a sequence of three designed for administrative assistant training. It provides students with technical instruction and practical experience in written and oral business communications. It includes an introduction and reviews of workplace safety procedures and employability skills. Emphasis is placed on the rules of English grammar, spelling, and punctuation, and the applications of those rules in business writing and reporting. It also covers techniques in effective reading, listening and speaking. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires successful completion of the Administrative Assistant/1: Office Procedures (75-35-50) course.

**Note:**  
For Perkins purposes this course has been designated as a **concentrator/capstone** course.  
*This course cannot be repeated once a student receives a Certificate of Completion.*

---

COURSE NO.: **75-35-70**

**Title:** ADMINISTRATIVE ASSISTANT/3: BUSINESS MATH

**JOB TITLE:** Administrative Assistant

**CAREER PATHWAY:** Business Management  
**CREDITS:** 5  
**CBEDS TITLE:** Business Communications  
**O*NET-SOC CODE:** 43-6014.00  
**HOURS:** 90  
**CBEDS NO.:** 4623

**COURSE DESCRIPTION:**

This competency-based course is the last in a sequence of three designed for administrative assistant training. It provides students with technical instruction and practical experience in business mathematics. It includes an introduction, reviews of workplace safety procedures and employability skills, and entrepreneurial skills. Emphasis is placed on the addition, subtraction, multiplication, and division of whole numbers, decimals, fractions, and mixed numbers as well as the applications of the mathematical rules in the computation of word and money problems. This course also promotes speed and accuracy utilizing an electronic calculator. It develops proficiency in checking and verifying data and other business-related problems with and without the use of an electronic calculator. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires successful completion of the Administrative Assistant/2: Business English (75-35-60) course.

**Note:**  
For Perkins purposes this course has been designated as a **concentrator/capstone** course.  
*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 75-35-80
Title: COMPUTER OPERATION/1: FOUNDATIONS
JOB TITLE: Computer Operator
CAREER PATHWAY: Business Management
CREDITS: 5
CBEDS TITLE: Business Communications
COURSE DESCRIPTION:
This competency-based course is the first in a sequence designed for computer operation. It provides students with technical instruction and practical experience in basic computer operation. It includes an orientation, workplace safety, resource management, and employability skills. Emphasis is placed on the computer and its parts, computer operating systems, word processing, file management, Internet applications, e-mail, computer ethics and security, and virus and spyware protection. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
A minimum reading level of 6.0 as measured by the TABE D 9/10 reading comprehension test. If the student has not been enrolled in a keyboarding course or has not mastered 25 words per minute, it is recommended that the student be concurrently enrolled in a keyboarding course.

Note:
For Perkins purposes this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.

REVISED: August/2017

COURSE NO.: 75-35-90
Title: COMPUTER OPERATION/2: APPLICATIONS
JOB TITLE: Computer Operator
CAREER PATHWAY: Business Management
CREDITS: 5
CBEDS TITLE: Business Communications
COURSE DESCRIPTION:
This competency-based course is the second in a sequence of courses designed for computer operation. It provides students with technical instruction and practical experience in the applications of computer programs. It includes an orientation and employability skills. Emphasis is placed on the techniques for word processing and electronic spreadsheets. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of Computer Operation/1: Foundations (75-35-80) course.

Note:
For Perkins purposes this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **75-45-50**

**Title:** COMPUTER OPERATION/3: DATABASE MANAGEMENT

**JOB TITLE:** Computer Operator

**CAREER PATHWAY:** Business Management

**CREDITS:** 5

**CBEDS TITLE:** Business Communications

**COURSE DESCRIPTION:**

This competency-based course is the third in a sequence of five designed for computer operation. It provides students with technical instruction and practical experience in database management. It includes an introduction and reviews of workplace safety and employability skills. Emphasis is placed on basic filing, alphabetic indexing, cross-referencing techniques for on-file documents, application of system commands for file maintenance, and the creation, documentation, and protection of functional data files. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires successful completion of Computer Operation/2: Applications (75-35-90) course.

**Note:**

For Perkins purposes this course has been designated as a concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.

---

COURSE NO.: **75-45-60**

**Title:** COMPUTER OPERATION/4: PRESENTATIONS

**JOB TITLE:** Computer Operator

**CAREER PATHWAY:** Business Management

**CREDITS:** 5

**CBEDS TITLE:** Business Communications

**COURSE DESCRIPTION:**

This competency-based course is the fourth in a sequence of five designed for computer operation. It provides students with technical instruction and practical experience in presentation programs. It includes an introduction and reviews of workplace safety and employability skills. Emphasis is placed on the different types of presentation graphics software, understanding the parts of the PowerPoint screen, navigating an existing presentation, creating a new presentation using the basic principles of design, filling in text boxes, inserting and formatting objects to edit and improve the presentation graphics, adding private notes for the speaker, printing the slides, and tips to maximize the effect and utility of the presentation. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires successful completion of Computer Operation/2: Applications (75-35-90) course.

**Note:**

For Perkins purposes this course has been designated as a concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
**COMPUTER OPERATION/5: IC³ CERTIFICATION PREPARATION**

**JOB TITLE:** Computer Operator  
**CAREER PATHWAY:** Business Management  
**CREDITS:** 5  
**CBEDS TITLE:** Business Communications  

**COURSE DESCRIPTION:**

This competency-based course is the last in a sequence of five designed for computer operation. It provides students with technical instruction and practical experience in fulfilling the requirements of the Internet and Computing Core Certificate (IC³) Program, a global training and certification program for students and employees who want to excel in a digital world. IC³ Certification consists of three core certification exams: Computing Fundamentals, Key Applications, and Living On-Line. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Successful completion of the Computer Operation/1: Foundations (75-35-80), Computer Operation/2: Applications (75-35-90), Computer Operation/3: Database Management (75-45-50) and Computer Operation/4: Presentations (75-45-60) courses highly recommended.

**Note:**  
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.

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**MICROSOFT OFFICE SPECIALIST [MOS] /1: WORD (CORE/EXPERT LEVELS)**

**JOB TITLE:** Computer Operator  
**CAREER PATHWAY:** Business Management  
**CREDITS:** 5  
**CBEDS TITLE:** Business Communications  

**COURSE DESCRIPTION:**

This competency-based course is the first in a sequence of two designed to meet the Microsoft Office Specialist (MOS) certification requirements. It provides students with technical instruction and practical experience in two levels of Word training—core and expert. Instruction includes an orientation, workplace safety, and employability skills. Emphasis is placed on working with texts, paragraphs, and documents, as well as file management, use of tables, and working with pictures and charts for the core level. The expert level emphasizes working with paragraphs and documents, using tables, working with pictures and charts, using mail merge and advanced features, and collaborating with work groups. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires successful completion of the Computer Operation/5: IC³ Certification Preparation (75-45-70) course.

**Note:**  
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 75-45-90

Title: MICROSOFT OFFICE SPECIALIST [MOS]/2: EXCEL (CORE/EXPERT LEVELS)
JOB TITLE: Computer Operator
CAREER PATHWAY: Business Management
CREDITS: 5
CBEDS TITLE: Business Communications
CREDITS: 5

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of two designed to meet the Microsoft Office Specialist (MOS) certification requirements. It provides students with technical instruction and practical experience in two levels of Excel training—core and expert. Instruction includes an introduction, resource management, business math, entrepreneurship, and reviews of workplace safety and employability skills. Emphasis is placed on working with cells and files, formatting worksheets, page setup and printing, working with worksheets and workbooks and using charts and objects for the core level. The expert level emphasizes the use of templates and multiple workbooks, formatting numbers, printing workbooks, working with toolbars, using macros, displaying and formatting data, using analysis tools, and collaborating with workgroups. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of Microsoft Office Specialist [MOS]/1: Word (Core/Expert Levels) (75-45-80) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
Industry Sector 5 | Education, Child Development and Family Services

<table>
<thead>
<tr>
<th>ROCP NO.</th>
<th>Title</th>
<th>Hours</th>
<th>Page</th>
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<tbody>
<tr>
<td>72-10-80</td>
<td>ECE: Infant Toddler Studies</td>
<td>150</td>
<td>10</td>
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<tr>
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<td>Early Childhood Education Assistant/1</td>
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<td>72-15-50</td>
<td>Child Development/1: Foundations</td>
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<td>72-15-60</td>
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<td>Education/4: Special Education</td>
<td>90</td>
<td>108</td>
</tr>
</tbody>
</table>

CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements


CHILDCARE WORKER

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1,260,600</td>
<td>1,329,900</td>
<td>+6%</td>
<td>$21,170</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>101,600</td>
<td>111,500</td>
<td>+10%</td>
<td>$25,190</td>
</tr>
</tbody>
</table>

Education requirements for employment:

• In some cases, a high school diploma or equivalent is required

TEACHING ASSISTANT (Elementary, Secondary and Special Education)

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1,234,100</td>
<td>1,312,800</td>
<td>+6%</td>
<td>$25,410</td>
</tr>
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</table>

California outlook and median earnings:

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>143,900</td>
<td>159,000</td>
<td>+11%</td>
<td>$31,550</td>
</tr>
</tbody>
</table>

Education requirements for employment:

• High school diploma or equivalent
• Associate’s degree
COURSE NO.: 72-10-80
Title: EARLY CHILDHOOD EDUCATION: INFANT/TODDLER STUDIES
JOB TITLE: ECE Infant/Toddler Caregiver
CAREER PATHWAY: Education
CREDITS: 10
CBEDS TITLE: Teaching Careers or Careers in Education
COURSE DESCRIPTION:
This competency-based course contains major principles of infant/toddler caregiving based on knowledge of human growth and development and infant/toddler needs. This course provides a framework for infant and toddler caregivers, reinforces skills and concepts on appropriate curriculum, and describes guidance techniques and parent involvement for infant care programs. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:  
Computer skills are recommended.

Note:  
For Perkins purposes this course has been designated as a concentrator course. Candidates for positions with public agencies are subject to background investigations: candidates with a record of criminal convictions and/or history of driving violations may be considered ineligible for employment. In addition, based on the Federal Omnibus Transportation Employee Testing of 1994, applicants with public agencies may be required to undergo mandatory drug and alcohol prior to and during employment.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 72-10-90
Title: EARLY CHILDHOOD EDUCATION ASSISTANT/1
JOB TITLE: ECE Assistant
CAREER PATHWAY: Child Development
CREDITS: 25
CBEDS TITLE: Careers in Child Development
COURSE DESCRIPTION:
This competency-based course provides training for the paraprofessional seeking employment as a Child Care Aide in nursery schools, child care centers and child development programs. The State of California requires classroom instruction in both child growth and development, and child care and guidance to earn credit for the course. This course also includes guided observations and fieldwork experience with groups of young children. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:  
Computer skills are recommended.

Note:  
For Perkins purposes this course has been designated as an introductory/concentrator course. Evidence of good health, a clear tuberculosis screening, the ability to physically perform the duties required and a screening for criminal conviction prior to contact with children in a community classroom setting are also required.

* This course cannot be repeated once a student receives a Certificate of Completion.
<table>
<thead>
<tr>
<th>COURSE NO.:</th>
<th>Title: CHILD DEVELOPMENT/1: FOUNDATIONS</th>
<th>JOB TITLE: ECE Assistant</th>
<th>CAREER PATHWAY: Child Development</th>
<th>CREDITS: 5</th>
<th>O*NET-SOC CODE: 39-9011.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-15-50</td>
<td></td>
<td></td>
<td>CBEDS TITLE: Teaching Careers or Careers in Education</td>
<td>HOURS: 90</td>
<td>CBEDS NO.: 4401</td>
</tr>
</tbody>
</table>

**COURSE DESCRIPTION:**
This competency-based course is the first in a sequence of three designed for early childhood education. It provides students with project-based experiences in child development programs. Instruction includes an orientation, workplace safety policies and procedures, techniques on communications and critical thinking, and employability skills. Emphasis is placed on the theories of human development and growth. Field observations and experiences with infants, toddlers, and preschoolers are provided as application components of studying child development program goals, guidance techniques, health and nutrition practices, indoor and outdoor environments, and special education requirements. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires employment-level competency in reading, written and oral communications, math, and computer operation and/or recommendation.

**Note:**
For Perkins purposes this course has been designated as an *introductory* course. Evidence of good health, a clear tuberculosis screening, the ability to physically perform the duties required and a screening for criminal conviction prior to contact with children in a community classroom setting are also required.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: **72-15-60**  

**Title:** CHILD DEVELOPMENT/2: CURRICULUM  
**JOB TITLE:** ECE Assistant  
**CAREER PATHWAY:** Child Development  
**CREDITS:** 5  
**CBEDS TITLE:** Teaching Careers or Careers in Education  
**O*NET-SOC CODE:** 39-9011.00  
**HOURS:** 90  
**CBEDS NO.:** 4401  

**COURSE DESCRIPTION:**  
This competency-based course is the second in a sequence of three designed for early childhood education. It provides students with project-based experiences in child development curricula. Instruction includes an introduction and reviews of workplace safety policies and procedures and employability skills. Emphasis is placed on the principles and practices of effective curriculum planning including play-based curricular activities and activities that enhance familial and societal relationships of students. Field observations and experiences with groups of young children are included as part of the planning, delivery, and evaluation of the health, arts, language arts, math, science, social studies, and physical education curricula. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.  

**PREREQUISITES:**  
Enrollment requires successful completion of the Child Development/1: Foundations (72-15-50) course.  

**Note:**  
For Perkins purposes this course has been designated as a concentrator course. Evidence of good health, a clear tuberculosis screening, the ability to physically perform the duties required and a screening for criminal conviction prior to contact with children in a community classroom setting are also required.  

*This course cannot be repeated once a student receives a Certificate of Completion*
COURSE NO. : 72-15-70
Title: CHILD DEVELOPMENT/3: SUPERVISION
JOB TITLE: ECE Supervisor
CAREER PATHWAY: Child Development
CREDITS: 5
CBEDS TITLE: Teaching Careers or Careers in Education
O*NET-SOC CODE: 39-9011.00
HOURS: 90
CBEDS NO.: 4401
COURSE DESCRIPTION:
This competency-based course is the last in a sequence of three designed for early childhood education. It provides students with project-based experiences in child development program supervision. Instruction includes an introduction and reviews of workplace safety policies and procedures, techniques on communications and critical thinking, and employability skills. Emphasis is placed on program development, supervision, evaluation, staff and volunteer recruitment and retention, staff relations, facility maintenance, business practices, staff and student health and nutrition, parental involvement, and public relations. Field observations and experiences are included as part of the evaluation of a program’s supervisory policies and practices. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires successful completion of the Child Development/2: Curriculum (72-15-60) course.
Note:
For Perkins purposes this course has been designated as a capstone course.
Evidence of good health, a clear tuberculosis screening, the ability to physically perform the duties required and a screening for criminal conviction prior to contact with children in a community classroom setting are also required.
*This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 72-20-50

Title: EARLY CHILDHOOD EDUCATION ASSISTANT/2

JOB TITLE: ECE Assistant

CAREER PATHWAY: Child Development

CREDITS: 25

CBEDS TITLE: Careers in Child Development

COURSE DESCRIPTION:

This competency-based course is designed to provide training for the Child Care Aide or paraprofessional seeking employment as a Child Care Teacher Assistant in nursery schools, child care centers, and child development programs. This course provides the classroom instruction and training required by the State of California for child care and guidance in home, school and community. Instruction includes guided observations and fieldwork experience with groups of young children. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires successful completion of Early Childhood Education Assistant/1 (72-10-90) course. Computer skills are recommended.

Note:

For Perkins purposes this course has been designated as a capstone course. Evidence of good health, a clear tuberculosis screening, the ability to physically perform the duties required and a screening for criminal conviction prior to contact with children in a community classroom setting are also required.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 72-25-80

Title: EDUCATION/4: SPECIAL EDUCATION

JOB TITLE: Special Ed Teacher Assistant

CAREER PATHWAY: Education

O*NET-SOC CODE: 25-9041.00

CREDITS: 5

CBEDS TITLE: Teaching Careers or Careers in Education

CBEDS NO.: 4401

HOURS: 90

COURSE DESCRIPTION:

This competency-based course is the last in a sequence of four designed for teacher training. It provides students with project-based experiences in special education programs. Instruction includes an introduction, reviews of workplace safety policies and procedures, communication skills, critical thinking skills, and employability skills, and resource management. Emphasis is placed on the policies, principles, and practices in special education highlighted by portfolio development based on field observations. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires successful completion of the Education/3: Secondary Ed (72-25-70) course.

Note:

For Perkins purposes this course has been designated as a capstone course.

Evidence of good health, a clear tuberculosis screening, the ability to physically perform the duties required and a screening for criminal conviction prior to contact with children in a community classroom setting are also required.

* This course cannot be repeated once a student receives a Certificate of Completion
## Industry Sector 6 | Energy, Environment and Utilities

<table>
<thead>
<tr>
<th>ROCP NO.</th>
<th>Title</th>
<th>Hours</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-55-50</td>
<td>Electronics/1</td>
<td>90</td>
<td>97</td>
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<tr>
<td>72-55-60</td>
<td>Electronics/2</td>
<td>90</td>
<td>97</td>
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<tr>
<td>72-55-70</td>
<td>Electronics/3</td>
<td>180</td>
<td>98</td>
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<tr>
<td>72-55-80</td>
<td>Mobile Electronics/1</td>
<td>90</td>
<td>99</td>
</tr>
<tr>
<td>72-55-90</td>
<td>Mobile Electronics/2</td>
<td>90</td>
<td>99</td>
</tr>
<tr>
<td>72-65-50</td>
<td>Photovoltaics/1</td>
<td>90</td>
<td>111</td>
</tr>
<tr>
<td>72-65-60</td>
<td>Photovoltaics/2</td>
<td>90</td>
<td>111</td>
</tr>
<tr>
<td>72-65-70</td>
<td>Photovoltaics/3</td>
<td>180</td>
<td>112</td>
</tr>
<tr>
<td>72-75-50</td>
<td>Electrician/1: Fundamentals</td>
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<td>102</td>
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<tr>
<td>72-75-55</td>
<td>Electrician/2: Wiring and Codes</td>
<td>120</td>
<td>103</td>
</tr>
<tr>
<td>72-75-60</td>
<td>Electrician/3: Wiring Techniques</td>
<td>240</td>
<td>103</td>
</tr>
<tr>
<td>72-75-65</td>
<td>Electrician/4: Industrial</td>
<td>360</td>
<td>104</td>
</tr>
<tr>
<td>72-75-70</td>
<td>Electric Motor Controls</td>
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<td>105</td>
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<td>72-75-80</td>
<td>Powerline Systems/1</td>
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<td>105</td>
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<td>72-75-85</td>
<td>Powerline Systems/2</td>
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<td>106</td>
</tr>
<tr>
<td>72-75-90</td>
<td>Powerline Systems/3</td>
<td>260</td>
<td>106</td>
</tr>
<tr>
<td>72-85-50</td>
<td>Energy Auditing</td>
<td>90</td>
<td>107</td>
</tr>
<tr>
<td>72-85-80</td>
<td>Technology Integration/1: Copper and FIOS Cabling</td>
<td>180</td>
<td>108</td>
</tr>
<tr>
<td>72-85-85</td>
<td>Technology Integration/2: Automation, Voice, and Entertainment</td>
<td>90</td>
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</tr>
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<td>72-85-90</td>
<td>Technology Integration/3: Security, HVAC, and Other Systems</td>
<td>180</td>
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<tr>
<td>79-35-80</td>
<td>Mobile Electronics Technician/1</td>
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<td>111</td>
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<tr>
<td>79-35-85</td>
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<tr>
<td>79-85-53</td>
<td>Powerline Systems</td>
<td>90</td>
<td>112</td>
</tr>
</tbody>
</table>

## CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements


### ELECTRICAL POWERLINE INSTALLERS & REPAIRERS

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>118,600</td>
<td>131,600</td>
<td>+11%</td>
<td>$68,010</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>6,800</td>
<td>8,000</td>
<td>+18%</td>
<td>$104,170</td>
</tr>
</tbody>
</table>

**Education requirements for employment:**

- Post-secondary education is not required
**ELECTRICIAN**

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>628,800</td>
<td>714,200</td>
<td>+14%</td>
<td>$52,720</td>
</tr>
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</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>58,400</td>
<td>77,400</td>
<td>+33%</td>
<td>$63,420</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Post-secondary education is not required

**ELECTRONIC HOME ENTERTAINMENT EQUIPMENT INSTALLERS AND REPAIRERS**

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>29,600</td>
<td>30,300</td>
<td>+2%</td>
<td>$37,410</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2,600</td>
<td>2,700</td>
<td>+4%</td>
<td>$39,410</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Training in a vocational school, related on-the-job experience, or an associate’s degree

**ELECTRONICS ENGINEERING TECHNICIAN**

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>139,400</td>
<td>136,600</td>
<td>-2%</td>
<td>$62,190</td>
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</tbody>
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California outlook and median earnings:

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>22,900</td>
<td>24,400</td>
<td>+7%</td>
<td>$64,740</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Training in a vocational school, related on-the-job experience, or an associate’s degree

**ENERGY AUDITOR**

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>998,000</td>
<td>1,046,000</td>
<td>+5%</td>
<td>$69,040</td>
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California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>130,900</td>
<td>150,700</td>
<td>+15%</td>
<td>$75,360</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Completion of a one or two-year training program with on-the-job experience
SECURITY AND FIRE ALARM SYSTEMS INSTALLERS
Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>64,000</td>
<td>72,300</td>
<td>+13%</td>
<td>$44,330</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>7,400</td>
<td>9,600</td>
<td>+30%</td>
<td>$48,470</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Training in a vocational school, related on-the-job experience, or an associate's degree

SOLAR PHOTOVOLTAIC INSTALLER
Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>5,900</td>
<td>7,400</td>
<td>+24%</td>
<td>$39,240</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2,900</td>
<td>4,200</td>
<td>+45%</td>
<td>$42,340</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- High School diploma or equivalent

TELECOMMUNICATIONS EQUIPMENT INSTALLERS AND REPAIRERS
Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>218,600</td>
<td>210,800</td>
<td>-4%</td>
<td>$53,640</td>
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California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>29,500</td>
<td>30,500</td>
<td>+3%</td>
<td>$56,810</td>
</tr>
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</table>

Education requirements for employment:
- Training in a vocational school, related on-the-job experience, or an associate's degree
COURSE NO.: 72-55-50
Title: ELECTRONICS/1
JOB TITLE: Electronics Technician
CAREER PATHWAY: Telecommunications
CREDITS: 5
CBEDS TITLE: Introduction to Electronics Technology
O*NET-SOC CODE: 17-3023.01
HOURS: 90
CBEDS NO.: 5551

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for electronics. It provides students with project-based experiences in electromechanical installation and maintenance. Instruction includes an orientation, workplace safety policies and procedures, trade mathematics, resource management, and employability skills. Emphasis is placed on the safe use, maintenance, and storage of electronic tools and equipment, identification and fabrication of terminals, assembly and inspection of the different types of electrical connectors for quality assurance, principles and designs of direct current (DC) circuits, interpretation of blueprints and schematics, and basic soldering and de-soldering techniques. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

Note:
For Perkins purposes, this course has been designated as an introductory course.
*This course cannot be repeated once a student receives a Certificate of Completion.

---

COURSE NO.: 72-55-60
Title: ELECTRONICS/2
JOB TITLE: Electronics Technician
CAREER PATHWAY: Telecommunications
CREDITS: 5
CBEDS TITLE: Introduction to Electronics Technology
O*NET-SOC CODE: 17-3023.01
HOURS: 90
CBEDS NO.: 5551

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of three designed for electronics. It provides students with project-based experiences in electromechanical installation and maintenance. Instruction includes an introduction and reviews of workplace safety policies and procedures, trade mathematics, and employability skills. Emphasis is placed on advanced soldering techniques, principles and designs of alternating current (AC) circuits, principles and applications of capacitance, inductance, advanced alternating current (AC) electronics, and solid electronics, and the construction and testing techniques for semiconductors. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Electronics/1 (72-55-50) course.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.
*This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **72-55-70**

Title: **ELECTRONICS/3**  
JOB TITLE: Electrician  
CAREER PATHWAY: Energy and Power Technology  
CREDITS: 20  
CBEDS TITLE: Introduction to Electronics Technology  
O*NET-SOC CODE: 17-3023.01  
HOURS: 240  
CBEDS NO.: 5583

**COURSE DESCRIPTION:**
This competency-based course is the third in a sequence of five designed for electrical technician and electrician trainees. It provides students with technical instruction and practical experience in wiring. It focuses on the selection and utilization of electrical instrumentation, proper interpretation of wire color connections, proper wiring techniques, and the types, features, and functions of blueprint drawings and prints. It also includes workplace safety. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires completion of the Electrician/2: Wiring and Codes (72-75-55) course.

**Note:**
For Perkins purposes, this course has been designated as a concentrator/capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
Energy, Environment and Utilities

6

COURSE NO.: 72-55-80
Title: MOBILE ELECTRONICS/1
JOB TITLE: Electronics Technician
CAREER PATHWAY: Telecommunications
CREDITS: 5
CBEDS TITLE: Introduction to Electronics Technology
O*NET-SOC CODE: 17-3023.01
HOURS: 90
CBEDS NO.: 5551

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of two designed for mobile electronics. It provides students with project-based experiences in electromechanical installation and maintenance. Technical instruction includes an orientation, workplace safety policies and procedures, resource management, and employability skills. Emphasis is placed on the principles of electronics, proper use and maintenance of testing equipment, principles of auto electricity, and the installation, operational, and troubleshooting techniques for car audio and video, antennas and speakers, and enclosure designs. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

Note:
For Perkins purposes, this course has been designated as an introductory/concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 72-55-90
Title: MOBILE ELECTRONICS/2
JOB TITLE: Electronics Technician
CAREER PATHWAY: Telecommunications
CREDITS: 5
CBEDS TITLE: Introduction to Electronics Technology
O*NET-SOC CODE: 17-3023.01
HOURS: 90
CBEDS NO.: 5551

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of two designed for mobile electronics. It provides students with project-based experiences in electromechanical installation and maintenance. Technical instruction includes an introduction and reviews of workplace safety policies and procedures, employability skills, trade mathematics, principles of electronics, types and uses of testing equipment, and auto electricity principles. Emphasis is placed on the installation, operational, and troubleshooting techniques for mobile security systems, navigation systems, and wireless communication systems. Coverage also includes test preparation lessons for passage of the Mobile Electronics Certified Professional (MECP) examination. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Mobile Electronics/1 (72-55-80) course.

Note:
For Perkins purposes, this course has been designated as a concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 72-65-50

Title: PHOTOVOLTAICS/1

JOB TITLE: Photovoltaics Technician

CAREER PATHWAY: Energy and Power Technology

CREDITS: 5

CBEDS TITLE: Energy and Environmental Technology

O*NET-SOC CODE: 47-2231.00

HOURS: 90

CBEDS NO.: 5691

COURSE DESCRIPTION:

This competency-based course is the first in a sequence of three designed for alternative and renewable energy technology. It provides students with project-based experiences in photovoltaics (PV). Technical instruction includes workplace safety policies and procedures, resource management, trade mathematics, and employability skills. Emphasis is placed on photovoltaic energy as a viable source of alternative energy, basic electrical theories, electrical wiring principles and procedures, solar energy, and the operational fundamentals of PV modules. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

Note:

For Perkins purposes, this course has been designated as an introductory course.

Tasks designated by an asterisk (*) meet the North American Board of Certified Energy Practitioners (NABCEP) 10 Learning Objectives for the PV Entry Level exam. The competencies of this course are aligned with the knowledge requirements set by the NABCEP’s Entry Level 10 Learning Objectives.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 72-65-60
Title: PHOTOVOLTAICS/2
JOB TITLE: Photovoltaic Technician
CAREER PATHWAY: Energy and Power Technology
O*NET-SOC CODE: 47-2231.00
CREDITS: 5
CBEDS TITLE: Energy and Environmental Technology
CBEDS NO.: 5691
HOURS: 90

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of three designed for alternative and renewable energy technology. It provides students with project-based experiences in photovoltaic (PV) system selection, site selection, and mechanical design adaptation. Technical instruction includes an introduction and reviews of workplace safety policies and procedures, resource management, trade mathematics, and employability skills. Emphasis is placed on PV system hardware and component evaluation, site assessment techniques for finding suitable location for PV systems, sizing/costing/selection of PV systems based on site assessment results, and PV system mechanical design criteria and adaptations. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires the successful completion of the Photovoltaics/1 (72-65-50) course. Tasks designated by an asterisk (*) meet the North American Board of Certified Energy Practitioners (NABCEP) 10 Learning Objectives for the PV Entry Level exam. The competencies of this course are aligned with the knowledge requirements set by the NABCEP’s Entry Level 10 Learning Objectives.

Note:
For Perkins purposes, this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO. : 72-65-70
Title: PHOTOVOLTAICS/3
JOB TITLE: Photovoltaic Technician
CAREER PATHWAY: Energy and Power Technology
CREDITS: 15
CBEDS TITLE: Energy and Environmental Technology

COURSE DESCRIPTION:
This competency-based course is the last in a sequence of three designed for alternative and renewable energy technology. It provides students with project-based experiences in photovoltaic (PV) installation. Technical instruction includes an introduction and reviews of workplace safety procedures, resource management, and trade mathematics as well as basic entrepreneurship. Emphasis is placed on the electrical design adaptations for PV systems, installation of subsystems and components, maintenance procedures and troubleshooting techniques for PV system malfunctions, and exploration of local, national, and global markets for PV applications. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Photovoltaics/2 (72-65-60) course.

Note:
For Perkins purposes, this course has been designated as a **capstone** course.
Tasks designated by an asterisk (*) meet the North American Board of Certified Energy Practitioners (NABCEP) 10 Learning Objectives for the PV Entry Level exam. The competencies of this course are aligned with the knowledge requirements set by the NABCEP's Entry Level 10 Learning Objectives.

* **This course cannot be repeated once a student receives a Certificate of Completion.**

COURSE NO. : 72-75-50
Title: ELECTRICIAN/1: FUNDAMENTALS
JOB TITLE: Electrician
CAREER PATHWAY: Energy and Power Technology
CREDITS: 10
CBEDS TITLE: Introduction to Electrical Power Systems

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of five designed for electrical technician and electrician trainees. It provides students with technical instruction and practical experience in workplace safety, trade mathematics, fundamental electrical concepts, storage batteries in direct current (DC) circuits, Ohm’s Law, alternating current (AC), and resource management. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes this course has been designated as an **introductory** course.

* **This course cannot be repeated once a student receives a Certificate of Completion.**
COURSE NO.: 72-75-55

Title: ELECTRICIAN/2: WIRING AND CODES

JOB TITLE: Electrician

CAREER PATHWAY: Energy and Power Technology

CREDITS: 10

CBEDS TITLE: Introduction to Electrical Power Systems

O*NET-SOC CODE: 47-2111.00

HOURS: 120

CBEDS NO.: 5583

COURSE DESCRIPTION:

This competency-based course is the second in a sequence of five designed for electrical technician and electrician trainees. It provides students with technical instruction and practical experience in electrical wiring and codes. It focuses on safety, permit requirements and code compliance, wiring design and protection, wiring materials and methods, equipment for general use, special occupancies, special equipment, special conditions, communication systems sanctioned by the National Electrical Code (NEC), and the interpretation of data found in the NEC tables. It also covers a review of the practical aspects of resource management when wiring. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires completion of the Electrician/1: Fundamentals (72-75-50) course.

Note:

For Perkins purposes this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 72-75-60

Title: ELECTRICIAN/3: WIRING TECHNIQUES

JOB TITLE: Electrician

CAREER PATHWAY: Energy and Power Technology

CREDITS: 20

CBEDS TITLE: Introduction to Electrical Power Systems

O*NET-SOC CODE: 47-2111.00

HOURS: 240

CBEDS NO.: 5583

COURSE DESCRIPTION:

This competency-based course is the fourth in a sequence of five designed for electrical technician and electrician trainees. It provides students with technical instruction and practical experience in electrical wiring and codes. It focuses on safety, permit requirements and code compliance, wiring design and protection, wiring materials and methods, equipment for general use, special occupancies, special equipment, special conditions, communication systems sanctioned by the National Electrical Code (NEC), and the interpretation of data found in the NEC tables. It also covers a review of the practical aspects of resource management when wiring. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires completion of the Electrician/3: Wiring Techniques (72-75-60) course.

Note:

For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
Title: **ELECTRICIAN/ 4: industrial**

**JOB TITLE:** Electrician

**CAREER PATHWAY:** Energy and Power Technology

**CREDITS:** 20

**CBEDS TITLE:** Introduction to Electrical Power Systems

**O*NET-SOC CODE:** 47-2111.00

**HOURS:** 240

**CBEDS NO.:** 5583

**COURSE DESCRIPTION:**

This competency-based course is the fourth in a sequence of five designed for electrical technician and electrician trainees. It provides students with technical instruction and practical experience in workplace safety, code-approved wiring techniques, AC theory, and resource management. It focuses on AC and DC motors and generators, single-phase motors, three-phase power systems and machines, testing procedures on live circuits, motor control, troubleshooting and maintenance techniques. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires completion of the Electrician/3: Wiring Techniques (72-75-60) course.

**Note:**

For Perkins purposes this course has been designated as a capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 72-75-70
Title: ELECTRIC MOTOR CONTROLS
JOB TITLE: Electrician
CAREER PATHWAY: Energy and Power Technology  O*NET-SOC CODE: 47-2111.00
CREDITS: 30  HOURS: 360
CBEDS TITLE: Introduction to Electrical Power Systems  CBEDS NO.: 5583

COURSE DESCRIPTION:
This competency-based course is the last in a sequence of five designed for electrical technician and electrician trainees. It provides students with technical instruction and practical experience in motor operation. It focuses on the features, functions, and control of magnetic full voltage starters. It also covers the basic operation of manual motor starters, the operation and application of motor overload devices and control pilot devices, the use and troubleshooting techniques for two-wire, three-wire, and separate control circuits, and employability skills. The course also features a review of classroom and workplace safety procedures and resource management. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Electrician/4: Industrial (72-75-65) course.

Note:
For Perkins purposes this course has been designated as a capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.

REVISED: August/2017

COURSE NO.: 72-75-80
Title: POWERLINE SYSTEMS/1
JOB TITLE: Electrical Powerline Mechanic  O*NET-SOC CODE: 49-9051.00
CAREER PATHWAY: Energy and Power Technology
CREDITS: 5  HOURS: 90
CBEDS TITLE: Principles of Power and Energy  CBEDS NO.: 5577

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for powerline technology. Instruction includes an orientation, workplace safety policies and procedures, resource management, trade mathematics, and employability skills. Emphasis is placed on the theories and general applications of direct current (DC), alternating current (AC), capacitance, and inductance. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

Note:
For Perkins purposes, this course has been designated as an introductory course.
* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 72-75-85
Title: **POWERLINE SYSTEMS/2**
JOB TITLE: Electrical Powerline Mechanic
CAREER PATHWAY: Energy and Power Technology
CREDITS: 20
CBEDS TITLE: Principles of Power and Energy

**COURSE DESCRIPTION:**
This competency-based course is the second in a sequence of three designed for powerline technology. It provides students with project-based experiences in basic powerline theories and techniques. Technical instruction includes an introduction and reviews of resource management, trade mathematics, and employability skills. Emphasis is placed on beginning rigging techniques, material preparation and delivery distribution system construction, overall powerline system scheme, proper use and maintenance of tools, basic pole climbing techniques, and initial preparation for industry examination. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires successful completion of the Powerline Systems/1 (72-75-80) course.

**Note:**
For Perkins purposes, this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.

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COURSE NO.: 72-75-90
Title: **POWERLINE SYSTEMS/3**
JOB TITLE: Electrical Powerline Mechanic
CAREER PATHWAY: Energy and Power Technology
CREDITS: 20
CBEDS TITLE: Principles of Power and Energy

**COURSE DESCRIPTION:**
This competency-based course is the last in a sequence of three designed for powerline technology. It provides students with project-based experiences in advanced powerline theories and techniques. Technical instruction includes an introduction and reviews of workplace safety policies and procedures, resource management, trade mathematics, and employability skills. Emphasis is placed on advanced powerline system applications of direct current (DC), alternating current (AC), capacitance, and inductance. Techniques used for basic electrical wiring, advanced rigging, and advanced pole climbing are also emphasized. Instruction on entrepreneurial skills and industry examination preparation is also included. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires successful completion of the Powerline Systems/2 (72-75-85) course.

**Note:**
For Perkins purposes, this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 72-85-50
Title: ENERGY AUDITING
JOB TITLE: Energy Auditor
CAREER PATHWAY: Energy and Power Technology
CREDITS: 5
CBEDS TITLE: Introduction to Electrical Power Systems
COURSE DESCRIPTION:
This competency-based course is designed for energy auditing. It provides students with project-based experiences in residential and commercial energy management, supply, and conservation. Technical instruction includes an orientation, workplace safety policies and procedures, and employability skills. Emphasis is placed on the principles and sources of energy, data collection for energy auditing, resource accounting for energy efficiency, establishing baselines, taking inventories, lighting audits, and water usage audits. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

Note:
For Perkins purposes, this course has been designated as a concentrator/capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 72-85-80
Title: TECHNOLOGY INTEGRATION/1: COPPER AND FIOS CABLING
JOB TITLE: Home Technology Integrator
CAREER PATHWAY: Telecommunications
CREDITS: 15
CBEDS TITLE: Telecommunications
COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for home technology integration (HTI). It provides students with project-based experiences in copper and fiber optic cable designs. Technical instruction includes an orientation, workplace safety principles and procedures, resource management, trade mathematics, and employability skills. Emphasis is placed on wiring and "rough-in" tools and equipment, residential AC wiring and lighting, copper low-voltage structured wiring, local area networks (LAN) for home and small offices, LAN administration for copper and FIOS, broadband internet access technologies, and fiber optics communication signal transmission. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

Note:
For Perkins purposes, this course has been designated as an introductory course. Sections designated by an asterisk (*) contain competencies that meet the CEA-CompTIA DHTI+ requirements. The said competencies are designed to prepare students to configure, integrate, maintain, troubleshoot, and comprehend the basic design concepts of electronic and digital home systems.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 72-85-85
Title: TECHNOLOGY INTEGRATION/2: AUTOMATION, VOICE, AND ENTERTAINMENT
JOB TITLE: Home Technology Integrator
CAREER PATHWAY: Telecommunications
CREDITS: 5
CBEDS TITLE: Telecommunications
CBEDS NO.: 4618
COURSE DESCRIPTION:
This competency-based course is the second in a sequence of three designed for home technology integration (HTI). It provides students with project-based experiences in automation, voice, and entertainment systems integration. Technical instruction includes an introduction, workplace safety principles and procedures, and reviews of resource management and employability skills. Emphasis is placed on residential automation systems integration, design concepts for residential telecommunications devices, and audio and video systems design concepts. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Technology Integration/1: Copper and FIOs Cabling (72-85-80) course.

Note:
For Perkins purposes, this course has been designated as a concentrator course. Sections designated by an asterisk (*) contain competencies that meet the CEA-CompTIA DHTI+ requirements. The said competencies are designed to prepare students to configure, integrate, maintain, troubleshoot, and comprehend the basic design concepts of electronic and digital home systems.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO. : **72-85-90**

**Title:** TECHNOLOGY INTEGRATION/3: SECURITY, HVAC, AND OTHER SYSTEMS

**JOB TITLE:** Home Technology Integrator

**CAREER PATHWAY:** Telecommunications

**CREDITS:** 15

**O*NET-SOC CODE:** 49-2098.00

**HOURS:** 180

**CBEDS TITLE:** Telecommunications

**CBEDS NO.:** 4618

**COURSE DESCRIPTION:**

This competency-based course is the third in a sequence of three designed for home technology integration (HTI). It provides students with project-based experiences in security, heating, ventilations, and air conditioning (HVAC) and other integrated home systems. Technical instruction includes an introduction, a review of resource management, and an introduction to entrepreneurship. Emphasis is placed on home security and access control systems, HVAC management systems, home irrigation and pool management systems, lighting and lighting control systems, and miscellaneous devices. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires successful completion of the Technology Integration/2: Automation, Voice, and Entertainment (72-85-85) course.

**Note:**

For Perkins purposes, this course has been designated as a **capstone** course. Sections designated by an asterisk (*) contain competencies that meet the CEA-CompTIA DHTI+ requirements. The said competencies are designed to prepare students to configure, integrate, maintain, troubleshoot, and comprehend the basic design concepts of electronic and digital home systems.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 79-35-80
Title: MOBILE ELECTRONICS TECHNICIAN/1
JOB TITLE: Electronics Technician
CAREER PATHWAY: Telecommunications
CREDITS: 15
CBEDS TITLE: Introduction to Electronics Technology
O*NET-SOC CODE: 17-3023.01
HOURS: 180
CBEDS NO.: 5551
COURSE DESCRIPTION:
This competency-based course provides instruction and experience in hands-on installation methods for mobile electronics. Instruction includes information on basic electronics principles, test equipment, and basic automobile mechanics, and the principles, operation, and installation of vehicle audio systems. It also reviews career opportunities and employment skills necessary in the mobile electronics trade. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a 7.0 reading level as measured by the TABE D 9/10 test and math skills equivalent to Math 1 (53-03-75) course.

Note:
For Perkins purposes, this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 79-35-85
Title: MOBILE ELECTRONICS TECHNICIAN/2
JOB TITLE: Electronics Technician
CAREER PATHWAY: Telecommunications
CREDITS: 15
CBEDS TITLE: Introduction to Electronics Technology
O*NET-SOC CODE: 17-3023.01
HOURS: 180
CBEDS NO.: 5551
COURSE DESCRIPTION:
This competency-based course provides instruction and experience in hands-on installation methods for mobile electronics. This course includes information on the principles, operation, and installation of vehicle speakers, crossovers, security systems, cellular phones, navigation equipment, and vehicle tracking systems. It also reviews career opportunities and business management skills necessary in the mobile electronics trade. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of Mobile Electronics Technician/1 (79-35-80) course.

Note:
For Perkins purposes, this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-35-90

Title: MOBILE ELECTRONICS TECHNICIAN/3

JOB TITLE: Electronics Technician

CAREER PATHWAY: Telecommunications

CREDITS: 15

CBEDS TITLE: Introduction to Electronics Technology

COURSE DESCRIPTION:
This competency-based course provides instruction and experience in hands-on installation methods for mobile electronics. Instruction includes information on vehicle security systems, cellular phones, navigation equipment, and vehicle tracking systems. It also reviews career opportunities and business management skills necessary in the mobile electronics trade. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of Mobile Electronics Technician/2 (79-35-85) course.

Note:
For Perkins purposes, this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 79-85-53

Title: POWERLINE SYSTEMS

JOB TITLE: Electrical Powerline Mechanic

CAREER PATHWAY: Energy & Power Technology

CREDITS: 5

CBEDS TITLE: Principles of Power and Energy

COURSE DESCRIPTION:
This competency-based course is designed to provide instruction in AC & DC electrical theory, applied mathematics, transmission and distribution of electrical power flow, and industry safety laws pertaining to powerline systems. This course also includes instruction in employability skills and opportunities. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes, this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
CTE Careers by Industry Sector with Employment
Projections, Median Earnings and Education Requirements


Industry Sector 7 | Engineering and Architecture

<table>
<thead>
<tr>
<th>ROCP NO.</th>
<th>Title</th>
<th>Hours</th>
<th>Page</th>
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<tr>
<td>74-25-60</td>
<td>Blueprint Reading</td>
<td>90</td>
<td>115</td>
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<tr>
<td>74-25-70</td>
<td>Computer-Aided Design (CAD): Architectural</td>
<td>90</td>
<td>115</td>
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<td>74-25-80</td>
<td>Computer-Aided Design (CAD): Mechanical</td>
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<td>79-25-75</td>
<td>CAD Technician (Upgrade)</td>
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ARCHITECTURAL DRAFTERS
Nation-wide employment outlook and median earnings:

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<td>94,000</td>
<td>91,200</td>
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California outlook and median earnings:

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Education requirements for employment:
• Post-secondary education, typically a 2-year associate’s degree

DRAFTERS, ALL OTHERS
Nation-wide employment outlook and median earnings:

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California outlook and median earnings:

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EDUCATION REQUIREMENTS FOR EMPLOYMENT:
• Post-secondary education, typically a 2-year associate’s degree

ELECTRONICS DRAFTERS
Nation-wide employment outlook and median earnings:

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California outlook and median earnings:

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Education requirements for employment:
• Post-secondary education, typically a 2-year associate’s degree
## ELECTRICIAN MECHANICAL DRAFTERS

Nation-wide employment outlook and median earnings:

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California outlook and median earnings:

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<td>-3%</td>
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Education requirements for employment:
- Post-secondary education, typically a 2-year associate's degree
COURSE NO.: 74-25-60

Title: BLUEPRINT READING
JOB TITLE: CAD Technician
CAREER PATHWAY: Engineering Design
CREDITS: 5
CBEDS TITLE: Technical Drafting

COURSE DESCRIPTION:
This competency-based course is designed for blueprint reading and provides students with project-based experiences in drafting and blueprint reading. Instruction includes principles and techniques used in basic drafting, dimensioning, and tolerance drafting. Emphasis is placed on the applications of sectional views, auxiliary views, revolutions, drafting references, and drawing types in drafting as well as in the reading and interpretation of blueprints. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes, this course has been designated as an introductory course.
* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 74-25-70

Title: COMPUTER-AIDED DESIGN (CAD): ARCHITECTURAL
JOB TITLE: CAD Technician
CAREER PATHWAY: Architectural Design
CREDITS: 5
CBEDS TITLE: Computer-Aided Drafting/Design

COURSE DESCRIPTION:
This competency-based course is one of the two designed for computer-aided design (CAD). It provides students with project-based experiences in architectural CAD. Technical instruction includes an orientation, workplace safety policies and procedures, trade mathematics, and employability skills. Emphasis is placed on architectural terminology, design standards, and methods. Drawing construction with CAD focuses on architectural drafting based on conventional techniques that range from basic to intermediate and advanced levels. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Computer-Aided Design: Mechanical (74-25-80) course.

Note:
For Perkins purposes, this course has been designated as a concentrator/capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.
Title: COMPUTER-AIDED DESIGN (CAD): MECHANICAL
JOB TITLE: CAD Technician
CREDIT: 5
HOURS: 90
CREDITS: 5
O*NET-SOC CODE: 17-3013.00
CBEDS NO.: 5705

COURSE DESCRIPTION:
This competency-based course is one of two designed for computer-aided design (CAD). It provides students with project-based experiences in mechanical CAD. Technical instruction includes an introduction and reviews of workplace safety policies and procedures, resource management, and employability skills. Emphasis is placed on mechanical terminology, design, and methods. Drawing construction with CAD focuses on mechanical drafting based on conventional techniques that range from basic to intermediate and advanced levels. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Blueprint Reading (74-25-60) course.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.

Title: COMPUTER-AIDED DRAFTING (CAD) TECHNICIAN (UPGRADE)
JOB TITLE: CAD Technician
CREDIT: 10
O*NET-SOC CODE: 17-3012.01
HOURS: 120
CBEDS NO.: 5705

COURSE DESCRIPTION:
This competency-based course is designed to train students for employment in the electronic drafting field. Instruction includes schematic diagrams, block diagrams, military standards, specification control drawings, printed circuit boards, color codes, logic diagrams, integrated circuit drawings, interconnection diagrams, and drafting machines. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires one year of high school drafting or equivalent experience.

Note:
For Perkins purposes this course has been designated as a capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.
Industry Sector 7 | Engineering and Architecture

<table>
<thead>
<tr>
<th>ROCP NO.</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>74-55-50</td>
<td>Fashion/1</td>
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<td>Fashion/2</td>
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<td>74-55-70</td>
<td>Fashion/3</td>
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<td>74-55-80</td>
<td>Fashion/4</td>
<td>180</td>
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<tr>
<td>78-10-80</td>
<td>Hair Styling (Upgrade)</td>
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<td>Cosmetology/2</td>
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<td>Barber Crossover for Cosmetologist</td>
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<td>78-45-75</td>
<td>Cosmetology Crossover for Barber</td>
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<td>78-45-80</td>
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<td>78-45-95</td>
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CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements

BARBER
Nation-wide employment outlook and median earnings:

<table>
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<tbody>
<tr>
<td>59,200</td>
<td>65,100</td>
<td>+10%</td>
<td>$25,760</td>
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California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>4,000</td>
<td>4,800</td>
<td>+20%</td>
<td>$31,610</td>
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COSMETOLOGIST AND HAIR STYLIST
Nation-wide employment outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>597,200</td>
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<td>+10%</td>
<td>$24,260</td>
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California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>44,400</td>
<td>52,700</td>
<td>+19%</td>
<td>$24,330</td>
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</table>

Education requirements for employment:
- Some states require a high school diploma or equivalent
- All states require a license to practice
- Some states require attendance at a state-licensed cosmetology school
ESTHETICIAN/SKINCARE SPECIALIST

Nation-wide employment outlook and median earnings:

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California outlook and median earnings:

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</thead>
<tbody>
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<td>7,600</td>
<td>8,800</td>
<td>+16%</td>
<td>$30,460</td>
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</table>

Education requirements for employment:
- Some states require a high school diploma or equivalent
- All states require a license to practice
- Some states require attendance at a state-licensed cosmetology school

FASHION DESIGNER

Nation-wide employment outlook and median earnings:

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<tr>
<td>23,100</td>
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<td>+3%</td>
<td>$65,170</td>
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California outlook and median earnings:

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<tbody>
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<td>8,000</td>
<td>9,100</td>
<td>+14%</td>
<td>$66,820</td>
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</table>

Education requirements for employment:
- Training in a vocational school, related on-the-job experience, or an associate’s degree

MANICURIST

Nation-wide employment outlook and median earnings:

<table>
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</thead>
<tbody>
<tr>
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California outlook and median earnings:

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</thead>
<tbody>
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<td>24,200</td>
<td>28,800</td>
<td>+19%</td>
<td>$22,360</td>
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</table>

Education requirements for employment:
- Some states require a high school diploma or equivalent
- All states require a license to practice
- Completion of a state-licensed cosmetology program
COURSE NO.: 74-55-50
Title: FASHION/1
JOB TITLE: Pattern Designer
CAREER PATHWAY: Fashion Design and Merchandising
CREDITS: 5
CBEDS TITLE: Fashion Textiles and Apparel
COURSE DESCRIPTION:
This competency-based course is the first in a sequence of four designed for fashion. It provides students with project-based experiences in apparel design and illustration as used in today’s industry. Technical instruction includes an orientation, workplace safety policies and procedures, trade mathematics, and employability skills. Emphasis is placed on the current inspiration and sources of design and illustration techniques used for developing a line, basic sewing principles and techniques, and basic patternmaking principles and techniques. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires employment-level competency in reading, written and oral communications, math, and computer operation.
Note:
For Perkins purposes this course has been designated as an introductory course.
* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 74-55-60
Title: FASHION/2
JOB TITLE: Pattern Designer
CAREER PATHWAY: Fashion Design and Merchandising
CREDITS: 5
CBEDS TITLE: Fashion Textiles and Apparel
COURSE DESCRIPTION:
This competency-based course is the second in a sequence of four designed for fashion. It provides students with project-based experiences in apparel design, illustration, and patternmaking as used in today’s industry. Technical instruction includes an introduction and reviews of workplace safety policies and procedures, resource management, trade mathematics, and employability skills. Emphasis is placed on advanced design and illustration techniques used for developing a line, sewing and garment construction techniques, and manual patternmaking and draping techniques. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires successful completion of the Fashion/1 (74-55-50) course.
Note:
For Perkins purposes this course has been designated as a concentrator course.
* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 74-55-70

Title: FASHION/3
JOB TITLE: Pattern Designer
CAREER PATHWAY: Fashion Design and Merchandising
CREDITS: 15
CBEDS TITLE: Fashion Textiles and Apparel
O*NET-SOC CODE: 27-1022.00
HOURS: 180
CBEDS NO.: 4331

COURSE DESCRIPTION:
This competency-based course is the third in a sequence of four designed for fashion. It provides students with project-based experiences in computerized apparel design, illustration, and patternmaking as used in today’s industry. Technical instruction includes an introduction, reviews of workplace safety policies and procedures, resource management, and employability skills, and introductory entrepreneurship. Emphasis is placed on computerized techniques in design and illustration, tailoring and production sewing techniques, and computerized patternmaking techniques. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Fashion/2 (74-55-60) course.

Note:
For Perkins purposes this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 74-55-80

Title: FASHION/4
JOB TITLE: Pattern Designer
CAREER PATHWAY: Fashion Design and Merchandising
CREDITS: 15
CBEDS TITLE: Fashion Textiles and Apparel
O*NET-SOC CODE: 27-1022.00
HOURS: 180
CBEDS NO.: 4331

COURSE DESCRIPTION:
This competency-based course is the last in a sequence of four designed for fashion. It provides students with project-based experiences in apparel history, design, and manufacturing. Technical instruction includes an introduction and reviews of workplace safety policies and procedures, resource management, employability skills, and entrepreneurship. Emphasis is placed on the historical inspiration of fashion and costumes, textile technology, manual and computerized grading, design techniques, and manufacturing techniques. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Fashion/3 (74-55-70) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 78-10-80
Title: HAIR STYLING (UPGRADE)
JOB TITLE: Hair Stylist
CAREER PATHWAY: Personal Services
CREDITS: 5
CBEDS TITLE: Cosmetology
O*NET-SOC CODE: 39-5012.00
HOURS: 60
CBEDS NO.: 5812

COURSE DESCRIPTION:
This competency-based course prepares trainees to advance in the trade by use of the latest hair styling techniques. It includes advanced hair cutting, hair styling, iron curling, advanced permanent waving, hair relaxing, and hair coloring techniques. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires knowledge of basic cosmetology or barbering.

Note:
For Perkins purposes this course has been designated as a capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 78-10-90
Title: MANICURING/1
JOB TITLE: Manicurist
CAREER PATHWAY: Personal Services
CREDITS: 15
CBEDS TITLE: Manicuring
O*NET-SOC CODE: 39-5092.00
HOURS: 200
CBEDS NO.: 5814

COURSE DESCRIPTION:
This competency-based course is the first of a two-course sequence and contains a 200-hour manicuring training needed under the rules and regulations issued by the California State Board of Barbering and Cosmetology (CSBBC) to successfully pass the license examination. Instruction includes state regulations and basic chemistry, electricity, bacteriology, anatomy, and physiology in cosmetology as well as health, safety, and sanitation issues. It focuses on water and oil manicures and part one of pedicuring. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires students to be sixteen years of age or older. Applicants must have completed tenth grade or its equivalent.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator course.
* *This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 78-10-95
Title: MANICURING/2
JOB TITLE: Manicurist
CAREER PATHWAY: Personal Services
CREDITS: 15
CBEDS TITLE: Manicuring
CBEDS NO.: 5814

COURSE DESCRIPTION:
This competency-based course is the last of a two-course sequence and contains a 200-hour manicuring training needed under the rules and regulations issued by the California State Board of Barbering and Cosmetology (CSBBC) to successfully pass the license examination. Instruction covers part two of pedicuring and employability/entrepreneurship skills. The course focuses on the application of artificial nails. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of Manicuring/1 (78-10-90) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

* *This course cannot be repeated once a student receives a Certificate of Completion.

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COURSE NO.: 78-45-51
Title: BARBER/1
JOB TITLE: Barber
CAREER PATHWAY: Personal Services
CREDITS: 10
CBEDS TITLE: Barbering
CBEDS NO.: 5811

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of five covering aspects of barbering pursuant to Section 7316 of the Barbering and Cosmetology Act. It provides students with project-based learning in the barbering trade, technical instruction in Board of Barber & Cosmetology rules and regulations, health, safety & hazardous substances, disinfection & sanitation and wet hair styling. This course prepares students for the examination by the State Board of Barber Examiners. Hours acquired through this course may be applied toward a 1500-hour barbering course at any time within three years from a student's last date of attendance. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires students to be seventeen years of age or older and must have tenth grade equivalency.

Note:
For Perkins purposes this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE DESCRIPTION:
This competency-based course is the third in a sequence of five covering aspects of barbering pursuant to Section 7316 of the Barbering and Cosmetology Act. It provides students with project-based learning in the barbering trade. Technical instruction finishes with permanent waving, chemical straightening and haircutting. This course prepares students for the examination by the State Board of Barber Examiners. Hours acquired through this course may be applied toward a 1500-hour barbering course at any time within three years from a student's last date of attendance. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of Barber/2 (78-45-53) course.

Note:
For Perkins purposes this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of five covering aspects of barbering pursuant to Section 7316 of the Barbering and Cosmetology Act. It provides students with project-based learning in the barbering trade. Technical instruction finishes with wet hair styling and continues with thermal hair styling, and shaves, face, skin, & hair care. This course prepares students for the examination by the State Board of Barber Examiners. Hours acquired through this course may be applied toward a 1500-hour barbering course at any time within three years from a student's last date of attendance. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of Barber/1 (78-45-51) course.

Note:
For Perkins purposes this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **78-45-57**

Title: **BARBER/4**

JOB TITLE: Barber

CAREER PATHWAY: Personal Services

CREDITS: 35

CBEDS TITLE: Barbering

O*NET-SOC CODE: 39-5011.00

HOURS: 420

CBEDS NO.: 5811

**COURSE DESCRIPTION:**

This competency-based course is the fourth in a sequence of five covering aspects of barbering pursuant to Section 7316 of the Barbering and Cosmetology Act. It provides students with project-based learning in the barbering trade: review of proper chemical & electrical use & safety in barbering and bacteriology, anatomy & physiology. Technical instruction finishes with haircutting and continues with hair coloring/bleaching, shaves and face, skin & hair care. This course prepares students for the examination by the State Board of Barber Examiners. Hours acquired through this course may be applied toward a 1500-hour barbering course at any time within three years from a student’s last date of attendance. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires successful completion of Barber/3 (78-45-55) course.

**Note:**

For Perkins purposes this course has been designated as a concentrator course.

* *This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: **78-45-59**

**Title:** BARBER/5  
**JOB TITLE:** Barber  
**CAREER PATHWAY:** Personal Services  
**CREDITS:** 10  
**HOURS:** 120  
**CBEDS TITLE:** Barbering  
**CBEDS NO.:** 5811

**COURSE DESCRIPTION:**
This competency-based course is the fifth in a sequence of five covering aspects of barbering pursuant to Section 7316 of the Barbering and Cosmetology Act. It provides students with project-based learning in the barbering trade: review of the BBC rules and regulations, chemistry & electricity in barbering, health, safety & hazardous substances, disinfection & sanitation, bacteriology, anatomy, & physiology, wet hair styling, thermal hair styling, permanent waving, chemical straightening, haircutting and hair coloring & bleaching. It also teaches entrepreneurship/shop management, salesmanship, and employability skills. This course prepares students for the examination by the State Board of Barber Examiners. Hours acquired through this course may be applied toward a 1500-hour barbering course at any time within three years from a student's last date of attendance. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires successful completion of Barber/4 (78-45-57) course.

**Note:**  
For Perkins purposes this course has been designated as a capstone course.  
* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **78-45-60**

**Title:** COSMETOLOGY/1  
**JOB TITLE:** Cosmetologist  
**CAREER PATHWAY:** Personal Services  
**CREDITS:** 30  
**CBEDS TITLE:** Cosmetology  

**COURSE DESCRIPTION:**
This competency-based course is the first of the three-series cosmetology training and offers a 400-hour course conducted under the rules and regulations issued by the California State Board of Barbering and Cosmetology (CSBBC). This course develops the skills needed to take and pass the license examination. Instruction includes state regulations and basic chemistry, electricity, bacteriology, anatomy, and physiology in cosmetology as well as health, safety, and sanitation issues. It focuses on wet and thermal hair styling; permanent waving; chemical straightening; haircutting; hair coloring and bleaching; manual, electrical, and chemical facials; eyebrow arching and hair removal; makeup, lash and brow tinting, and false eyelashes; and natural and artificial nails techniques. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires applicants to be at least 16 years of age and must have completed the tenth grade or have the equivalent of a tenth-grade education.

**Note:**
For Perkins purposes this course has been designated as an *introductory* course.

*This course cannot be repeated once a student receives a Certificate of Completion.*

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COURSE NO.: **78-45-63**

**Title:** COSMETOLOGY/2  
**JOB TITLE:** Cosmetologist  
**CAREER PATHWAY:** Personal Services  
**CREDITS:** 40  
**CBEDS TITLE:** Cosmetology  

**COURSE DESCRIPTION:**
This competency-based course is the second of the three-series cosmetology training and offers the 600-hour course conducted under the rules and regulations issued by the California State Board of Barbering and Cosmetology (CSBBC). This course develops the skills needed to take and pass the license examination. Instruction includes wet and thermal hair styling; permanent waving; chemical straightening; haircutting; technical instruction and practical training in esthetics, manicuring, pedicuring, and artificial nails; and health and safety technical instruction review. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires successful completion of Cosmetology/1 (78-45-60) course.

**Note:**
For Perkins purposes this course has been designated as a *concentrator* course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 78-45-65
Title: COSMETOLOGY/3
JOB TITLE: Cosmetologist
CAREER PATHWAY: Personal Services
CREDITS: 40
CBEDS TITLE: Cosmetology
CREDITS: 40
CBEDS NO.: 5812
COURSE DESCRIPTION:
This competency-based course is the third and last of the three-series cosmetology training and offers the 600-hour course conducted under the rules and regulations issued by the California State Board of Barbering and Cosmetology (CSBBC). This course develops the skills needed to take and pass the license examination. Instruction includes hairstyling and hairdressing; permanent waving and chemical straightening; hair coloring and bleaching; haircutting; technical instruction and practical training in esthetics, pedicures, and artificial nails; health and safety technical instruction review; professional image; and the salon/spa business and preparation for employment. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Cosmetology/2 (78-45-63) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 78-45-70
Title: BARBER CROSSOVER FOR COSMETOLOGIST
JOB TITLE: Barber
CAREER PATHWAY: Personal Services
CREDITS: 15
CBEDS TITLE: Barbering
CREDITS: 15
CBEDS NO.: 5811
COURSE DESCRIPTION:
This competency-based course is designed for Cosmetologists to receive training to become a licensed barber. The course is 200 hours of technical instruction and practical operations covering barber practices that are not part of the required cosmetologist training. Technical instruction includes theory lectures, demonstrations, textbook study, and examinations. Practical operations include practice of complete services on mannequins and real customers. The competencies in this course outline are aligned with California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Students should be licensed Cosmetologist or present proof of successful completion of a Board-approved Cosmetology program in California to take Barber Crossover for Cosmetologist.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 78-45-75
Title: **COSMETOLOGY CROSSOVER FOR BARBER**
JOB TITLE: Cosmetologist
CAREER PATHWAY: Personal Services
CREDITS: 30
CBEDS TITLE: Cosmetology
COURSE DESCRIPTION:
This competency-based course is designed for barbers to receive training to become a licensed cosmetologist. The course is 200 hours of technical instruction and practical operations covering cosmetology practices that are not part of the required barber training. Technical instruction includes theory lectures, demonstrations, textbook study, and examinations. Practical operations include practice of complete services on mannequins and real customers. The competencies in this course are aligned with California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Students should be a licensed Barber or present proof of successful completion of a Board-approved Barber program in California to take Cosmetology Crossover for Barber.
Note:
For Perkins purposes this course has been designated as an introductory/concentrator/capstone course.
* *This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 78-45-80
Title: **ESTHETICIAN/1**
JOB TITLE: Esthetician
CAREER PATHWAY: Personal Services
CREDITS: 15
CBEDS TITLE: Cosmetology
COURSE DESCRIPTION:
This competency-based course is the first of the three-series esthetician training and offers the 200-hour course conducted under the rules and regulations issued by the California State Board of Barbering and Cosmetology (CSBBC). This course develops the skills needed to take and pass the license examination. Instruction includes state regulations and basic chemistry, health and safety, hazardous substances, electricity, bacteriology, principles of infection control and sanitation, and anatomy and physiology. It emphasizes techniques in manual facials and electrical facials. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires applicants to be at least sixteen years of age and must have completed the tenth grade.
Note:
For Perkins purposes this course has been designated as an introductory course.
* *This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 78-45-85
Title: ESTHETICIAN/3
JOB TITLE: Esthetician
CAREER PATHWAY: Personal Services
CREDITS: 15
CBEDS TITLE: Cosmetology
CREDIT HOURS: 15
HOURS: 200
O*NET-SOC CODE: 39-5094.00
CBEDS NO.: 5812

COURSE DESCRIPTION:
This competency-based course is the last of a three-series esthetician training and offers the 200-hour course conducted under the rules and regulations issued by the California State Board of Barbering and Cosmetology (CSBBC). This course develops the skills needed to take and pass the license examination. It emphasizes techniques in eyebrow arching and hair removal, makeup, general esthetics and the treatment room, professional image, and the salon business and preparation for employment. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of Esthetician/2 (78-45-83) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 78-45-95

Title: COSMETOLOGY SPECIALIST

JOB TITLE: Cosmetologist

CAREER PATHWAY: Personal Services

CREDITS: 5

CBEDS TITLE: Cosmetology

COURSE DESCRIPTION:
This competency-based course is designed to prepare trainees for specialization in the cosmetology trade. Instruction includes bacteriology, anatomy, and physiology as well as disinfection, sanitation, safety, and resource management in the four specialty options: Option I: Esthetician, Option II: Hair Stylist, Option III: Manicurist, and Option IV: State Board Exam Review. Emphasis is placed on color theory, contouring, formal makeup, and theatrical makeup in Option I: Esthetician. Emphasis is placed on braids, extension, and advanced hair coloring in Option II: Hair Stylist. Emphasis is placed on spa manicuring and pedicuring in Option III: Manicurist. Emphasis is placed on the coverage of the Esthetician, Manicurist, and Cosmetologist examinations in Option IV: State Board Exam Review. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires knowledge of basic cosmetology or barbering.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
Industry Sector 9 | Health Science and Medical Technology

### CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements


#### DENTAL ASSISTANT

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>318,800</td>
<td>377,400</td>
<td>+18%</td>
<td>$36,940</td>
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</tbody>
</table>

California outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>48,800</td>
<td>56,400</td>
<td>+16%</td>
<td>$37,220</td>
</tr>
</tbody>
</table>

Education requirements for employment:

- On-the-job training
- Completion of a dental assistant program offered by a vocational school or community college
HOSPITAL MAINTENANCE TECHNICIAN
These statistics reflect the outlook for all janitors and cleaners except maids and housekeeping cleaners.

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>2,360,600</td>
<td>2,496,900</td>
<td>+6%</td>
<td>$24,190</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>231,300</td>
<td>255,100</td>
<td>+10%</td>
<td>$27,080</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- On-the-job training
- A high school diploma and completion of classes from a vocational school or community college is often preferred by employers

MEDICAL ASSISTANT

Nation-wide employment outlook and median earnings:

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>591,300</td>
<td>730,200</td>
<td>+24%</td>
<td>$31,540</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>80,900</td>
<td>103,300</td>
<td>+28%</td>
<td>$34,640</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- On-the-job training
- A high school diploma or equivalent
- Employers may prefer candidates who have completed a 1 – 2 year training program at a vocational school or community college

MEDICAL RECORDS AND HEALTH INFORMATION TECHNICIANS

Nation-wide employment outlook and median earnings:

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>188,600</td>
<td>217,600</td>
<td>+15%</td>
<td>$38,040</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18,900</td>
<td>22,600</td>
<td>+20%</td>
<td>$43,860</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- A high school diploma and completion of classes from a vocational school or community college
NURSING ASSISTANT
Nation-wide employment outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>1,492,100</td>
<td>1,754,100</td>
<td>+18%</td>
<td>$26,590</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>99,700</td>
<td>118,900</td>
<td>+19%</td>
<td>$30,280</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- A high school diploma
- To become a certified nursing assistant (CNA) an aide must complete a state-approved training and pass a competency evaluation

PHARMACY TECHNICIAN
Nation-wide employment outlook and median earnings:

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>372,500</td>
<td>407,200</td>
<td>+9%</td>
<td>$30,920</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>32,700</td>
<td>36,500</td>
<td>+12%</td>
<td>$37,710</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- High school diploma or equivalent
- In many cases, completion of a certificate program
- On-the-job training

PHYSICAL THERAPIST AIDE
Nation-wide employment outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>50,000</td>
<td>69,500</td>
<td>+39%</td>
<td>$25,680</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>6,200</td>
<td>8,200</td>
<td>+32%</td>
<td>$27,640</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- A high school diploma
- On-the-job training
- Some states require aides to be licensed
- Some states require graduation from an accredited school and passage of the National Physical Therapy Exam
- Some states require passage of a state exam
RADIOLOGIC TECHNOLOGIST

Nation-wide employment outlook and median earnings:

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</tr>
</thead>
<tbody>
<tr>
<td>197,000</td>
<td>214,200</td>
<td>+9%</td>
<td>$57,450</td>
</tr>
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</table>

California outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>16,600</td>
<td>18,900</td>
<td>+14%</td>
<td>$75,230</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- A certificate, associate degree, or bachelor’s degree in radiography

VOCATIONAL NURSE

Nation-wide employment outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>719,900</td>
<td>837,200</td>
<td>+16%</td>
<td>$44,090</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>65,700</td>
<td>79,400</td>
<td>+21%</td>
<td>$52,820</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Completion of a state-approved program
- A high school diploma or equivalent is usually required for admission to training programs
- Passage of the National Council Licensure Examination (NCLEX-PN)

X-RAY TECHNICIANS (HEALTH TECHNOLOGISTS & TECHNICIANS)

Nation-wide employment outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>102,200</td>
<td>125,900</td>
<td>+23%</td>
<td>$41,070</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>13,300</td>
<td>16,700</td>
<td>+26%</td>
<td>$43,510</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- A certificate, or associate degree
- Some states require passage of a state licensing exam
Health Science and Medical Technology

REVISED: August/2017

COURSE NO.: 76-15-50

Title: HEALTH INFORMATION TECH/1: TERMINOLOGY

JOB TITLE: Health Information Technician

CAREER PATHWAY: Healthcare Administrative Services

CREDITS: 5

CBEDS TITLE: Intro to Health Information & Records Systems

COURSE DESCRIPTION:

This competency-based course is the first in a sequence of five designed for health information technology. It provides students with project-based experiences in medical and dental health informatics. Technical instruction includes an orientation, workplace safety policies and procedures, resource management, and employability skills. Emphasis is placed on medical word formation, analysis, spelling, pronunciation, abbreviation, and applications, an overview of healthcare specializations, and understanding of case reports, body systems, clinical/diagnostic/surgical procedures, pathological conditions, and medications. Practice in the use of a medical dictionary and other medical reference books is also included. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

Note:

For Perkins purposes this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.

REVISED: August/2017

COURSE NO.: 76-15-60

Title: HEALTH INFORMATION TECH/2: ELECTRONIC RECORDING AND FILING

JOB TITLE: Health Information Technician

CAREER PATHWAY: Healthcare Administrative Services

CREDITS: 5

CBEDS TITLE: Intro to Health Information & Records Systems

COURSE DESCRIPTION:

This competency-based course is the second in a sequence of five designed for health information technology. It provides students with project-based experiences in electronic recording and filing. Technical instruction includes an introduction, and reviews of workplace safety policies and procedures, resource management, and employability skills. Emphasis is placed on the legal and ethical issues of electronic recording and filing, operation and maintenance of healthcare office tools, equipment, and software, processing and using forms, reports, correspondence, and financial records, and the overall principles and procedures used in records management. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires successful completion of the Health Information Tech/1: Terminology (76-15-50) course.

Note:

For Perkins purposes this course has been designated as a concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
Health Science and Medical Technology

COURSE NO. : 76-15-70
Title: HEALTH INFORMATION TECH/3: DIAGNOSTIC CODING SYSTEMS
JOB TITLE: Health Information Technician
CAREER PATHWAY: Healthcare Administrative Services
CREDITS: 5
CBEDS TITLE: Intro to Health Information & Records Systems
COURSE DESCRIPTION:
This competency-based course is the third in a sequence of five designed for health information technology. It provides students with project-based experiences in insurance and billing. Technical instruction includes an introduction, reviews of workplace safety policies and procedures, resource management, and employability skills. Emphasis is placed on the policies and procedures used to complete Workers' Compensation, State Disability Insurance (SDI), group and private insurance, Medicare, Medicaid (Medi-Cal), Medi/Medi Crossover, managed care, TRICARE, and CHAMPVA forms, claims, and contracts. Advanced training in the use of healthcare software is also covered. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Health Information Tech/2: Electronic Recording and Filing (76-15-60) course.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO. : 76-15-80
Title: HEALTH INFORMATION TECH/4: DIAGNOSTIC CODING SYSTEMS
JOB TITLE: Health Information Technician
CAREER PATHWAY: Healthcare Administrative Services
CREDITS: 5
CBEDS TITLE: Intro to Health Information & Records Systems
COURSE DESCRIPTION:
This competency-based course is the fourth in a sequence of five designed for health information technology. It provides students with project-based experiences in diagnostic coding used in medical offices, hospitals, clinical laboratories, private and governmental insurance agencies, and other healthcare-related facilities. Technical instruction includes an introduction as well as reviews of workplace safety policies and procedures and employability skills. Emphasis is placed on the official coding guidelines of the two latest editions of the International Classification of Diseases (ICD). Specific sections of the Tabular List including infectious and parasitic diseases, neoplasms, diseases of the blood and blood-forming organs, endocrine/nutritional/metabolic diseases, and the conditions and diseases of the nervous system, eye and adnexa, ear and mastoid process, circulatory system, respiratory system, digestive system, skin and subcutaneous tissue, musculoskeletal system and connective tissue, and the genitourinary system are covered. Also included are coding conventions for pregnancy, childbirth, and puerperium, congenital malformations, deformations, and chromosomal abnormalities, injury and poisoning, external causes of morbidity and mortality, factors influencing health status, and codes for special purposes. Competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Health Information Tech/3: Insurance and Billing (76-15-70) course.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.
* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 76-15-90

Title: HEALTH INFORMATION TECH/5: AMBULATORY CODING SYSTEMS

JOB TITLE: Health Information Technician

CAREER PATHWAY: Healthcare Administrative Services

CREDITS: 5

PREREQUISITES:

Enrollment requires successful completion of the Health Information Tech/4: Diagnostic Coding Systems (76-15-80) course and keyboarding speed as required by the industry.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 76-35-53

Title: DENTAL ASSISTING/1
JOB TITLE: Dental Assistant
CAREER PATHWAY: Patient Care
CREDITS: 15
HOURS: 180
CBEDS TITLE: Dental Services
CBEDS NO.: 4249
O*NET-SOC CODE: 31-9091.00

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for dental assisting. It provides students with project-based experiences in dental science and chairside assisting. Technical instruction includes an orientation, workplace safety policies and procedures, and communication skills. Emphasis is placed on the areas of dental specialization, organization of the dental health team, legal/ethical/compliance issues, head and neck anatomy, dental nomenclature, dental anatomy, dental pathology, microbiology and dental infection control, pharmacology, anesthesiology, and the impact of nutrition on dental health. It also covers the materials, equipment, and procedures used in a dental laboratory. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires at least 18 years of age or older upon course sequence completion, a high school diploma or equivalency certificate, a 10.0 reading level as measured by the TABE D 9/10 and a 10.0 math skill level equivalent to a Math 3 (53-03-57); an AHA or BLS Health Care Providers Cardiopulmonary Resuscitation (CPR) Certification, tuberculosis and Hepatitis B screening, and evidence of good health.

Note:
For Perkins purposes this course has been designated as an introductory course.
THE STUDENT MUST PRESENT A CURRENT CERTIFICATE SHOWING COMPLETION OF AN AHA OR BLS FOR HEALTHCARE PROVIDERS CARDIOPULMONARY RESUSCITATION (CPR) CLASS (COURSE C-BASIC LIFE SUPPORT) PRIOR TO CLINICAL ROTATION

*This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **76-35-56**

**Title:** DENTAL ASSISTING/2  
**JOB TITLE:** Dental Assistant  
**CAREER PATHWAY:** Patient Care  
**CREDITS:** 15  
**CBEDS TITLE:** Dental Services  

**COURSE DESCRIPTION:**
This competency-based course is the second in a sequence of three designed for dental assisting. It provides students with project-based experiences in chairside assisting and dental emergency procedures. Technical instruction includes an introduction, review of workplace safety policies and procedures, compliance issues, dental mathematics, resource management, and employability skills. Emphasis is placed on procuring a patient’s medical/dental history and vital signs, completion of a dental chart, and the instruments/materials/techniques used in chairside procedures and dental emergencies. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires successful completion of the Dental Assisting/1 (76-35-53) course.

**Note:**
For Perkins purposes this course has been designated as a **concentrator** course.

* *This course cannot be repeated once a student receives a Certificate of Completion.*

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COURSE NO.: **76-35-59**

**Title:** DENTAL ASSISTING/3  
**JOB TITLE:** Dental Assistant  
**CAREER PATHWAY:** Patient Care  
**CREDITS:** 15  
**CBEDS TITLE:** Dental Services  

**COURSE DESCRIPTION:**
This competency-based course is the last in a sequence of three designed for dental assisting. It provides students with project-based experiences in the dental office and clinic. Technical instruction includes an introduction, reviews of workplace safety policies and procedures, compliance issues, and employability skills, as well as introductory entrepreneurship. Emphasis is placed on dental office management procedures, dental radiography, digital radiography, and in-service clinical practice. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires successful completion of the Dental Assisting/2 (76-35-56) course.

**Note:**
For Perkins purposes this course has been designated as a **capstone** course.

* *This course cannot be repeated once a student receives a Certificate of Completion.*
Title: PHYSICAL THERAPY
JOB TITLE: Physical Therapy Aide
CAREER PATHWAY: Patient Care
CREDITS: 15
CBEDS TITLE: Healthcare Occupations
O*NET-SOC CODE: 31-2022.00
HOURS: 180
CBEDS NO.: 4257
COURSE DESCRIPTION:
This competency-based course prepares students to provide basic physical therapy treatment in health care facilities. This course offers instruction in employability skills, workplace safety and infection control, ethical and legal standards, interpersonal skills, and medical terminology. It presents an overview of selected anatomy and physiology systems as well as the disorders and drugs for those bodily systems. Instruction and practice are provided in the assessment of vital signs, body mechanics, treatment methods, therapeutic and rehabilitative exercises, and mobility training. Skills laboratory and clinical observations are also included in the training. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires evidence of good health and a tuberculosis screening. Student must have a reading level of 6.0 as measured by the TABE D 9/10 test. Completion of a Biology or Medical Terminology class is highly recommended.

Note:
For Perkins purposes this course has been designated as a introductory/concentrator/capstone course. THE STUDENT MUST PRESENT A CURRENT CERTIFICATE SHOWING COMPLETION OF AN AHA OR BLS HEALTHCARE PROVIDERS CARDIOPULMONARY RESUSCITATION (CPR) CLASS PRIOR TO CLINICAL ROTATION.
* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 76-45-55

Title: SPORTS THERAPEUTICS
JOB TITLE: Physical Therapist Aide
CAREER PATHWAY: Patient Care
CREDITS: 15
CBEDS TITLE: Healthcare Occupations
O*NET-SOC CODE: 31-2022.00
HOURS: 180
CBEDS NO.: 4257

COURSE DESCRIPTION:
This competency-based course provides students with hands-on training on the basic duties of a physical therapist, certified athletic trainer, personal trainer, physical therapy aide, fitness instructor, massage therapist, and other fields related to health care. Technical instruction includes an orientation, safety and infection control, communication and interpersonal skills, mathematics proficiency, and employability skills. Emphasis is placed on: ethical and legal issues in sports therapy; observation, reporting, and charting; medical terminology; nutrition and metabolism; first aid and CPR; physical therapy procedures; physical therapy modalities; sports and therapeutic equipment; pharmacology; patient care skills; and clinical protocol. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires the minimum age of 16, evidence of optimal health, and tuberculosis screening. Completion of a Biology or Medical Terminology class is highly recommended.

Note:
For Perkins purposes this course has been designated as a introductory/concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 76-45-83

Title: X-RAY TECHNOLOGY/1
JOB TITLE: X-Ray Technician
CAREER PATHWAY: Patient Care
CREDITS: 30
CBEDS TITLE: Healthcare Occupations

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for x-ray technology. It provides students with project-based experiences according to the California State certification examination requirements for the limited category of extremities and torsoskeleton. Didactic instruction includes an orientation, general safety principles, communication skills, critical thinking skills, and resource management. Emphasis is placed on medical ethics, medical terminology, part one of anatomy and physiology including extremity and torsoskeletal pathologies, part one of film critique, image receptor system, radiographic positioning, clinical assistant procedures, and the principles of exposure and image quality. Students are also provided with clinical training in health care facilities supervised by the instructor and staff personnel to perform as safe, competent, and professional X-Ray Technicians. The passing of the state examination allows graduates to work as XRay Technicians under a supervising licentiate. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires at least 18 years of age, a high school diploma or high school equivalency certificate, employment-level competency in reading and math, and participation in a qualifying interview; upon acceptance present a satisfactory physical examination and current American Heart Association (AHA) or Basic Life Support (BLS) for Healthcare Providers Cardiopulmonary Resuscitation Certificate and First Aid certificate PRIOR TO CLINICAL ROTATION.

Note:
For Perkins purposes this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO. : 76-45-86
Title: **X-RAY TECHNOLOGY/2**
JOB TITLE:  X-Ray Technician
CAREER PATHWAY: Patient Care
CREDITS: 40
CBEDS TITLE: Healthcare Occupations

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of three designed for x-ray technology. It provides students with project-based experiences according to the California State certification examination requirements in the limited category of chest. Didactic and clinical instruction includes parts two of anatomy and physiology including chest pathologies, radiographic positioning, principles of exposure and image quality, and clinical assistant procedures. Emphasis is also placed on radiologic physics, radiobiology and radiation safety. Students are given more hours for clinical experience in health care facilities supervised by the instructor and staff personnel in order to perform as safe, competent, and professional X-Ray Technicians. The passing of the state examination allows graduates to work as X-Ray Technicians under a supervising licentiate. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the X-Ray Technology/1 (76-45-83) course.

Note:
For Perkins purposes this course has been designated as a concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion
COURSE NO.: 76-45-89

Title: X-RAY TECHNOLOGY/3
JOB TITLE: X-Ray Technician
CAREER PATHWAY: Patient Care
CREDITS: 40
CBEDS TITLE: Healthcare Occupations

COURSE DESCRIPTION:
This competency-based course is the last in a sequence of three designed for x-ray technology. It provides students with project-based experiences according to the California State certification examination requirements in the limited category of skull. Didactic and clinical instruction includes parts three of anatomy and physiology (including cranial and facial bone pathologies), radiographic positioning, and film critique. Emphasis is also placed on digital radiography, employability skills, and the evaluation process. Students are given maximum hours available for clinical experience in health care facilities supervised by the instructor and staff personnel in order to perform as safe, competent, and professional X-Ray Technicians. The passing of the state examination allows graduates to work as X-Ray Technicians under a supervising licentiate. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the X-Ray Technology/2 (76-45-86) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 77-20-70

Title: RADIOLOGIC TECHNOLOGIST

JOB TITLE: Radiologic Technologist

CAREER PATHWAY: Patient Care

CREDITS: 40

CBEDS TITLE: Healthcare Occupations

COURSE DESCRIPTION:
This competency-based course is designed to provide the essential information needed by student radiographers to pass the state certification examinations in Diagnostic Radiologic Technology and Fluoroscopy. This course also develops the necessary skills and abilities needed to meet the requirements of their job description and provide optimal patient care. Along with didactic instruction, students are prepared clinically in health care facilities with instructor and staff member supervision. Passing the state examination will allow graduates to work as radiologic technologists under a supervising licentiate. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a copy of current California State X-Ray Technician Certificate/Permit (verifying state licensure in at least chest, extremities, and torso skeleton), sealed official transcripts verifying graduation from a California state-approved X-Ray technology program, pass a radiology exam with 70% accuracy rate, pass an assessment at 10th grade reading level, a U.S. High School diploma or high school equivalency certificate, evidence of computer literacy, participation in a qualifying interview; present a satisfactory physical examination and current American heart Association (AHA) or Basic Life Support (BLS) for Healthcare Providers Cardiopulmonary Resuscitation Certificate PRIOR TO CLINICAL ROTATION.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
Title: **MEDICAL ASSISTANT**
JOB TITLE: Medical Assistant
CAREER PATHWAY: Patient Care
CREDITS: 40
CBEDS TITLE: Medical Office
O*NET-SOC CODE: 31-9092.00
HOURS: 500
CBEDS NO.: 4275

COURSE DESCRIPTION:
This competency-based course contains information and training to prepare persons to function as medical assistants through training in ethics, medical terminology, and the preparation of medical forms. In addition, students will gain expertise in the day-to-day functions of the following specialties: ambulatory care, obstetrics and gynecology, pediatrics, out-patient surgery, urology, orthopedics, internal medicine, cardiology, and laboratory. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a 8.0 reading level as measured by the TABE D 9/10 test, at least 18 years of age, and evidence of measles, mumps, rubella, rubiola, varicella, and TB screenings. THE STUDENT MUST PRESENT A CURRENT CERTIFICATE SHOWING COMPLETION OF AN AHA OR BLS HEALTHCARE PROVIDERS CARDIOPULMONARY RESUSCITATION (CPR) CLASS PRIOR TO CLINICAL ROTATION.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator/capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: **77-50-75**

**Title:** NURSING ASSISTANT: LONG-TERM CARE  
**JOB TITLE:** Nursing Assistant  
**CAREER PATHWAY:** Patient Care  
**CREDITS:** 15  
**CBEDS TITLE:** Nursing Service  

**COURSE DESCRIPTION:**
This competency-based course offers an overview of anatomy, physiology, nutrition, medical terminology and an introduction to diseases and disorders. Emphasis is given to safety principles, infection control and the philosophy of nursing. This course also integrates methods for meeting the social and psychological needs of the patient. Nursing skills and clinical procedures are practiced in the classroom skills laboratory before being demonstrated in community health facilities. Upon completion of the required 60 hours of theory and 110 hours of clinical practice, the student will be qualified to take the state certification test. Successful completion of this examination will enable the student to be employed in a health care facility. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires successful completion of the Health Information Tech/1: Terminology (76-15-50) course. The candidate for this class must be 16 years of age and test at an 8.0 reading level as measured by the TABE D 9/10 test and math skills equivalent to Math 2 (53-03-76). Prior to contact with patients in the clinical area, the student shall be screened for criminal conviction, present a physical examination form declaring the student to be in optimum health without restrictions and show tuberculosis screening.

**Note:**
For Perkins purposes this course has been designated as an introductory/concentrator/capstone.
THE STUDENT MUST PRESENT A CURRENT CERTIFICATE SHOWING COMPLETION OF AN AHA OR BLS HEALTHCARE PROVIDERS CARDIOPULMONARY RESUSCITATION (CPR) CLASS PRIOR TO CLINICAL ROTATION.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO. : 77-60-60

Title: VOCATIONAL NURSE
JOB TITLE: Vocational Nurse
CAREER PATHWAY: Patient Care
CREDITS: 40
CBEDS TITLE: Nursing Service

O*NET-SOC CODE: 29-2061.00
HOURS: 1530
CBEDS NO.: 4279

COURSE DESCRIPTION:
This competency-based course prepares students with classes in ethics, safety principles, anatomy and physiology, pharmacology, medical terminology, growth and development, psychology and nutrition. Also studied are medical, surgical, obstetrical and pediatric nursing. The students are prepared clinically in health care facilities supervised by the instructor and staff members. Upon completion of this course the graduates may take the NCLEX (National Council Licensure Examination). Grads passing this examination may work as Licensed Vocational Nurses under the supervision of a Registered Nurse or Physician. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a U.S. high school diploma or high school equivalency certificate, or a U.S. A.A. or B. A. degree, a 10 reading level and a 9 math level as measured by the TABE D 9/10 test; participation in a qualifying interview; present a satisfactory physical examination and a current AHA or BLS Healthcare Providers Cardiopulmonary Resuscitation (CPR) Certificate PRIOR TO CLINICAL ROTATION. Must be 18 years of age or older, with proof of computer literacy abilities.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator/capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
Title: **HOME HEALTH AIDE (SUPPLEMENTAL)**

**CAREER PATHWAY:** Patient Care

**CREDITS:** 5

**COURSE DESCRIPTION:**
This competency-based course trains students to give basic nursing care in the home setting. Emphasis is given to the philosophy of nursing, safety principles in the home, and infection control methods as used by the home health aide. Nutrition in relation to maintenance of health is stressed. Integrated throughout the program are methods for meeting the social and psychological needs of the client. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires a current valid California CNA certification. The candidate for this class must be 16 years of age and test at a 8.0 reading grade level or higher as measured by the TABE D 9/10 test. Prior to contact with patients in the clinical area, the student shall be screened for criminal conviction, present a physical examination form declaring the student to be in good health without restrictions, and show tuberculosis screening.

**Note:**
For Perkins purposes this course has been designated as a **capstone** course.

**THE STUDENT MUST PRESENT A CURRENT CERTIFICATE SHOWING COMPLETION OF AN AHA OR BLS HEALTHCARE PROVIDERS CARDIOPULMONARY RESUSCITATION (CPR) CLASS PRIOR TO CLINICAL ROTATION.**

*This course cannot be repeated once a student receives a Certificate of Completion.*
Title: **PHARMACY TECHNICIAN**  
JOB TITLE: Pharmacy Technician  
CAREER PATHWAY: Patient Care  
CREDITS: 40  
CBEDS TITLE: Healthcare Occupations

**COURSE DESCRIPTION:**

This competency-based course is designed to prepare students for employment in a pharmaceutical setting. The class consists of theory and clinical preparation to include: medical terminology, anatomy and physiology, pharmaceutical settings, duties and responsibilities of a pharmacy technician, pharmaceutical terms, abbreviations and symbols, metric and apothecary systems, drug requirements, record-keeping, dispensing prescriptions, knowledge of manufacturing, packaging, and labeling of drug products. At the successful completion of this course, students will be qualified to register with the California State Board of Pharmacy as a Pharmacy Technician. Students will perform community classroom activities while under the direct supervision of a pharmacist. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires a U.S. High School Diploma, high school equivalency certificate, or A.A. Degree, math skill level equivalent to Math 2 (53-03-76), at least 18 years of age, possession of an AHA or BLS Healthcare Providers current Basic "C" CPR Certificate, tuberculosis clearance, and a physical exam.

**Note:**

For Perkins purposes this course has been designated as an introductory/concentrator/capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 79-75-65

Title: HOSPITAL MAINTENANCE TECHNICIAN
JOB TITLE: Hospital Maintenance Technician
CAREER PATHWAY: Healthcare Operational Support Services
CREDITS: 15
CBEDS TITLE: Fundamentals of Emergency Preparedness for Healthcare Facilities

COURSE DESCRIPTION:
This competency-based course prepares trainees for entry-level employment as hospital building maintenance technicians. Instruction includes employee responsibilities, appearance and personal hygiene, professionalism with staff and public, career knowledge, communications, safety, and the specific sanitary requirements of specialized hospital facilities. It also provides upgrade and prepares employees for promotion. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a 7.0 reading level as measured by the TABE D 9/10 and math skills equivalent to Math 2 (53-03-76) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.
## Industry Sector 10 | Hospitality, Tourism and Recreation

### ROCP NO. | Title | Hours | Page
---|---|---|---
77-15-50 | Culinary Arts: Baking/1 | 90 | 153
77-15-55 | Culinary Arts: Baking/2 | 90 | 153
77-15-70 | Culinary Arts: International Foods | 90 | 154
77-15-80 | Culinary Arts: Catering | 180 | 154
77-15-90 | Culinary Arts: Servsafe® Management | 20 | 155
78-50-50 | Baker (Fundamentals) | 250 | 155
78-50-80 | Chef Assistant | 360 | 156
78-50-90 | Cook Trainee | 400 | 156

### CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements


#### BAKER

Nation-wide employment outlook and median earnings:

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>185,300</td>
<td>198,300</td>
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<td>$25,090</td>
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California outlook and median earnings:

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<tbody>
<tr>
<td>31,300</td>
<td>36,700</td>
<td>+17%</td>
<td>$26,160</td>
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Education requirements for employment:

- No formal education requirement

#### COOK

Nation-wide employment outlook and median earnings:

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California outlook and median earnings:

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</thead>
<tbody>
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<td>122,100</td>
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<td>$26,750</td>
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</table>

Education requirements for employment:

- No formal education requirement

#### FOOD SERVICE MANAGER

Nation-wide employment outlook and median earnings:

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<tr>
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<tbody>
<tr>
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California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>26,500</td>
<td>30,600</td>
<td>+12%</td>
<td>$30,950</td>
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</table>

Education requirements for employment:

- High school diploma or equivalent
- Many employers prefer managers with a 2- or 4-year degree in a related field
COURSE NO.: 77-15-50
Title: CULINARY ARTS: BAKING/1
JOB TITLE: Baker
CAREER PATHWAY: Food Service and Hospitality
CREDITS: 5
CBEDS TITLE: Food and Beverage Production and Preparation
COURSE DESCRIPTION:
This competency-based course is the first in a sequence of two designed for baking. It provides students with project-based learning experiences in the art and science of baking. Technical instruction includes an orientation, resource management, weights and measures, equipment, safety and sanitation, and employability skills. Emphasis is placed on the ingredients and preparatory baking techniques used for basic bread, sweet yeast dough, doughnut, and cruller production. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.
Note:
For Perkins purposes this course has been designated as an introductory/concentrator course.
*This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 77-15-55
Title: CULINARY ARTS: BAKING/2
JOB TITLE: Baker
CAREER PATHWAY: Food Service and Hospitality
CREDITS: 5
CBEDS TITLE: Food and Beverage Production and Preparation
COURSE DESCRIPTION:
This competency-based course is the second in a sequence of two designed for culinary arts. It provides students with project-based learning experiences in the art and science of baking. Technical instruction includes an introduction and reviews of resource management, weights and measures, safety and sanitation, and employability skills. Emphasis is placed on the ingredients and the preparatory, production, and finishing techniques for pies, cookies, and cakes. It also covers basic entrepreneurship. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
Enrollment requires successful completion of the Culinary Arts: Baking/1 (77-15-50) course.
Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.
*This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 77-15-70

Title: CULINARY ARTS: INTERNATIONAL FOODS

JOB TITLE: Cook

CAREER PATHWAY: Food Service and Hospitality

CREDITS: 5

CBEDS TITLE: Food and Beverage Production and Preparation

O*NET-SOC CODE: 35-2011.00

HOURS: 90

CREDITS: 15

CBEDS NO.: 4421

PREREQUISITES:

Enrollment requires successful completion of another course from the Culinary Arts sequence.

Note:

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 77-15-80

Title: CULINARY ARTS: CATERING

JOB TITLE: Food Service Manager

CAREER PATHWAY: Food Service and Hospitality

CREDITS: 15

CBEDS TITLE: Food and Beverage Production and Preparation

O*NET-SOC CODE: 35-2012.00

HOURS: 180

CBEDS NO.: 4421

PREREQUISITES:

Enrollment requires successful completion of another course from the Culinary Arts sequence.

Note:

For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
Title: **CULINARY ARTS: SERVSAFE® MANAGEMENT**  
JOB TITLE: Food Service Manager  
CAREER PATHWAY: Food Service and Hospitality  
CREDITS: 0  
CBEDS TITLE: Food and Beverage Production and Preparation

**CREDITS: 0**  
HOURS: 20  
O*NET-SOC CODE: 35-2012.00

**COURSE DESCRIPTION:**
This competency-based course provides students with project-based learning experiences in restaurant food management. Technical instruction includes an orientation and general workplace safety policies and procedures. Emphasis is placed on the following ServSafe® Management topics: providing safe food; the microworld; contamination and food allergens; the safe food handler; the flow of food: introduction; the flow of food: purchasing, receiving, and storage; the flow of food: preparation; the flow of food: service; food safety management systems; sanitary facilities and equipment; cleaning and sanitizing; integrated pest management; food safety regulations and standards; and employee food safety training. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires successful completion of another course from the Culinary Arts sequence.

**Note:**
Prior to class, participants must purchase and read ServSafe® textbook. For Perkins purposes this course has been designated as a **capstone** course.

* This course cannot be repeated once a student receives a Certificate of Completion.

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Title: **BAKER (FUNDAMENTALS)**  
JOB TITLE: Baker  
CAREER PATHWAY: Food Service and Hospitality  
CREDITS: 20  
CBEDS TITLE: Food and Beverage Production and Preparation

**COURSE NO. : 78-50-50**  
O*NET-SOC CODE: 51-3011.00  
HOURS: 250  
CBEDS NO. : 4421

**COURSE DESCRIPTION:**
This competency-based course contains entry-level training, enabling graduates to qualify for first year apprentice positions in the commercial baking industry. Students are exposed to hands-on production procedures including scaling, mixing, make-up, baking, finishing, and merchandising of commercial baking products. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
None.

**Note:**
For Perkins purposes this course has been designated as an **introductory** course.

* This course cannot be repeated once a student receives a Certificate of Completion.
### COURSE NO.: 78-50-80

**Title:** CHEF ASSISTANT  
**JOB TITLE:** Chef Assistant  
**CAREER PATHWAY:** Food Service and Hospitality  
**CREDITS:** 30  
**CBEDS TITLE:** Food and Beverage Production and Preparation  
**O*NET-SOC CODE:** 35-2014.00  
**CBEDS NO.:** 4421  
**HOURS:** 360  

**COURSE DESCRIPTION:**

This competency-based course provides entry-level and intermediate training to enable a graduate to qualify as a catering assistant, institutional and restaurant apprentice cook, and other positions that require first-hand knowledge and experience in food service. Students are exposed to “prep” cooking, presentation, and storage in various food categories, with hands-on procedures and classroom theory. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires a 6.0 reading level as measured by the TABE D 9/10, math skills equivalent to Math 2 (53-03-76) course, excellent gross motor skills, and ability to do heavy lifting as required by industry.

**Note:**

For Perkins purposes this course has been designated as a **capstone** course.

*This course cannot be repeated once a student receives a Certificate of Completion.*

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### COURSE NO.: 78-50-90

**Title:** COOK TRAINEE  
**JOB TITLE:** Cook  
**CAREER PATHWAY:** Food Service and Hospitality  
**CREDITS:** 30  
**CBEDS TITLE:** Food and Beverage Production and Preparation  
**O*NET-SOC CODE:** 35-2014.00  
**CBEDS NO.:** 4421  
**HOURS:** 400  

**COURSE DESCRIPTION:**

This competency-based course develops entry-level skills to enable a student to qualify as an institutional or restaurant apprentice cook. Students are exposed to “prep” cooking, presentation, and storage in various food categories; correct use and care of kitchen tools and equipment; sanitation and food handling techniques, with hands-on procedures and classroom theory. The competencies in this course outline are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires a 6.0 reading level as measured by the TABE D 9/10 and math skills equivalent to Math 2 (53-03-76) course.

**Note:**

For Perkins purposes this course has been designated as a **capstone** course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
Industry Sector 10 | Hospitality, Tourism and Recreation

<table>
<thead>
<tr>
<th>ROCP NO.</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>74-15-50</td>
<td>A+ Certification/1</td>
<td>180</td>
<td>159</td>
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<tr>
<td>74-15-60</td>
<td>A+ Certification/2</td>
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<tr>
<td>77-65-50</td>
<td>Networking/1</td>
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<td>77-65-60</td>
<td>Networking/2</td>
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<tr>
<td>79-30-65</td>
<td>Computer Technician (Introduction)</td>
<td>120</td>
<td>163</td>
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<td>79-30-90</td>
<td>Computer Technician: A+ Certification (Upgrade)</td>
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<tr>
<td>79-45-60</td>
<td>Network Control Operator</td>
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CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements

COMPUTER, ATM AND OFFICE MACHINE REPAIRERS
These statistics reflect the outlook for computer, automated teller and office machine repairers.
Nation-wide employment outlook and median earnings:

<table>
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<tr>
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<tbody>
<tr>
<td>131,600</td>
<td>134,800</td>
<td>+2%</td>
<td>$37,100</td>
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California outlook and median earnings:

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<td>12,800</td>
<td>13,300</td>
<td>+4%</td>
<td>$40,360</td>
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Education requirements for employment:
- Training in a vocational school, related on-the-job experience, or an associate’s degree

COMPUTER NETWORK SUPPORT SPECIALIST
Nation-wide employment outlook and median earnings:

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<tr>
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<tbody>
<tr>
<td>181,000</td>
<td>194,600</td>
<td>+8%</td>
<td>$62,670</td>
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California outlook and median earnings:

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<tbody>
<tr>
<td>19,700</td>
<td>23,600</td>
<td>+20%</td>
<td>$73,620</td>
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Education requirements for employment:
- Bachelor’s degree required for some positions, but associate’s degree or post-secondary classes acceptable
COMPUTER USER SUPPORT SPECIALIST

Nation-wide employment outlook and median earnings:

<table>
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<tr>
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<td>585,900</td>
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<td>+13%</td>
<td>$49,390</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>62,200</td>
<td>77,500</td>
<td>+25%</td>
<td>$58,110</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- On-the-job training
- Completion of training at a vocational school or technical/community college
- Some network control operators receive training through an apprenticeship program
COURSE NO.: 74-15-50

Title: A+ CERTIFICATION/1

JOB TITLE: Computer Technician

CAREER PATHWAY: Networking

CREDITS: 15

CBEDS TITLE: Network Engineering

CBEDS NO.: 4604

O*NET-SOC CODE: 15-1151.00

HOURS: 180

COURSE DESCRIPTION:

This competency-based course is the first in a sequence of three designed for computer installation, preventive maintenance, networking, security, and troubleshooting. It provides students with project-based experiences in basic computer and peripheral servicing. Technical instruction includes an orientation, workplace safety policies and procedures, and employability skills. Emphasis is placed on computer mathematics and the features and functions of the hardware components of a computer system: storage devices, motherboard, power supply devices, central processing unit, display devices, peripherals and input devices, adapter cards, and printers as well as laptops. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires successful completion of one of the Computer Operation courses (75-35-80, 75-35-90, 75-45-50, 75-45-60, or 75-45-70).

Note:

For Perkins purposes this course has been designated as an introductory course. Meets CompTIA A+ Essentials Certification requirements

*This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO. : 74-15-60
Title: A+ CERTIFICATION/2
JOB TITLE: Computer Technician
CAREER PATHWAY: Networking
CREDITS: 15
CBEDS TITLE: Network Engineering

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of three designed for computer installation, preventive maintenance, networking, security, and troubleshooting. It provides students with project-based experiences in basic computer and peripheral servicing. Technical instruction includes an introduction and reviews of workplace safety policies and procedures, as well as employability skills. Emphasis is placed on current Windows-based operating systems and software and their operational procedures. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the A+ Certification/1 (74-15-50) course.

Note:
For Perkins purposes this course has been designated as a concentrator course.
Meets CompTIA A+ Essentials Certification requirements.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO. : 74-15-70
Title: A+ CERTIFICATION/3
JOB TITLE: Computer Technician
CAREER PATHWAY: Networking
CREDITS: 15
CBEDS TITLE: Network Engineering

COURSE DESCRIPTION:
This competency-based course is the last in a sequence of three designed for computer installation, preventive maintenance, networking, security, and troubleshooting. It provides students with project-based experiences in basic computer and peripheral servicing. Technical instruction includes an introduction, reviews of resource management and computer math, and basic entrepreneurship. Emphasis is placed on networking technologies/devices/protocols, basic security concepts and technologies, and troubleshooting, repair, and maintenance techniques and their relevance to the structure and function of a computer system. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the A+ Certification/2 (74-15-60) course.

Note:
For Perkins purposes this course has been designated as a capstone course.
Meets CompTIA A+ Essentials Certification requirements.

* This course cannot be repeated once a student receives a Certificate of Completion.
<table>
<thead>
<tr>
<th>COURSE NO.</th>
<th>77-65-50</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title:</strong></td>
<td>NETWORKING/1</td>
</tr>
<tr>
<td><strong>JOB TITLE:</strong></td>
<td>Networking Technician</td>
</tr>
<tr>
<td><strong>CAREER PATHWAY:</strong></td>
<td>Networking</td>
</tr>
<tr>
<td><strong>CREDITS:</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>CBEDS TITLE:</strong></td>
<td>Network Engineering</td>
</tr>
<tr>
<td><strong>O*NET-SOC CODE:</strong></td>
<td>15-1152.00</td>
</tr>
<tr>
<td><strong>HOURS:</strong></td>
<td>180</td>
</tr>
<tr>
<td><strong>CBEDS NO.:</strong></td>
<td>4604</td>
</tr>
</tbody>
</table>

**COURSE DESCRIPTION:**
This competency-based course is the first in a sequence of two courses designed to prepare students to pass the Cisco Certified Entry Networking Technician (CCENT) examination. Technical instruction includes an orientation, workplace safety principles and procedures, resource management, and employability skills. Emphasis is placed on data bus, memory, network storage devices, communication ports, input and output devices, communication with other computers, portable computers, hardware configuration, operating systems, introduction to computer networking, introduction to network operating systems, connecting to the network and logging in, accessing data files on the network, OSI model, IEEE networking specifications, networking architecture, network layout design, networking media, networking interface cards, network protocols, and the network operating system. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires a 6.0 reading level as measured by the TABE D 9/10.

**Note:**
For Perkins purposes this course has been designated as an introductory course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: **77-65-60**

**Title:** NETWORKING/2  
**JOB TITLE:** Networking Technician  
**CAREER PATHWAY:** Networking  
**CREDITS:** 15  
**CBEDS TITLE:** Network Engineering

**COURSE DESCRIPTION:**

This competency-based course is the second in a sequence of two courses designed to prepare students to pass the Cisco Certified Entry Networking Technician (CCENT) examination. Technical instruction includes an introduction, workplace safety principles and procedures, employability skills, and entrepreneurial skills. Emphasis is placed on setting up user accounts and log-in security, setting up the network file system, managing the file system, file system security, multi-vendor networks, network transmission, network management, setting up network printing, creating login scripts, configuring network applications for users, network fault tolerance, the internet, backing up servers and workstations, performing a simple network installation, and network test review including study guides and simulated online testing. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires successful completion of the Networking/1 (77-65-50) course.

**Note:**

For Perkins purposes this course has been designated as a concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-30-65

Title: COMPUTER TECHNICIAN (INTRODUCTION)
JOB TITLE:  Computer Technician
CAREER PATHWAY: Networking
CREDITS: 10
CBEDS TITLE: Networking

COURSE DESCRIPTION:
This competency-based course prepares students for entry-level positions in the field of microcomputer repair. Instruction includes an introduction to the hardware components of a computer system, introduction to computer math, and basic electrical and electronic theory with transition to specific skill training in a computing machinery technology. This course introduces the student to DOS 6.2X, to the components of the systemboard, microprocessors and hard drives. Students will learn the fundamentals of installing hard drives, understand system resources and resolve conflicts, and identify types of memory as they are used in computer processing. Other areas of instruction include: the components of monitors, multimedia/ peripherals, and modems. Instruction includes an introduction to Windows 9x and its support. Students are introduced to the skills needed in the diagnosis and the service of microcomputers and printers. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires an 8.0 reading level as measured by the TABE D 9/10, and math skills equivalent to Math 2 (53-03-76) course.

Note:
For Perkins purposes this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **79-30-90**

Title: **COMPUTER TECHNICIAN: A+ CERTIFICATION (UPGRADE)**

JOB TITLE: Computer Technician

CAREER PATHWAY: Networking

CREDITS: 10

CBEDS TITLE: Network Engineering

O*NET-SOC CODE: 49-2011.00

HOURS: 120

CBEDS NO.: 4604

COURSE DESCRIPTION:

This competency-based course prepares students for the A+ Certification Exams in computer repair. The intent of this course is to upgrade students’ existing computer repair skills. Level of instruction assumes student has an advanced working knowledge of troubleshooting, service and support skills with regard to computer repair. Areas of instruction include: advanced DOS 6.2x, advanced instruction in the different types of microprocessors used in microcomputers, support of Windows 3.1x, support of Windows networks, support of Windows 9x, the use of Windows NT and Windows 2000. Instruction also includes the support and service of ink-jet and laser printers as well as the support of laptop computers. Students are provided with simulated certification testing and test-taking strategies to prepare for the A+ Certification Exam. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires a 9.0 reading comprehension level as measured by the TABE D 9/10, and math skills equivalent to Math 2 (53-03-76). Student must also have a working knowledge of troubleshooting, service and support skills with regard to computer repair. An interview with receiving instructor to evaluate student’s expertise is required as well.

Note:

For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **79-45-60**

Title: **NETWORK CONTROL OPERATOR**

JOB TITLE: Network Control Operator

CAREER PATHWAY: Networking

CREDITS: 20

CBEDS TITLE: Network Engineering

COURSE DESCRIPTION:

This competency-based course is designed to provide students with an introduction to network administration. It includes a review of the micro-computer, DOS, Windows, an understanding of the relationship of desktop hardware and software to the network, general networking concepts, and reinforcement of the relationship between desktop networking components. This course also includes instruction in employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires an 8.0 reading level as measured by the TABE D 9/10, math skills equivalent to Math 2 (53-03-76), and completion of Computer Operation/2: Applications (75-35-90) course.

**Note:**

For Perkins purposes this course has been designated as a concentrator/capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements


MACHINIST
Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>399,700</td>
<td>438,900</td>
<td>+10%</td>
<td>$41,700</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>33,800</td>
<td>40,200</td>
<td>+19%</td>
<td>$42,270</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- On-the-job training
- Completion of a training program at a vocational school or technical/community college
- Some machinists receive training through an apprenticeship program

WELDER
Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>397,900</td>
<td>412,300</td>
<td>+4%</td>
<td>$39,390</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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<tr>
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</thead>
<tbody>
<tr>
<td>28,400</td>
<td>31,400</td>
<td>+11%</td>
<td>$39,570</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- On-the-job training
- High school diploma or equivalent
- Completion of a training program at a vocational school or technical/community college
CTE | Industry Sector 12

# Manufacturing and Product Development

**COURSE NO.: 77-85-50**

**Title:** MACHINIST/1  
**JOB TITLE:** Machinist  
**CAREER PATHWAY:** Machining and Forming Technologies  
**CREDITS:** 15  
**CBEDS TITLE:** Machining and Forming Technologies  
**COURSE DESCRIPTION:**  
This competency-based course is the first in a sequence of two designed for machine and forming technology. It provides students with project-based experiences in basic machining. Technical instruction includes an orientation, workplace safety policies and procedures, resource management, trade mathematics, and employability skills. Emphasis is placed on machine tools and materials, blueprint reading – part I, bench work, drilling machine operation, metal cutting operation, lathe operation, milling operation, grinding machine operation, heat treatment operation, and tool and die work operation, calculations, and layout. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**  
Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

**Note:**  
For Perkins purposes this course has been designated as an introductory course.

*This course cannot be repeated once a student receives a Certificate of Completion.*

---

**COURSE NO.: 77-85-60**

**Title:** MACHINIST/2  
**JOB TITLE:** Machinist  
**CAREER PATHWAY:** Machining and Forming Technologies  
**CREDITS:** 15  
**CBEDS TITLE:** Machining and Forming Technologies  
**COURSE DESCRIPTION:**  
This competency-based course is the second in a sequence of two designed for machine and forming technology. It provides students with project-based experiences in basic machining. Technical instruction includes an introduction, reviews of safety policies and procedures, resource management, employability skills, and introduction to entrepreneurship. Emphasis is placed on math and science principles, operational/maintenance/storage techniques for precision tools and CNC equipment, selection and application of metals and alloys, blueprint reading – part II, communication media, programming, and introductory robotics. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**  
Enrollment requires the successful completion of the Machinist/1 (77-85-50) course.

**Note:**  
For Perkins purposes this course has been designated as a concentrator/capstone course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 77-95-50
Title: WELDING/1
JOB TITLE: Welder
CAREER PATHWAY: Welding and Materials Joining
CREDITS: 15
CBEDS TITLE: Welding Technology

O*NET-SOC CODE: 51-4121.06
HOURS: 180
CBEDS NO.: 5619

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of three designed for welding. It provides students with technical instruction and practical experience in basic welding which incorporates principles of sustainable and green technology. Instruction includes an orientation, workplace safety policies and procedures, and employability skills. Emphasis is placed on resource management, trade mathematics, welding symbols and codes, welding metallurgy, tools and equipment, and the techniques involved in surface welds, oxyacetylene cutting, brazing, welding tubing, and shielded metal arc welding (SMAW). The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 8.0 as measured by the TABE D 9/10.

Note:
For Perkins purposes this course has been designated as an introductory course.
*This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 77-95-60
Title: WELDING/2
JOB TITLE: Welder
CAREER PATHWAY: Welding and Materials Joining
CREDITS: 15
CBEDS TITLE: Welding Technology

O*NET-SOC CODE: 51-4121.06
HOURS: 180
CBEDS NO.: 5619

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of three designed for welding. It provides students with technical instruction and practical experience in basic welding which incorporates principles of sustainable and green technology. Instruction includes an introduction, reviews of workplace safety policies and procedures, resource management, employability skills, and welding metallurgy, and introductory entrepreneurship. Emphasis is placed on advanced trade mathematics, equipment and processes, and the techniques involved in fillet welds and plasma arc cutting. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Welding/1 (77-95-50) course.

Note:
For Perkins purposes this course has been designated as a concentrator course.
*This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 77-95-70

Title: WELDING/3

JOB TITLE: Welder

CAREER PATHWAY: Welding and Materials Joining

CREDITS: 15

CBEDS TITLE: Welding Technology

COURSE DESCRIPTION:

This competency-based course is the last in a sequence of three designed for welding. It provides students with technical instruction and practical experience in basic welding which incorporates principles of sustainable and green technology. Instruction includes an introduction and a review of workplace safety policies and procedures. Emphasis is placed on the basic geometric and trigonometric requirements of the industry and the tools, equipment, and techniques used in groove welding, air carbon arc process, and combination welding. It also focuses on meeting the requirements of the City of Los Angeles Departmental Welding Exams adopted from the American Welding Society (AWS) procedures. An introduction to fabrication and robotics are also included. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires successful completion of the Welding/2 (77-95-60) course.

Note:

For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 79-95-70

Title: MACHINIST: COMPUTER NUMERIC CONTROLS

JOB TITLE: Machinist

CAREER PATHWAY: Machining and Forming Technology

CREDITS: 15

CBEDS TITLE: Machining and Forming Technology

COURSE DESCRIPTION:

This competency-based course provides experience in fabricating increasingly complex parts and instruments for the machine tool industry. It stresses additional mathematical and computational skills applicable to the industry. Students are given practical experiences on a minimum of one automated machine. Development of performance skills necessary for employment is emphasized. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Computer science and machine lab experience is desirable.

Note:

For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
### CTE Careers by Industry Sector with Employment

**Projections, Median Earnings and Education Requirements**


#### CUSTOMER SERVICE REPRESENTATIVE

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>2,581,800</td>
<td>2,834,800</td>
<td>+10%</td>
<td>$32,300</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>201,500</td>
<td>231,500</td>
<td>+15%</td>
<td>$37,110</td>
</tr>
</tbody>
</table>

Education requirements for employment:

- Many employers require a high school diploma or equivalent
- On-the-job training

#### FIRST LINE SUPERVISORS

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>447,100</td>
<td>471,400</td>
<td>+5%</td>
<td>$63,540</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>38,500</td>
<td>42,800</td>
<td>+11%</td>
<td>$71,890</td>
</tr>
</tbody>
</table>
JANITORS AND CLEANERS

Nation-wide employment outlook and median earnings:

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<thead>
<tr>
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<tbody>
<tr>
<td>2,360,600</td>
<td>2,496,900</td>
<td>+6%</td>
<td>$24,190</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>231,300</td>
<td>255,100</td>
<td>+10%</td>
<td>$27,080</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- On-the-job training
- Some employers may require formal education

REAL ESTATE AGENT

Nation-wide employment outlook and median earnings:

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<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>337,400</td>
<td>346,800</td>
<td>+3%</td>
<td>$44,090</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

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</thead>
<tbody>
<tr>
<td>25,700</td>
<td>31,400</td>
<td>+22%</td>
<td>$51,580</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- All 50 states require a license
- A qualification for the license is a high school diploma
- Many employers prefer college graduates
Title: **REAL ESTATE AGENT: ESCROW PRINCIPLES**

**JOB TITLE:** Real Estate Agent

**CAREER PATHWAY:** Professional Sales

**CREDITS:** 5

**CBEDS TITLE:** Professional Sales I

**COURSE DESCRIPTION:**
This competency-based course is the last in a sequence of four designed for real estate. It satisfies the statutory requirement for the salesperson's or broker's license. It includes instruction in basic escrow processes for individuals purchasing real estate property. Topics include a background for individuals who want to advance their professional standing in the real estate and escrow industry. Basic escrow theory is explained; basic escrow-specific vocabulary is introduced; and actual sample escrows enable individuals to progress through increasingly complex situations. Ethical laws and requirements are presented. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires concurrent high school students to be 18 years of age upon completion of the course.

**Note:**
For Perkins purposes this course has been designated as a [capstone](#) course.

Department of Real Estate Approval No. 1313-91.

*This course cannot be repeated once a student receives a Certificate of Completion.*
Title: REAL ESTATE AGENT: FINANCE

JOB TITLE: Real Estate Agent

CAREER PATHWAY: Professional Sales

CREDITS: 5

COURSE DESCRIPTION:
This competency-based course is the third in a sequence of four designed for real estate. It meets statutory requirements for broker’s/salesperson’s license. It includes instruction in the financing of real estate, the different types of loans, and requirements to qualify both the property and the borrower for the loan. Topics include mortgage instruments, construction loans, financial math, and different types of lenders; secondary market financing, including conventional and Federal Home Loan Mortgage Corporation (FHLMC) and Federal National Mortgage Corporation (FNMC) purchases; Veteran’s Administration (VA) and Federal Housing Authority (FHA) underwriting and guarantees; and ethics of real estate. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires concurrent high school students to be 18 years of age upon completion of the course.

Note:
For Perkins purposes this course has been designated as a capstone course.
Department of Real Estate Approval No. 996.88.

* This course cannot be repeated once a student receives a Certificate of Completion.
**REAL ESTATE AGENT: PRACTICE AND ETHICS**

**Title:** Real Estate Agent  
**CAREER PATHWAY:** Professional Sales  
**CREDITS:** 5  
**CBEDS TITLE:** Professional Sales I  
**COURSE DESCRIPTION:**
This competency-based course is the first in a sequence of four designed for real estate. It satisfies the statutory requirements for the broker's and salesperson's license. It includes instruction in basic business, financial, and sales practices of real estate. It covers agency laws, various types of contracts and their usage, competitive market analysis, types of advertising, various methods of real estate finance, property management, escrow procedures, tax aspect of real estate practice and the standards of real estate ethics. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires successful completion of Real Estate Agent: Principles (71-40-90) or possession of a real estate salesperson's or broker's license.

**Note:**
For Perkins purposes this course has been designated as a **capstone** course.  
Department of Real Estate Approval No. 1194-90.

* This course cannot be repeated once a student receives a Certificate of Completion.

---

**REAL ESTATE AGENT: PRINCIPLES**

**Title:** Real Estate Agent  
**CAREER PATHWAY:** Professional Sales  
**CREDITS:** 5  
**CBEDS TITLE:** Professional Sales I  
**COURSE DESCRIPTION:**
This competency-based course is the second in a sequence of four designed for real estate. It prepares students for the California Real Estate salesperson's license examination. It includes instruction in the major aspects of real estate law, the California Department of Real Estate, contracts, deeds, titles, encumbrances, leases, financing, land descriptions, business opportunities, real estate computation, and ethics. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires concurrent high school students to be 18 years of age upon completion of the course.

**Note:**
For Perkins purposes this course has been designated as a **capstone** course.  
Department of Real Estate Approval No. 894.87.

* This course cannot be repeated once a student receives a Certificate of Completion.
Title: CUSTOMER SERVICE REPRESENTATIVE
JOB TITLE: Customer Service Representative
CAREER PATHWAY: Professional Sales
CREDITS: 5
CBEDS TITLE: Customer Service
CBEDS NO.: 4119
COURSE DESCRIPTION:
This competency-based course prepares students in providing customer services to a variety of industry and/or company environments. This course contains instruction in assessing individual work styles and identifying effective work behaviors; identifying and building personal/interpersonal skills to sustain employment; strengthening thinking and problem solving in the workplace, and identifying work site employment. Instruction of business-related oral and written communication skills (customer face-to-face interaction, effective telephone skills) is also included. An introduction to the fundamentals of customer service and customer service representative job-readiness skills is provided. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a minimum of 8.0 reading level as measured by the TABE D 9/10 test.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 78-35-50

Title: CUSTOMER SERVICE
JOB TITLE: Customer Service Representative
CAREER PATHWAY: Professional Sales
CREDITS: 5
CBEDS TITLE: Customer Service
CBEDS NO.: 4119

COURSE DESCRIPTION:
This competency-based course is designed for customer service. It provides students with project-based learning experiences in customer care for a variety of industry and/or business environments. Technical instruction includes an orientation, workplace safety policies and procedures, business math, employability skills, and work styles. Emphasis is placed on communication and critical thinking skills, fundamental customer service strategies, cross-selling and upselling strategies, techniques on how to handle irate customers, and strategies required to sustain employment. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 8.0 as measured by the TABE D 9/10.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course. Sections designated by an asterisk (*) contain competencies that meet the National Retail Federation (NRF) Foundation’s National Professional Certification in Customer Service. The said competencies are designed to capture the core customer service duties for a broad range of entry-level positions across the sales and service industries.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **79-75-50**

**Title:** BUILDING AND GROUNDS WORKER (FUNDAMENTALS)

**JOB TITLE:** Building and Grounds Worker

**CAREER PATHWAY:** Entrepreneurship/Self Employment

O*NET-SOC CODE: 37-2011.00

**CREDITS:** 5

**CBEDS TITLE:** Small Business Services

CBEDS NO.: 4132

**COURSE DESCRIPTION:**

This competency-based course prepares trainees for entry-level employment as school custodians, upgrades skills, and prepares employees for promotion. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

None.

**Note:**

For Perkins purposes this course has been designated as an introductory course. It is recommended that students in the Maintenance Supervisor program complete the following courses in the given sequence: Building and Grounds Worker (Fundamentals) (79-75-50), Maintenance Supervisor: Heating and Ventilation (79-75-75), Maintenance Supervisor: Scheduling Practices (79-75-80), Maintenance Supervisor: Supervisory Practices (79-75-85).

* This course cannot be repeated once a student receives a Certificate of Completion.

---

COURSE NO.: **79-75-75**

**Title:** MAINTENANCE SUPERVISOR: HEATING AND VENTILATION

**JOB TITLE:** Maintenance Supervisor

**CAREER PATHWAY:** Entrepreneurship/Self Employment

O*NET-SOC CODE: 49-1011.00

**CREDITS:** 5

**CBEDS TITLE:** Small Business Services

CBEDS NO.: 4132

**COURSE DESCRIPTION:**

This competency-based course prepares trainees to operate various heating, ventilation, and air conditioning equipment. Instruction includes principles and techniques of various low-pressure boiler operations, fuel systems, unit heating systems, ventilation systems, and air conditioning systems. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

None.

**Note:**

For Perkins purposes this course has been designated as a concentrator/capstone course. It is recommended that students in the Maintenance Supervisor program complete the following courses in the given sequence: Building and Grounds Worker (Fundamentals) (79-75-50), Maintenance Supervisor: Heating and Ventilation (79-75-75), Maintenance Supervisor: Scheduling Practices (79-75-80), Maintenance Supervisor: Supervisory Practices (79-75-85).

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-75-80
Title: MAINTENANCE SUPERVISOR: SCHEDULING PRACTICES
JOB TITLE: Maintenance Supervisor
CAREER PATHWAY: Entrepreneurship/Self Employment
CREDITS: 5
CBEDS TITLE: Small Business Services

COURSE DESCRIPTION:
This competency-based course prepares trainees for entry-level supervision positions as school custodian supervisors. Instruction includes practical training in the management of custodial personnel; in-depth study of time and motion studies; scheduling workloads equitably; scheduling of routine cleaning; scheduling of non-routine cleaning. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.
It is recommended that students in the Maintenance Supervisor program complete the following courses in the given sequence: Building and Grounds Worker (Fundamentals) (79-75-50), Maintenance Supervisor: Heating and Ventilation (79-75-75), Maintenance Supervisor: Scheduling Practices (79-75-80), Maintenance Supervisor: Supervisory Practices (79-75-85).

* This course cannot be repeated once a student receives a Certificate of Completion.

---

COURSE NO.: 79-75-85
Title: MAINTENANCE SUPERVISOR: SUPERVISORY PRACTICES
JOB TITLE: Maintenance Supervisor
CAREER PATHWAY: Entrepreneurship/Self Employment
CREDITS: 5
CBEDS TITLE: Small Business Services

COURSE DESCRIPTION:
This competency-based course provides training in principles of supervision, inspection of buildings and grounds, record keeping, and management of personnel. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course. It is recommended that students in the Maintenance Supervisor program complete the following courses in the given sequence: Building and Grounds Worker (Fundamentals) (79-75-50), Maintenance Supervisor: Heating and Ventilation (79-75-75), Maintenance Supervisor: Scheduling Practices (79-75-80), Maintenance Supervisor: Supervisory Practices (79-75-85).

* This course cannot be repeated once a student receives a Certificate of Completion.
CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements


EMERGENCY MEDICAL TECHNICIAN
These statistics reflect the outlook for computer, automated teller and office machine repairers.

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>241,200</td>
<td>299,600</td>
<td>+24%</td>
<td>$32,670</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16,600</td>
<td>20,600</td>
<td>+24%</td>
<td>$33,220</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- A high school diploma
- Formal training and certification
- A license to practice is required in all 50 states.

FORENSIC SCIENCE TECHNICIAN

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>14,400</td>
<td>18,200</td>
<td>+27%</td>
<td>$56,750</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2,200</td>
<td>2,900</td>
<td>+32%</td>
<td>$76,590</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Bachelor’s degree preferred and on-the-job training
Police Officer
(Trainee): These statistics reflect the outlook for police officers, not trainees.

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>680,000</td>
<td>714,200</td>
<td>+5%</td>
<td>$59,680</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>68,700</td>
<td>73,700</td>
<td>+7%</td>
<td>$98,250</td>
</tr>
</tbody>
</table>

Education requirements for employment:
• For police officers, the education requirements range from a high school diploma to a college degree.
• Police officers are trained at a police academy
• Police officers must be U.S. citizens, usually 21 years of age and meet rigorous physical and personal

Security Guard

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1,095,400</td>
<td>1,150,900</td>
<td>+5%</td>
<td>$25,770</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>148,900</td>
<td>171,900</td>
<td>+15%</td>
<td>$26,420</td>
</tr>
</tbody>
</table>

Education requirements for employment:
• No specific education requirements for this profession
• A high school diploma is often preferred
• In some cases, education beyond a high school diploma may be required
• On-the-job training is often provided
## 14 Public Services

**COURSE NO.: 76-35-70**

**Title:** FIRST RESPONDER/EMR (EMERGENCY MEDICAL RESPONDER)  
**JOB TITLE:** First Responder  
**CAREER PATHWAY:** Emergency Response  
**CREDITS:** 5  
**CBEDS TITLE:** First Responders Basic  
**CREDITS:** 5  
**HOURS:** 90  
**O*NET-SOC CODE:** 29-2041.00  
**CBEDS NO.:** 5809

### COURSE DESCRIPTION:

This competency-based course is designed to prepare students for emergency medical services (EMS) occupations. Technical instruction includes: an orientation and workplace safety policies and procedures, evaluation, and employability skills. Emphasis is placed on: introduction to the EMS systems; legal and ethical issues; well-being of the first responder; the human body; medical terminology; lifting, moving, and positioning patients; airway management; assessment of the patient; cardiopulmonary resuscitation (CPR) and automated external defibrillators (AED); medical emergencies; bleeding, shock, and soft-tissue injuries; muscle and bone injuries; infants and children; gaining access and hazards on scene; multiple-casualty incidents, triage, and the incident management system; pharmacology; swimming and diving incidents; response to terrorism and weapons of mass destruction; and first responder skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

### PREREQUISITES:

None.

**Note:**

For Perkins purposes this course has been designated as a concentrator course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 77-50-50

Title: EMERGENCY MEDICAL TECHNICIAN

JOB TITLE: Emergency Medical Technician

CAREER PATHWAY: Emergency Response

CREDITS: 10

CBEDS TITLE: Introduction to Emergency Services

COURSE DESCRIPTION:

This competency-based course contains the training requirement for Emergency Medical Technician-1 (EMT) certification. This includes basic EMT sciences such as anatomy and physiology, emergency medical and trauma care, obstetrics, pediatrics, and behavioral emergencies. The course is based on the Los Angeles County Core Curriculum. Upon successful completion, the student will have the knowledge and training required for EMT 1 certification. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires a 9.0 reading level and math skills equivalent to Basic Math-Intermediate (53-03-72), at least 18 years of age, evidence of good health and tuberculosis screening.

Note:

For Perkins purposes this course has been designated as a capstone course.

THE STUDENT MUST PRESENT A CURRENT CERTIFICATE SHOWING COMPLETION OF AN AHA OR BLS HEALTHCARE PROVIDERS CARDIOPULMONARY RESUSCITATION (CPR) CLASS PRIOR TO CLINICAL ROTATION.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 77-50-55

Title: EMERGENCY MEDICAL TECHNICIAN: RECERTIFICATION

JOB TITLE: Emergency Medical Technician

CAREER PATHWAY: Emergency Response

CREDITS: 0

CBEDS TITLE: Introduction to Emergency Services

COURSE DESCRIPTION:

This competency-based course provides review and upgrading in techniques and methods used by the emergency medical technician (EMT). Also reviewed are the laws and the regulations affecting the EMT. This course provides the refresher training required by the State of California for EMT-1A recertification. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires a current, valid EMT-1A certification or previous certification as an EMT-1A within the last twelve months.

Note:

For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
### COURSE NO.: 78-85-60

**Title:** FORENSIC SCIENCE  
**JOB TITLE:** Crime Scene Technician  
**CAREER PATHWAY:** Public Safety  
**CREDITS:** 15  
**CBEDS TITLE:** Forensic Science  
**O*NET-SOC CODE:** 33-9032.00  
**HOURS:** 180  
**CBEDS NO.:** 5840

### COURSE DESCRIPTION:

This competency-based course is designed to introduce the student to protective service careers. It provides theory and hands-on demonstration of the science behind forensic science. Technical instruction includes: orientation and safety, critical thinking skills, observation skills, and employability skills. Emphasis is placed on: crime scene investigation and evidence collection, study of hair, fibers and textiles, pollen and spore examination, fingerprint identification, DNA fingerprinting, blood and blood spatter, drug identification and toxicology, handwriting analysis, forgery, and counterfeiting, death: meaning, manner mechanism, cause, and time, soil examination, forensic anthropology, glass evidence, casts and impressions, tool marks, and ballistics. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

### PREREQUISITES:

Enrollment requires successful completion of Biology/1 and Biology/2.

**Note:**

For Perkins purposes this course has been designated as an introductory/concentrator course.

*This course cannot be repeated once a student receives a Certificate of Completion.*
COURSE NO.: 78-85-70
Title: SECURITY OFFICER TRAINEE
JOB TITLE: Security Guard
CAREER PATHWAY: Public Safety
CREDITS: 5
CBEDS TITLE: Introduction to Public Safety Careers

COURSE DESCRIPTION:
This competency-based course is designed to prepare students for entry-level employment as security officers. Technical instruction includes: orientation, safety policies and procedures, and employability skills. Emphasis is placed on: powers of arrest, weapons of mass destruction (WMD) and terrorism, public relations, observation and documentation, communication protocols, liability/legal aspects, transportation security officer, evacuation procedures, officer safety, arrest, search and seizure, access control, trespass, first aid and CPR, handling difficult people, workplace violence, chemical agents, preserving the incident scene, crowd control, courtroom demeanor, parking/traffic control, and fire safety. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Concurrent high school students must be at least 16 years old, with at a 2.0 grade point average and a good attendance record.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course. Student must be at least 18 years old to receive a guard card.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 78-85-80
Title: POLICE SCIENCE
JOB TITLE: Police Officer
CAREER PATHWAY: Public Safety
CREDITS: 5
CBEDS TITLE: Law Enforcement

COURSE DESCRIPTION:
This competency-based course is designed as a comprehensive introduction to law enforcement and criminal justice. This course describes the necessary skills to become a police officer. The general concepts of law enforcement are presented: laws of arrest, search and seizure, constitutional rights, history of law enforcement, and a working knowledge of the duties of a police officer. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires basic reading and math skills.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
### Industry Sector 15 | Transportation

#### CTE Careers by Industry Sector with Employment Projections, Median Earnings and Education Requirements


**AIRCRAFT MECHANICS AND SERVICE TECHNICIAN (AIRCRAFT)**

These statistics reflect the outlook for all aircraft mechanics and service technicians.

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>119,900</td>
<td>121,500</td>
<td>+1%</td>
<td>$60,170</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>13,200</td>
<td>14,900</td>
<td>+13%</td>
<td>$63,910</td>
</tr>
</tbody>
</table>

**Education requirements for employment:**

- High school diploma or equivalent
- Training at an FAA certified Aviation Maintenance Technician School
- FAA certification

---

<table>
<thead>
<tr>
<th>ROCP NO.</th>
<th>Title</th>
<th>Hours</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>79-60-70</td>
<td>Automotive Technician: Exhaust Emissions- 20 Hour Smog Licensing (Upgrade)</td>
<td>20</td>
<td>187</td>
</tr>
<tr>
<td>79-70-50</td>
<td>Airframe and Powerplant Technician</td>
<td>600</td>
<td>188</td>
</tr>
<tr>
<td>79-70-70</td>
<td>Airframe Technician Trainee</td>
<td>900</td>
<td>188</td>
</tr>
<tr>
<td>79-70-90</td>
<td>Powerplant Technician Trainee</td>
<td>900</td>
<td>189</td>
</tr>
<tr>
<td>79-80-51</td>
<td>Auto Body Repair/1: Non-Structural</td>
<td>360</td>
<td>190</td>
</tr>
<tr>
<td>79-80-53</td>
<td>Auto Body Repair/2: Structural</td>
<td>360</td>
<td>191</td>
</tr>
<tr>
<td>79-80-55</td>
<td>Auto Body Repair/3: Mechanical and Electrical</td>
<td>360</td>
<td>192</td>
</tr>
<tr>
<td>79-80-57</td>
<td>Auto Body Repair/4: Painting and Refinishing</td>
<td>360</td>
<td>193</td>
</tr>
<tr>
<td>79-90-51</td>
<td>Auto Tech: Automatic Transmission and Transaxle</td>
<td>180</td>
<td>194</td>
</tr>
<tr>
<td>79-90-53</td>
<td>Auto Tech: Brakes</td>
<td>180</td>
<td>195</td>
</tr>
<tr>
<td>79-90-55</td>
<td>Auto Tech: Diesel/1</td>
<td>180</td>
<td>196</td>
</tr>
<tr>
<td>79-90-57</td>
<td>Auto Tech: Diesel/2</td>
<td>180</td>
<td>197</td>
</tr>
<tr>
<td>79-90-59</td>
<td>Auto Tech: Drive Train (Diesel)</td>
<td>180</td>
<td>198</td>
</tr>
<tr>
<td>79-90-61</td>
<td>Auto Tech: Electrical and Electronics/1</td>
<td>180</td>
<td>199</td>
</tr>
<tr>
<td>79-90-63</td>
<td>Auto Tech: Electrical and Electronics/2</td>
<td>180</td>
<td>200</td>
</tr>
<tr>
<td>79-90-65</td>
<td>Auto Tech: Emission Control/1</td>
<td>90</td>
<td>201</td>
</tr>
<tr>
<td>79-90-67</td>
<td>Auto Tech: Emission Control/2</td>
<td>90</td>
<td>202</td>
</tr>
<tr>
<td>79-90-69</td>
<td>Auto Tech: Engine Performance/1</td>
<td>180</td>
<td>203</td>
</tr>
<tr>
<td>79-90-70</td>
<td>Warehouse Operations: Forklift Operator (Fundamentals)</td>
<td>180</td>
<td>204</td>
</tr>
<tr>
<td>79-90-71</td>
<td>Auto Tech: Engine Performance/2</td>
<td>180</td>
<td>205</td>
</tr>
<tr>
<td>79-90-73</td>
<td>Auto Tech: Engine Repair</td>
<td>180</td>
<td>206</td>
</tr>
<tr>
<td>79-90-75</td>
<td>Auto Tech: Heating and Air Conditioning</td>
<td>180</td>
<td>207</td>
</tr>
<tr>
<td>79-90-77</td>
<td>Auto Tech: Manual Drive Train and Axles</td>
<td>180</td>
<td>208</td>
</tr>
<tr>
<td>79-90-79</td>
<td>Auto Tech: Suspension and Steering</td>
<td>180</td>
<td>209</td>
</tr>
<tr>
<td>79-90-83</td>
<td>Technology/1: Automotive Systems</td>
<td>90</td>
<td>210</td>
</tr>
<tr>
<td>79-90-85</td>
<td>Technology/2: Automotive Systems</td>
<td>90</td>
<td>210</td>
</tr>
</tbody>
</table>
AUTOMOTIVE BODY AND RELATED REPAIRERS

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>149,700</td>
<td>163,500</td>
<td>+9%</td>
<td>$41,540</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13,700</td>
<td>14,900</td>
<td>+9%</td>
<td>$42,830</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Successful completion of a vocational training program
- High school diploma or equivalent

AUTOMOTIVE SERVICE TECHNICIAN AND MECHANIC

(Trainee): These statistics reflect the outlook for police officers, not trainees.

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>739,900</td>
<td>779,000</td>
<td>+5%</td>
<td>$38,470</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>69,200</td>
<td>75,100</td>
<td>+9%</td>
<td>$43,650</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Successful completion of a post-secondary vocational training program
- High school diploma or equivalent

DIESEL ENGINE SPECIALIST

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>263,900</td>
<td>295,500</td>
<td>+12%</td>
<td>$45,170</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>22,100</td>
<td>26,800</td>
<td>+21%</td>
<td>$52,040</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- Graduation from a formal training programs
- High school diploma or equivalent
- On-the-job training

INDUSTRIAL TRUCK AND TRACTOR OPERATORS: These statistics includes forklift operator.

Nation-wide employment outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$30,900</td>
<td>$43,500</td>
<td>+2%</td>
<td>$32,460</td>
</tr>
</tbody>
</table>

California outlook and median earnings:

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>60,200</td>
<td>69,700</td>
<td>+16%</td>
<td>$33,610</td>
</tr>
</tbody>
</table>

Education requirements for employment:
- High school diploma or equivalent
This competency-based course meets the requirements for the BAR 20-Hour Update #1 for currently employed and licensed California State Smog Technicians. Instruction includes an introduction to ASM testing and diagnosis; oscilloscope testing and waveform pattern diagnosis; lab scope operation and analysis of fuel control sensors; use of the scan tool, DVOM, and lab scope; and different types of tests that can be used to determine the efficiency of the catalytic converter. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a California Smog Technician license, an 8.0 reading level as measured by the TABE D 9/10 and math skills equivalent to Math 2 (53-03-76) course.

Note:
For Perkins purposes this course has been designated as a capstone course. Students who successfully complete this course and pass the final examination will receive a certificate of completion. Students may bring in their smog application renewal to be stamped, verifying course completion.

* This course cannot be repeated once a student receives a Certificate of Completion.
### Transportation

<table>
<thead>
<tr>
<th>COURSE NO.</th>
<th>79-70-50</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title:</strong></td>
<td>AIRFRAME AND POWERPLANT TECHNICIAN</td>
</tr>
<tr>
<td><strong>JOB TITLE:</strong></td>
<td>Airframe and Powerplant Technician</td>
</tr>
<tr>
<td><strong>CAREER PATHWAY:</strong></td>
<td>Systems Diagnostics &amp; Service</td>
</tr>
<tr>
<td><strong>CREDITS:</strong></td>
<td>40</td>
</tr>
<tr>
<td><strong>CBEDS TITLE:</strong></td>
<td>Aircraft Mechanics</td>
</tr>
<tr>
<td><strong>O*NET-SOC CODE:</strong></td>
<td>49-3011.00</td>
</tr>
<tr>
<td><strong>HOURS:</strong></td>
<td>600</td>
</tr>
<tr>
<td><strong>CBEDS NO.:</strong></td>
<td>5653</td>
</tr>
</tbody>
</table>

**COURSE DESCRIPTION:**
This competency-based course includes instruction in general subjects related to both airframe and powerplant, including basic mathematics, basic physics, basic electricity, aircraft drawings, weight and balance, fluid lines and fittings, materials and processes, ground operation and servicing, cleaning and corrosion control, maintenance forms, records and publications, and mechanic privileges and limitations. It prepares students to pass parts of the Federal Aviation Administration (FAA) airframe and powerplant mechanic examinations. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires a minimum 9.0 reading level as measured by the TABE D 9/10 and a minimum 9.0 math level as measured by the TABE 9M complete Battery Test and the minimum age of 16.

**Note:**
For Perkins purposes this course has been designated as an introductory course.

* This course cannot be repeated once a student receives a Certificate of Completion.

### COURSE NO. 79-70-70

<table>
<thead>
<tr>
<th><strong>Title:</strong></th>
<th>AIRFRAME TECHNICIAN TRAINEE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>JOB TITLE:</strong></td>
<td>Airframe Technician</td>
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<tr>
<td><strong>CAREER PATHWAY:</strong></td>
<td>Systems Diagnostics &amp; Service</td>
</tr>
<tr>
<td><strong>CREDITS:</strong></td>
<td>40</td>
</tr>
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<td><strong>CBEDS TITLE:</strong></td>
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<tr>
<td><strong>O*NET-SOC CODE:</strong></td>
<td>49-3011.00</td>
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<tr>
<td><strong>HOURS:</strong></td>
<td>900</td>
</tr>
<tr>
<td><strong>CBEDS NO.:</strong></td>
<td>5653</td>
</tr>
</tbody>
</table>

**COURSE DESCRIPTION:**
This competency-based course includes instruction in aircraft airframe theory: modern techniques, equipment, and materials used in the repair and maintenance of airframes; electrical, hydraulic, instrument, and environmental control systems, blueprint reading, measurement, sheet metal development, fabrication, welding, heat treating, finishing, aircraft assembly and rigging, fabric covering, and repair. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**
Enrollment requires a minimum 9.0 reading level as measured by the TABE D 9/10 and a minimum 9.0 math level as measured by the TABE 9M. Complete Battery Test and the minimum age of 16. Successful completion of the Airframe and Powerplant Technician (79-70-50) course.

**Note:**
For Perkins purposes this course has been designated as a concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
Title: POWERPLANT TECHNICIAN TRAINEE  
JOB TITLE: Powerplant Technician  
CAREER PATHWAY: Systems Diagnostics & Service  
CREDITS: 40  
CBEDS TITLE: Aircraft Mechanics  
O*NET-SOC CODE: 49-3011.00  
HOURS: 900  
CBEDS NO.: 5653  
COURSE DESCRIPTION:
This competency-based course includes instruction in aircraft turbine and piston engine theory, maintenance, and overhaul, using specifications of the Federal Aviation Administration (FAA) and manufacturers. It prepares students to pass the FAA’s written, oral, and practical examinations for powerplant mechanics and prepares them for employment in the aviation industry. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a minimum 9.0 reading level as measured by the TABE D 9/10 and a minimum 9.0 math level as measured by the TABE 9M. Complete Battery Test and the minimum age of 16. Successful completion of the Airframe and Powerplant Technician (79-70-50) course.

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
This competency-based course is the first in a sequence of five designed for the National Automotive Technicians Education Foundation (NATEF) certification in Auto Body Repair. It provides students with technical instruction and practical experience in non-structural analysis and damage repair of automobiles using sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with local, state, and federal safety and environmental regulations. It covers the proper use, maintenance, and storage of auto body repair tools and equipment. Emphasis is placed on the techniques in the following areas of non-structural analysis and damage repair: preparation, outer body panel repairs/replacements/adjustments, metal finishing and body filling, movable glass and hardware, metal welding and cutting, plastics and adhesives. It also teaches trade mathematics, resource management, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes this course has been designated as an introductory course. Meets NATEF Standards and identifies high priority tasks in collision repair and refinish. Check the NATEF Manual for explanation of high priority I or G tasks.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-80-53

Title: AUTO BODY REPAIR/2: STRUCTURAL

JOB TITLE: Auto Body Technician

CAREER PATHWAY: Structural Repair & Refinishing

CREDITS: 30

CBEDS TITLE: Structural Repair

CBEDS NO.: 5664

O*NET-SOC CODE: 49-3021.00

HOURS: 360

COURSE DESCRIPTION:

This competency-based course is the second in a sequence of five designed for the National Automotive Technicians Education Foundation (NATEF) certification in Auto Body Repair. It provides students with technical instruction and practical experience in structural analysis and damage repair of automobiles using sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance and storage of auto body repair tools and equipment. Emphasis is placed on the techniques in the following areas of structural analysis and damage repair: frame inspection and repair, unibody inspection/measurement/repair, fixed glass, and metal welding and cutting. It also expands the coverage of trade mathematics, reviews resource management and employability skills, and teaches entrepreneurial skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires the ability to lift and carry heavy items as required by the industry and successful completion of the course Auto Body Repair/1: Non-Structural (79-80-51).

Note:

For Perkins purposes this course has been designated as a concentrator course. Meets NATEF Standards and identifies high priority tasks in collision repair and refinish. Check the NATEF Manual for explanation of high priority I or G tasks.

* This course cannot be repeated once a student receives a Certificate of Completion.
### Course: AUTO BODY REPAIR/3: MECHANICAL AND ELECTRICAL

**Title:** Auto Body Technician  
**CAREER PATHWAY:** Structural Repair & Refinishing  
**CREDITS:** 30  
**CBEDS TITLE:** Structural Repair & Refinishing, Comprehensive  

#### Course Description:
This competency-based course is the third in a sequence of five designed for the National Automotive Technicians Education Foundation (NATEF) certification in Auto Body Repair. It provides students with technical instruction and practical experience in mechanical and electrical repair of automobiles using sustainable and green vehicle technologies. Instruction includes the inspection, removal, replacement, and/or adjustment of the following: suspension and steering, electrical, brakes, heating and air conditioning, cooling, drive train, fuel, intake, exhaust, and restraint systems. It covers a review of trade mathematics, employability skills, and entrepreneurial skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

#### Prerequisites:
Enrollment requires the ability to lift and carry heavy items as required by the industry and successful completion of the course Auto Body Repair/2: Structural (79-80-53). CFC (dichlorodifluoromethane) certification is mandatory for anyone working on air conditioning systems.

#### Note:
For Perkins purposes this course has been designated as a **concentrator/capstone** course. Meets NATEF Standards and identifies high priority tasks in collision repair and refinish. Check the NATEF Manual for explanation of high priority I or G tasks.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-80-57

Title: AUTO BODY REPAIR/4: PAINTING AND REFINISHING

JOB TITLE: Auto Body Technician

CAREER PATHWAY: Structural Repair & Refinishing

CREDITS: 30

CBEDS TITLE: Painting & Refinishing

O*NET-SOC CODE: 49-3021.00

HOURS: 360

CBEDS NO.: 5666

COURSE DESCRIPTION:
This competency-based course is the fourth in a sequence of five designed for the National Automotive Technicians Education Foundation (NATEF) certification in Auto Body Repair. It provides students with technical instruction and practical experience in auto body painting and refinishing using sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance, and storage of auto body painting and refinishing tools and equipment. Emphasis is placed on the techniques in the following areas: surface preparation, spray gun and related equipment operation, paint mixing/matching/application, causes and cures of paint defects, and final details. It also reviews trade mathematics, resource management, employability skills, and entrepreneurial skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires the ability to lift and carry heavy items as required by the industry and successful completion of the course Auto Body Repair/3: Mechanical and Electrical (79-80-55).

Note:
For Perkins purposes this course has been designated as a concentrator/capstone course. Meets NATEF Standards and identifies high priority tasks in collision repair and refinish. Check the NATEF Manual for explanation of high priority I or G tasks.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **79-90-51**

Title: **AUTO TECH: AUTOMATIC TRANSMISSION AND TRANSAXLE**

Job Title: Transmission Technician

Career Pathway: Systems Diagnostics & Service

Credits: 15

CBEDS Title: Advanced Automotive

COURSE DESCRIPTION:

This competency-based course is one in a sequence of courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in an automobile area incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance, and storage of auto repair tools and equipment as well as the effective use of service manuals and computer-based information systems. Emphasis is placed on the techniques in the following areas of automatic transmission and transaxle diagnosis and repair: general, in-vehicle, and off-vehicle. It also teaches trade mathematics, resource management, employability skills, and entrepreneurial skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires successful completion of the Auto Tech: Engine Repair (79-90-73) course.

Note:

For Perkins purposes this course has been designated as a capstone course. MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN AUTOMATIC TRANSMISSION AND TRANSAXLE. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS.

* This course cannot be repeated once a student receives a Certificate of Completion.
Title: AUTO TECH: BRAKES
JOB TITLE: Brakes Technician
CAREER PATHWAY: Systems Diagnostics & Service
CREDITS: 15
CBEDS TITLE: Advanced Automotive

COURSE DESCRIPTION:
This competency-based course is one in a sequence of courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in an area incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance, and storage of auto repair tools and equipment as well as the effective use of service manuals and computer-based information systems. Emphasis is placed on the techniques in the following areas of brake diagnosis and repair: general, hydraulic system, drum brake, disc brake, power assist units, wheel bearings, parking brakes, electronic brake, and control systems. It also teaches trade mathematics, resource management, employability skills, and entrepreneurial skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Auto Tech: Engine Repair (79-90-73) course.

Note:
For Perkins purposes this course has been designated as a capstone course.
MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN BRAKES. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **79-90-55**

Title: **AUTO TECH: DIESEL/1**

JOB TITLE:  Diesel Technician

CAREER PATHWAY: Systems Diagnostics & Service

CREDITS: 15

CBEDS TITLE: Diesel Equipment Mechanics

COURSE DESCRIPTION:

This competency-based course is one in a sequence of three courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience with diesel engines incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. Emphasis is placed on the techniques in the following areas of diesel engine diagnosis and repair: general, cylinder head and valve train, and engine block. It also teaches trade mathematics, resource management, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires successful completion of the Auto Tech: Engine Repair (79-90-73) course.

Note:

For Perkins purposes this course has been designated as an introductory/concentrator course.

MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN MEDIUM/HEAVY TRUCK DIESEL ENGINE. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS.

* This course cannot be repeated once a student receives a Certificate of Completion.
Course No.: 79-90-57
Title: AUTO TECH: DIESEL/2
Job Title: Diesel Technician
Career Pathway: Systems Diagnostics & Service
CREDITS: 15
CBEDS Title: Diesel Equipment Mechanics
CBEDS No.: 5657

Course Description:
This competency-based course is one in a sequence of three courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience with diesel engines incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. Emphasis is placed on the techniques in the following areas of diesel engine diagnosis and repair: lubrication, cooling, air induction, exhaust, fuel supply, and electronic fuel management systems, and the engine brakes. It also reviews the proper use, maintenance, and storage of diesel repair tools and equipment, the effective use of service manuals and computer-based information systems, trade mathematics, resource management, and employability skills. The course also presents an introduction to entrepreneurship. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

Prerequisites:
Enrollment requires successful completion of the Auto Tech: Diesel/1 (79-90-55) course.

Note:
For Perkins purposes this course has been designated as a capstone course.
MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN MEDIUM/HEAVY TRUCK DIESEL ENGINE. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO. : 79-90-59
Title: AUTO TECH: DRIVE TRAIN (DIESEL)
JOB TITLE: Diesel Technician
CAREER PATHWAY: Systems Diagnostics & Service
CREDITS: 15
CBEDS TITLE: Diesel Equipment Mechanics

COURSE DESCRIPTION:
This competency-based course is the last in a sequence of three courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in a medium/heavy truck specialty area incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance, and storage of auto repair tools and equipment as well as the effective use of service manuals and computer-based information systems. Emphasis is placed on the techniques in the following areas of diesel drive train diagnosis and repair: clutch, transmission, drive shaft, universal joint, and drive axle. It also teaches trade mathematics, resource management, and employability skills, and entrepreneurial skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Auto Tech: Diesel/2 (79-90-57) course.

Note:
For Perkins purposes this course has been designated as a capstone course.
MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN MEDIUM/HEAVY TRUCK DRIVE TRAIN. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS.

* This course cannot be repeated once a student receives a Certificate of Completion
Title: AUTO TECH: ELECTRICAL AND ELECTRONICS/1
JOB TITLE: Auto Technician
CAREER PATHWAY: Systems Diagnostics & Service
CREDITS: 15
CBEDS TITLE: Advanced Automotive

COURSE DESCRIPTION:
This competency-based course is one in a sequence of courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in an automobile area incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance, and storage of auto repair tools and equipment as well as the effective use of service manuals and computer-based information systems. Emphasis is placed on the techniques in the following areas of electrical and electronic diagnosis and repair: general diagnosis of domestic and import cars, battery, starting system, and charging system. It also teaches trade mathematics, resource management, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Auto Tech: Engine Repair (79-90-73) course.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator course.

*This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-90-63

Title: AUTO TECH: ELECTRICAL AND ELECTRONICS/2

JOB TITLE: Auto Technician

CAREER PATHWAY: Systems Diagnostics & Service

CREDITS: 15

CBEDS TITLE: Advanced Automotive

COURSE DESCRIPTION:
This competency-based course is one in a sequence of courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in an automobile area incorporating sustainable and green vehicle technologies. Instruction includes a review of classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. Emphasis is placed on the techniques in the following areas of electrical and electronic diagnosis and repair: lighting systems, gauges, warning devices, driver information systems, horn and wiper/washer, and accessories. It also offers entrepreneurial skills and reviews of the proper use, maintenance, and storage of auto repair tools and equipment, the effective use of service manuals and computer-based information systems, trade mathematics, resource management, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Auto Tech: Electrical and Electronics/1 (79-90-61) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN ELECTRICAL/ELECTRONICS SYSTEMS. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-90-65

Title: AUTO TECH: EMISSION CONTROL/1

JOB TITLE: Smog Technician

CAREER PATHWAY: Systems Diagnostics & Service

CREDITS: 5

CBEDS TITLE: Automotive Specialty, Other Combinations

COURSE DESCRIPTION:

This competency-based course is the first in a sequence of two designed to meet the Bureau of Automotive Regulation (BAR) licensing requirements for the Basic Clean Air Car Course Program. It provides students with technical instruction and practical experience in emission control using sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. Emphasis is placed on the techniques in the following areas of emission control: vehicle testing, On Board Diagnosis (OBD) II systems tests and diagnostics, malfunction indicator light (MIL) trouble codes, main monitors and readiness tests. It also teaches resource management, trade mathematics, use of service manuals and computer-based information systems, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires successful completion of the Auto Tech: Engine Performance/1 (79-90-69) and Auto Tech: Engine Performance/2 (79-90-71) courses or one year experience in the automotive engine performance area.

Note:

For Perkins purposes this course has been designated as an introductory/concentrator course. MEETS THE BUREAU OF AUTOMOTIVE REGULATION (BAR) STANDARDS FOR THE BASIC CLEAN AIR CAR COURSE TO BECOME LICENSED AS A SMOG INSPECTION TECHNICIAN.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-90-67
Title: AUTO TECH: EMISSION CONTROL/2
JOB TITLE: Emission Specialist
CAREER PATHWAY: Systems Diagnostics & Service
CREDITS: 5
HOURS: 90
CBEDS TITLE: Automotive Specialty, Other Combinations
CBEDS NO.: 5688
COURSE DESCRIPTION:
This competency-based course is the second in a sequence of two designed to meet the Bureau of Automotive Regulation (BAR) licensing requirements for the Advanced Clean Air Course Program. It provides students with technical instruction and practical experience in emission control using sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. Emphasis is placed on the techniques in the following areas of emission control: NOx emissions, DSO, loaded mode emissions, catalytic converter, and BAR-97 EIS testing procedures for the Enhanced Area Program. It also teaches trade mathematics, resource management, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Auto Tech: Emission Control/1 (79-90-65) course.

Note:
For Perkins purposes this course has been designated as a capstone course.
MEETS THE BUREAU OF AUTOMOTIVE REGULATION (BAR) STANDARDS FOR THE ADVANCED CLEAN AIR COURSE TO BECOME LICENSED AS ADVANCED EMISSION SPECIALIST.
* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: **79-90-69**

Title: **AUTO TECH: ENGINE PERFORMANCE/1**

JOB TITLE: Auto Technician

CAREER PATHWAY: Systems Diagnostics & Service

CREDITS: 15

CBEDS TITLE: Advanced Automotive

O*NET-SOC CODE: 49-3023.02

HOURS: 180

CBEDS NO.: 5669

**COURSE DESCRIPTION:**

This competency-based course is one in a sequence of courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in an automobile area incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance, and storage of auto repair tools and equipment, the effective use of service manuals and computer-based information systems, and an introduction to the different engine designs, automotive electricity, hybrid vehicles, and alternative fuel vehicles. Emphasis is placed on the techniques in the following areas of engine performance diagnosis and repair: general, computerized engine controls, and ignition system. It also teaches trade mathematics, resource management, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

**PREREQUISITES:**

Enrollment requires successful completion of the Auto Tech: Engine Repair (79-90-73) course.

**Note:**

For Perkins purposes this course has been designated as an introductory/concentrator course.

MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN ENGINE PERFORMANCE. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO. : 79-90-70
Title: WAREHOUSE OPERATIONS: FORKLIFT OPERATOR (FUNDAMENTALS)
JOB TITLE: Forklift Operator
CAREER PATHWAY: Operations
CREDITS: 15
CBEDS TITLE: Distribution and Logistics
COURSE DESCRIPTION:
This competency-based course provides students with entry-level skills for the modern material-handling trades. Training includes warehousing, storekeeping, industrial safety; the uses and purposes of various types of material-handling equipment, such as gas and electric forklifts, straddle-arm stackers, transporters and tow motors. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.
PREREQUISITES:
None.
Note:
For Perkins purposes this course has been designated as an introductory course.
* This course cannot be repeated once a student receives a Certificate of Completion.
TITLE: AUTO TECH: ENGINE PERFORMANCE/2

JOB TITLE: Auto Technician

CAREER PATHWAY: Systems Diagnostics & Service

CREDITS: 15

HOURS: 180

CBEDS TITLE: Advanced Automotive

CBEDS NO.: 5669

COURSE DESCRIPTION:

This competency-based course is one in a sequence of courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in an automobile area incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. Emphasis is placed on the techniques in the following areas of engine performance: fuel, air induction, and exhaust systems, emission controls systems, and engine-related service. It also offers reviews of engine design, automotive electricity, hybrid vehicles, and alternative fuel vehicles. An introduction to entrepreneurship is also included as well as reviews of resource management, trade mathematics, tools and equipment, service manuals and computer-based information system, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:

Enrollment requires successful completion of the Auto Tech: Engine Performance/1 (79-90-69) course.

Note:

For Perkins purposes this course has been designated as a capstone course.

MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN ENGINE PERFORMANCE. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-90-73
Title: AUTO TECH: ENGINE REPAIR  
JOB TITLE: Auto Technician  
CAREER PATHWAY: Systems Diagnostics & Service  
CREDITS: 15  
CBEDS TITLE: Automotive Service  
O*NET-SOC CODE: 49-3023.02  
HOURS: 180  
CBEDS NO.: 5668

COURSE DESCRIPTION:
This competency-based course is one in a sequence of courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in an automobile area incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance, and storage of engine repair tools and equipment, the effective use of service manuals and computer-based information systems, and an introduction to hybrid and alternative fuel vehicles. Emphasis is placed on the techniques in the following areas of engine repair: general engine, cylinder head and valve train, engine block assembly, and lubrication and cooling systems. It also teaches trade mathematics, resource management, employability skills, and entrepreneurial skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
None.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator course.

MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN ENGINE REPAIR. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS.

* This course cannot be repeated once a student receives a Certificate of Completion.
This competency-based course is one in a sequence of courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in an automobile area incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance, and storage of auto repair tools and equipment as well as the effective use of service manuals and computer-based information systems. Emphasis is placed on the techniques in the following areas of heating and air conditioning diagnosis and repair: A/C system, refrigeration system, heating, ventilation, and engine cooling systems, operating system and related controls, and refrigerant recovery, recycling and handling. It also teaches trade mathematics, resource management, and employability skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Auto Tech: Engine Repair (79-90-73) course.

Note:
For Perkins purposes this course has been designated as a capstone course. MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN HEATING AND AIR CONDITIONING. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS.

* This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-90-77

Title: AUTO TECH: MANUAL DRIVE TRAIN AND AXLES

JOB TITLE: Auto Technician

CAREER PATHWAY: Systems Diagnostics & Service

CREDITS: 15

CBEDS TITLE: Advanced Automotive

COURSE DESCRIPTION:
This competency-based course is one in a sequence of courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in an automobile area incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance, and storage of auto repair tools and equipment as well as the effective use of service manuals and computer-based information systems. Emphasis is placed on the techniques in the following areas of manual drive train and axle diagnosis and repair: general, clutch, transmission/transaxle, drive shaft, half shaft, universal and constant-velocity joint, and drive axle. It also teaches trade mathematics, resource management, employability skills, and entrepreneurial skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Auto Tech: Engine Repair (79-90-73) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.
Title: AUTO TECH: SUSPENSION AND STEERING

COURSE NO.: 79-90-79

JOB TITLE: Auto Technician

CAREER PATHWAY: Systems Diagnostics & Service

CREDITS: 15

CBEDS TITLE: Advanced Automotive

O*NET-SOC CODE: 49-3023.02

HOURS: 180

CBEDS NO.: 5669

COURSE DESCRIPTION:
This competency-based course is one in a sequence of courses designed to meet the Automotive Service Excellence (ASE) Program Certification Standards set by the National Automotive Technicians Education Foundation (NATEF). It provides students with technical instruction and practical experience in an automobile area incorporating sustainable and green vehicle technologies. Instruction includes classroom and workplace policies and procedures in accordance with federal, state, and local safety and environmental regulations. It covers the proper use, maintenance, and storage of auto repair tools and equipment as well as the effective use of service manuals and computer-based information systems. Emphasis is placed on the techniques in the following areas of suspension and steering diagnosis and repair: general, steering, suspension, related steering and suspension, wheels, and tires. It also teaches trade mathematics, resource management, employability skills, and entrepreneurial skills. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Auto Tech: Engine Repair (79-90-73) course.

Note:
For Perkins purposes this course has been designated as a capstone course. MEETS NATEF STANDARDS AND IDENTIFIES PRIORITY TASKS IN SUSPENSION AND STEERING. CHECK THE NATEF MANUAL FOR EXPLANATION OF PRIORITY 1, 2, OR 3 TASKS. *This course cannot be repeated once a student receives a Certificate of Completion.
COURSE NO.: 79-90-83

Title: TECHNOLOGY/1: AUTOMOTIVE SYSTEMS
JOB TITLE: Auto Technician
CAREER PATHWAY: Systems Diagnostics & Service
CREDITS: 5
CBEDS TITLE: Automotive Service

COURSE DESCRIPTION:
This competency-based course is the first in a sequence of two designed to introduce automotive systems. It provides students with project-based experiences in automotive technologies including alternative and green vehicle technology. Instruction includes an orientation, classroom and workplace policies and procedures, resource management, measurements, tools and equipment, and employability skills. Emphasis is placed on domestic car engine designs, engine cooling systems, engine lubrication systems, automotive electricity, charging systems, and starting systems. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires a reading level of 6.0 as measured by the TABE D 9/10.

Note:
For Perkins purposes this course has been designated as an introductory/concentrator course.

* This course cannot be repeated once a student receives a Certificate of Completion.

COURSE NO.: 79-90-85

Title: TECHNOLOGY/2: AUTOMOTIVE SYSTEMS
JOB TITLE: Auto Technician
CAREER PATHWAY: Systems Diagnostics & Service
CREDITS: 5
CBEDS TITLE: Automotive Service

COURSE DESCRIPTION:
This competency-based course is the second in a sequence of two designed to introduce automotive systems. It provides students with project-based experiences in automotive technologies including alternative and green vehicle technology. Instruction includes an introduction, classroom and workplace policies and procedures, and reviews of resource management, measurements, tools and equipment, and employability skills as well as basic entrepreneurial skills. Emphasis is placed on foreign car engine designs, the ignition systems, fuel systems, exhaust systems, emission control, major engine operations, and alternate power sources for automobiles. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

PREREQUISITES:
Enrollment requires successful completion of the Technology/1: Automotive Systems (79-90-83) course.

Note:
For Perkins purposes this course has been designated as a capstone course.

* This course cannot be repeated once a student receives a Certificate of Completion.