

CUYAMACA COLLEGE
ACADEMIC PROGRAM CHANGES
March 2026
for the
2026-2027 CATALOG

COURSE ADDITIONS

Biology 105 – Marine Biology

4 UNITS

Prerequisite: None

3 hours lecture, 3 hours laboratory

This introductory college-level course uses marine organisms and their interrelations with their aquatic environment in order to develop an understanding of modern biological principles and processes that are basic to all forms of life. Emphasis is placed on marine organisms, their ecology, and their evolutionary adaptations to marine habitats of the ocean environment. Topics include the marine environment and its organisms: plankton, plants, invertebrates, fishes, birds, reptiles, and mammals. An exploration of human impacts to this environment provides students with historical and foundational knowledge towards ecological stewardship. This course is intended for all students interested in marine biology.

(CSU) (AA/AS-5)

Communication 130 – Fundamentals of Human Communication

3 UNITS

Prerequisite: None

3 hours lecture

A survey of the theory, basic principles, and methods of human communication. The course emphasizes improving speaking and listening in public speaking, interpersonal and group contexts, while demonstrating sensitivity and responsiveness to diversity, equity, inclusion, belonging, and accessibility.

(CSU) (AA/AS-1B)

Exercise Science 264 – Analysis and Theory of Intercollegiate Sport

1 UNIT

Prerequisite: None

3 hours laboratory

Students will analyze intercollegiate level theories, techniques, and strategies involved with performance of intercollegiate sports. Students will engage in video and digital analysis, data and statistical analysis, skill and performance evaluation, and a deeper understanding of sports related philosophies.

(CSU)

Exercise Science 280 – Yoga Teacher Training Foundation

3 UNITS

Recommended Preparation: "C" grade or higher or "Pass" in ES 028A or equivalent, or concurrent enrollment

2 hours lecture, 3 hours laboratory

This course introduces the foundational concepts of teaching yoga to beginners and supports the deepening of one's personal practice. Students explore body mechanics, anatomy, alignment principles, and breathing techniques, specifically in the context of instructing and performing basic yoga poses. Additional topics including the history and philosophy of yoga, Sanskrit basics, asana classification, and types of yoga are covered with a commitment to making yoga inclusive and accessible to all.

(CSU)

Exercise Science 281 – Yoga Teacher Training Cultivation

3 UNITS

Recommended Preparation: "C" grade or higher or "Pass" in ES 280 or equivalent, or concurrent enrollment

2 hours lecture, 3 hours laboratory

This course provides students with the tools and experience to design and teach intelligently sequenced, inclusive, and thematically cohesive yoga classes for all levels. Emphasis is placed on verbal clarity, adaptive teaching methods, and integration of breathwork, meditation, and yogic philosophy into class design. Topics include advanced sequencing, subtle body anatomy, pranayama, meditation, alignment-based modifications, and professional ethics in yoga teaching. Students refine communication skills, deepen self-awareness, and cultivate confidence to lead yoga classes safely and effectively.

(CSU)

Ornamental Horticulture 190 – Business Management for Turf and Horticulture

3 UNITS

Prerequisite: None

2 hours lecture, 3 hours laboratory

In-depth study of developing and managing comprehensive fertilizer and pest control programs, including accurate cost calculations and effective implementation strategies. Turfgrass identification is covered. Students will gain practical experience in budgeting, forecasting, and managing financial resources for turf and landscape operations, preparing them for leadership roles in the green industry.

(CSU)

COURSE MODIFICATIONS

The following reflect changes in subject designator, course number and/or title, prerequisite/corequisite/recommended preparation, units, hours, and/or course description. Other areas (e.g., course objectives, course content, student learning outcomes, etc.) may also have been modified to meet Title 5 standards (reflected as “*Review and update of course outline*”). These modifications have been carefully reviewed by the Curriculum, General Education and Academic Policies and Procedures Committee.

PRESENT	PROPOSED CHANGES TO AREAS AS INDICATED
<p>Art 120 – Two Dimensional Design 2 hours lecture, 2 units 4 hours laboratory 1 unit Total units: 3</p> <p>Introduction to the two-dimensional arts. Students will study the great works of the human imagination while focusing on those of historical, theoretical and cultural relevance. Students will examine form and content through the application of art elements and principles of design.</p>	<p>1.5 hours lecture, 1.5 units 4.5 hours laboratory 1.5 units Total units: 3</p> <p>This course is an introduction to two-dimensional arts through the study of historical, theoretical, and cultural works of the human imagination. Students will examine form and content through the application of art elements and principles of design by developing the fundamentals needed for creative expression and visual composition.</p>
<p>Art 121 – Painting I 2 hours lecture, 2 units 4 hours laboratory 1 unit Total units: 3</p> <p>Introduction to painting with an emphasis on painting tools, materials, techniques and color principles. Students will develop skill in handling form, space, and plastic aspects of acrylic and/or oil paints.</p>	<p>1.5 hours lecture, 1.5 units 4.5 hours laboratory 1.5 units Total units: 3</p> <p>Introduction to the principles, elements, and practices of painting. Students learn foundational painting tools, materials, techniques, and color theory while developing skills in rendering form, space, and the plastic qualities of acrylic and/or oil paint. Coursework emphasizes both technical proficiency and creative responses to subject matter, including an examination of painting as a vehicle for social, political, and cultural expression.</p>
<p>Art 124 – Drawing I 2 hours lecture, 2 units 4 hours laboratory 1 unit Total units: 3</p> <p>Introduction to drawing theory and practice. Students will study major works of art in relation to drawing techniques, illusion of space, and composition through a variety of media.</p>	<p>1.5 hours lecture, 1.5 units 4.5 hours laboratory 1.5 units Total units: 3</p> <p>This course is an introduction to drawing theory and practice. Students will explore traditional drawing techniques with an emphasis on representational drawing techniques, through a variety of media. Students will develop observational and compositional awareness through the application of drawing techniques utilizing the elements of art and applying the principles of art and design.</p>
<p>Art 135 – Watercolor I 2 hours lecture, 2 units 4 hours laboratory 1 unit Total units: 3</p>	<p>1.5 hours lecture, 1.5 units 4.5 hours laboratory 1.5 units Total units: 3</p>
<p>Art 143 – Modern Art</p>	<p><i>Review and update of course outline</i></p>
<p>Art 146 – Asian Art</p>	<p><i>Review and update of course outline</i></p>
<p>Art 177 – Digital Drawing and Painting 2 hours lecture, 2 units 4 hours laboratory 1 unit Total units: 3</p> <p>This introductory course uses computer-based technologies and its application for digital drawings and paintings. Students will develop digital images that showcase perceptual skills, conceptual strategies, production methods and narrative compositions using various software.</p>	<p>1.5 hours lecture, 1.5 units 4.5 hours laboratory 1.5 units Total units: 3</p> <p>This introductory course explores the tools, techniques, and creative possibilities of digital drawing and painting. Using contemporary computer-based technologies, including drawing tablets, painting and illustration software, scanners, and digital input devices, students will develop images that demonstrate perceptual skill, conceptual thinking, and narrative composition. Emphasis is placed on fundamental pictorial elements and how they function within composition, harmony, contrast, and balance. Students will create a range of digital artworks, including observational studies, illustrations, collage-based images, and sequential or narrative compositions.</p>

PRESENT	PROPOSED CHANGES TO AREAS AS INDICATED
<p>Art 184 – Introduction to Animation 2 hours lecture, 2 units 4 hours laboratory 1 unit Total units: 3</p>	<p>1.5 hours lecture, 1.5 units 4.5 hours laboratory 1.5 units Total units: 3</p>
<p>Art 210 – Introduction to Printmaking 2 hours lecture, 2 units 4 hours laboratory 1 unit Total units: 3</p>	<p>1.5 hours lecture, 1.5 units 4.5 hours laboratory 1.5 units Total units: 3</p>
<p>Art 220 – Painting II 2 hours lecture, 2 units 4 hours laboratory 1 unit Total units: 3</p> <p>Continuation of Painting I with an emphasis on creative problem-solving skills. Students will develop a personal style of expression.</p>	<p>1.5 hours lecture, 1.5 units 4.5 hours laboratory 1.5 units Total units: 3</p> <p>Continuation of Painting I with an emphasis on creative problem-solving skills. Students will develop a personal style of expression. Coursework emphasizes both technical proficiency and creative responses to subject matter, including an examination of painting as a vehicle for social, political, and cultural expression.</p>
<p>Art 221 – Painting III 2 hours lecture, 2 units 4 hours laboratory 1 unit Total units: 3</p> <p>Offers a wider selection of painting mediums to include acrylic, oil, egg tempera, casein and encaustic. Students will continue developing a personal style of expression.</p>	<p>1.5 hours lecture, 1.5 units 4.5 hours laboratory 1.5 units Total units: 3</p> <p>This advanced painting course offers a wider selection of painting mediums including acrylic, oil, and encaustic. Topics will include major historical and contemporary cultural movements in painting, as well as creative responses to materials and subject matter. Students will continue developing a personal style of expression.</p>
<p>Art 222 – Painting IV 2 hours lecture, 2 units 4 hours laboratory 1 unit Total units: 3</p> <p>Focuses on a series of paintings that develop a personal theme or statement. Advanced painting techniques will be combined with advanced compositional devices.</p>	<p>1.5 hours lecture, 1.5 units 4.5 hours laboratory 1.5 units Total units: 3</p> <p>This advanced painting course is designed for students preparing to major in art or develop a professional-level painting portfolio. Working closely with the instructor, students will create a cohesive series of paintings that explore a personal theme or conceptual direction. Emphasis is placed on advanced painting techniques, complex compositional strategies, and the ability to document, analyze, and refine one’s work. Students will engage with contemporary and historical painting practices.</p>
<p>Biology 122 – The Secret Life of Plants</p>	<p><i>Review and update of course outline</i></p>
<p>Biology 140 – Human Anatomy</p> <p>Prerequisite: “C” grade or higher or “Pass” in BIO 130, 131 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in BIOL C1000 (formerly BIO 120) or equivalent</p>
<p>Biology 141 – Human Physiology</p> <p>Prerequisite: “C” grade or higher or “Pass” in BIO 130, 131 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in BIOL C1000 (formerly BIO 120) or equivalent</p>
<p>Biology 141L – Laboratory in Human Physiology</p> <p>Prerequisite: “C” grade or higher or “Pass” in BIO 130, 131 or equivalent, BIO 141 or equivalent or concurrent enrollment</p>	<p>Prerequisite: “C” grade or higher or “Pass” in BIOL C1000 (formerly BIO 120) or equivalent and BIO 141 or concurrent enrollment in BIO 141 or equivalent</p>

PRESENT	PROPOSED CHANGES TO AREAS AS INDICATED
Biology 152 – Paramedical Microbiology Prerequisite: “C” grade or higher or “Pass” in BIO 130 and 131 or equivalent	Prerequisite: “C” grade or higher or “Pass” in BIOL C1000 or equivalent
Business Office Technology 102A – Intermediate Keyboarding/Document Processing I	<i>Review and update of course outline</i>
Business Office Technology 102B – Intermediate Keyboarding/Document Processing II	<i>Review and update of course outline</i>
Business Office Technology 103B – Building Keyboarding Skill II	<i>Review and update of course outline</i>
Business Office Technology 103C – Building Keyboarding Skill III	<i>Review and update of course outline</i>
Business Office Technology 107 – Office Systems and Procedures	<i>Review and update of course outline</i>
Business Office Technology 114 – Essential Word	<i>Review and update of course outline</i>
Business Office Technology 115 – Essential Excel	<i>Review and update of course outline</i>
Business Office Technology 116 – Essential Access	<i>Review and update of course outline</i>
Business Office Technology 117 – Essential Powerpoint	<i>Review and update of course outline</i>
Business Office Technology 119 – Windows for the Information Worker	<i>Review and update of course outline</i>
Business Office Technology 120 – Comprehensive Word, Level I	<i>Review and update of course outline</i>
Business Office Technology 123 – Comprehensive Excel, Level I	<i>Review and update of course outline</i>
Business Office Technology 126 – Comprehensive Access, Level I	<i>Review and update of course outline</i>
Business Office Technology 132 – Google Applications for Business	<i>Review and update of course outline</i>
Business Office Technology 151 – Using Microsoft Outlook Recommended Preparation: “C” grade or higher or “Pass” in BOT 100, 114, 119 or 120 or equivalent	Recommended Preparation: “C” grade or higher or “Pass” in BOT 100, 119, and either BOT 114 or 120 or equivalent
Business 162 – Analysis of Financial Statements	<i>Review and update of course outline</i>
Child Development 126 – Art for Child Development Prerequisite: “C” grade or higher or “Pass” in CD 125	Prerequisite: “C” grade or higher or “Pass” in CDEV C1000 (formerly CD 125)
Child Development 129 – Language and Literature for Child Development Recommended Preparation: “C” grade or higher or “Pass” in CD 125 or equivalent	Prerequisite: “C” grade or higher or “Pass” in CDEV C1000 (formerly CD 125) or equivalent

PRESENT	PROPOSED CHANGES TO AREAS AS INDICATED
<p>Child Development 133 – Practicum-Field Experience: Student Teaching 54 hours paid or unpaid work experience per unit, 2 units</p> <p>Prerequisite: “C” grade or higher or “Pass” in CD 106, 123, 125, 126, 127, 128, 129, 130, 131 or equivalent</p> <p>Under supervision at approved field placement sites, student teachers will design, implement, and evaluate curriculum experiences, apply previous coursework to make connections between theory and practice, demonstrate professional behavior, and build a comprehensive understanding of children in the group environment. Respectful workplace relationships among children and adults that serve as a foundation for co-construction of curriculum and positive guidance will be emphasized. Occupational cooperative work experience credit may accrue at the rate of one to eight units per semester for a total of sixteen units, and students must work 54 paid hours or unpaid hours per unit earned. 54 hours paid or unpaid work experience per unit, 2 units.</p>	<p>162 hours paid or unpaid work experience, 3 units</p> <p>Prerequisite: “C” grade or higher or “Pass” in CD 106, 123, CDEV C1000 (formerly CD 125), 126, 127, 128, 129, 130, AND 131 or equivalent</p> <p>Under supervision at approved field placement sites, student teachers will design, implement, and evaluate curriculum experiences, apply previous coursework to make connections between theory and practice, demonstrate professional behavior, and build a comprehensive understanding of children in the group environment. Respectful workplace relationships among children and adults that serve as a foundation for co-construction of curriculum and positive guidance will be emphasized. Work experience credit may accrue at the rate of one to eight units per semester for a total of sixteen units, and students must work 54 paid hours or unpaid hours per unit earned. 162 hours paid or unpaid work experience, 3 units.</p>
<p>Child Development 136 – Adult Supervision</p> <p>Recommended Preparation: 12 units of Child Development as defined by Title 22 licensing regulations: 3 units in Child Growth and Development (CD 125), 3 units in Child, Family and Community (CD 131), 6 units in Program Curriculum (CD 123 or 126 or 127 or 128 or 129 or 130)</p>	<p>Recommended Preparation: 12 units of Child Development as defined by Title 22 licensing regulations: 3 units in Child Growth and Development (CDEV C1000 (formerly CD 125)), 3 units in Child, Family and Community (CD 131), 6 units in Program Curriculum (CD 123 or 126 or 127 or 128 or 129 or 130)</p>
<p>Child Development 137 – Administration of Child Development Programs I</p> <p>Recommended Preparation: 12 CD units as required by Title 22 licensing regulations: CD 125, 131 and 6 units in program curriculum (CD 123 and 126 or 127 or 128 or 129 or 130)</p>	<p>Recommended Preparation: 12 CD units as required by Title 22 licensing regulations: CDEV C1000 (formerly CD 125), 131 and 6 units in program curriculum (CD 123 and 126 or 127 or 128 or 129 or 130)</p>
<p>Chemistry 120 – Preparation for General Chemistry</p>	<p><i>Review and update of course outline</i></p>
<p>Communication 145 – Argumentation</p> <p>Prerequisite: “C” grade or higher or “Pass” in English 120 or ESL 122 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in ENGL C1000 (formerly ENGL 120) or ESL 122 or equivalent</p>
<p>Counseling 101 – Introduction to College</p> <p>An introductory course designed to assist students with a successful transition to college. An overview of student responsibilities, college expectations, college and career success strategies will be discussed. Students will learn about the college; campus, services, academic regulations, general education requirements, and certificate, degree and transfer options. Students will receive education planning. Pass/No Pass only. Non-degree applicable.</p>	<p>This course is designed to give an overview of student responsibilities, college expectations, academic regulations and policies. Students will discover the wealth of specialized student support services, examine requirement for certificate programs, associate degrees and transfer pathways, confidently navigate the college campus and website, and understand how they are part of a diverse campus community. Emphasis is placed on the transition to college learning and college life, self-reflection, and self-advocacy. Students will develop a preliminary educational plan to achieve personal and academic goals and apply critical analysis skills, information literacy, and successful attitudes in joining a college community. Pass/No Pass only.</p>
<p>Counseling 125 – Career Development in a Multicultural Society</p>	<p>Counseling 125 – Diversity, Identity, and Career Development in the Workplace</p>

PRESENT	PROPOSED CHANGES TO AREAS AS INDICATED
<p>Economic 110 – Economic Issues and Policies</p> <p>A one-semester course that provides general elementary knowledge of basic economic concepts and serves as an introduction to more advanced economics courses. Surveys current economic subjects including consumer economics, inflation, recession, competition, monopoly, world trade and competing economic systems. Not open to students with credit in ECON 120 or 121.</p>	<p>A one-semester course that provides general elementary knowledge of basic economic concepts and serves as an introduction to more advanced economics courses. Surveys current economic subjects including consumer economics, inflation, recession, competition, monopoly, world trade and competing economic systems. Not open to students with credit in ECON C2002 (formerly ECON 120) or ECON C2001 (formerly ECON 121).</p>
<p>Environmental Health and Safety Management 201 – Introduction to Industrial Hygiene and Occupational Health</p> <p>Anticipation, recognition, reevaluation and control of biological, chemical and physical hazards in the workplace. Introduction to the development of industrial hygiene and occupational health and safety as a professional discipline. Provides an understanding of basic physiological processes and the effects caused by occupational exposure to hazards. Survey of various occupational health and safety programs and government regulations. Industrial hygiene monitoring and sampling techniques for airborne contaminants, noise, heat, radiation and illumination.</p>	<p>Introduction to the principles of anticipating, recognizing, evaluating, and controlling biological, chemical, and physical hazards in occupational settings. Examination of the historical development of industrial hygiene and occupational health and safety as professional disciplines. Emphasis on basic physiological processes and the health effects associated with occupational exposures. Includes an overview of occupational health and safety programs and applicable government regulations. Covers industrial hygiene monitoring and sampling techniques for airborne chemical contaminants and physical hazards such as noise, heat, and ionizing and non-ionizing radiation.</p>
<p>English 221 – British Literature I</p> <p>Recommended Preparation: “C” grade or higher or “Pass” in ENGL 122 or equivalent</p>	<p>Recommended Preparation: “C” grade or higher or “Pass” in ENGL C1002 (formerly ENGL 122) or equivalent</p>
<p>English 222 – British Literature II</p> <p>Recommended Preparation: “C” grade or higher or “Pass” in ENGL 122 or equivalent</p>	<p>Recommended Preparation: “C” grade or higher or “Pass” in ENGL C1002 (formerly ENGL 122) or equivalent</p>
<p>English 231 – American Literature I</p> <p>Recommended Preparation: “C” grade or higher or “Pass” in ENGL 122 or equivalent</p>	<p>Recommended Preparation: “C” grade or higher or “Pass” in ENGL C1002 (formerly ENGL 122) or equivalent</p>
<p>English 232 – American Literature II</p> <p>Recommended Preparation: “C” grade or higher or “Pass” in ENGL 122 or equivalent</p>	<p>Recommended Preparation: “C” grade or higher or “Pass” in ENGL C1002 (formerly ENGL 122) or equivalent</p>
<p>Engineering 120 – Engineering Computer Applications</p> <p>Prerequisite: “C” grade or higher or “Pass” in MATH 180 or equivalent or concurrent enrollment</p>	<p>Prerequisite: “C” grade or higher or “Pass” in MATH C2210 (formerly MATH 180) or equivalent or concurrent enrollment</p>
<p>Engineering 200 – Engineering Mechanics-Statics</p> <p>Corequisite: MATH 280 or previous enrollment</p>	<p>Corequisite: MATH C2220 (formerly MATH 280) or previous enrollment</p>
<p>Engineering 210 – Electric Circuits</p> <p>Prerequisite: “C” grade or higher or “Pass” in MATH 280, PHYC 202 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in MATH C2220 (formerly MATH 280) and PHYC 202 or equivalent</p>
<p>Engineering 220 – Engineering Mechanics-Dynamics</p>	<p><i>Review and update of course outline</i></p>
<p>Engineering 225 – Mechanics for Civil Engineers</p> <p>Prerequisite: “C” grade or higher or “Pass” in MATH 180 and PHYC 201 (for engineering focus) or PHYC 130 (for non-engineering focus) or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in MATH C2210 (formerly MATH 180) and PHYC 201 (for engineering focus) or PHYC 130 (for non-engineering focus) or equivalent</p>

PRESENT	PROPOSED CHANGES TO AREAS AS INDICATED
<p>Engineering 230 – Basics of Mechatronics</p> <p>Prerequisite: “C” grade or higher or “Pass” in MATH 280 and PHYC 202, or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in MATH C2220 (formerly MATH 280) and PHYC 202, or equivalent</p>
<p>English Second Language 099A – ESL for the Workplace I</p> <p>3 hours lecture, 3 units 1 hour laboratory, 0 units Total units: 3</p> <p>Prerequisite: Placement based on assessment</p>	<p>3 hours lecture, 3 units</p> <p>Prerequisite: None</p>
<p>English Second Language 099B – ESL for the Workplace II</p> <p>3 hours lecture, 3 units 1 hour laboratory, 0 units Total units: 3</p> <p>Prerequisite: Grade of “Pass” in ESL 099A or equivalent or assessment</p> <p>Second course in the study of English for the workplace for students whose first language is other than English. Supplements language skills taught in ESL 050 and ESL 1A and develops and adds to business English skills taught in ESL 099A. Learn business vocabulary, intermediate writing, and oral communication skills, and computer skills. Pass/No Pass only. Non-degree applicable.</p>	<p>3 hours lecture, 3 units</p> <p>Prerequisite: None</p> <p>Second course in the study of English for the workplace for students whose first language is other than English. Supplements language skills taught in ESL 050 and ESL 1A. Learn business vocabulary, intermediate writing, oral communication skills, and computer skills. Pass/No Pass only. Non-degree applicable.</p>
<p>Geography 120 – Physical Geography: Earth Systems</p>	<p><i>Review and update of course outline</i></p>
<p>Geology 104 – Earth Science</p>	<p><i>Review and update of course outline</i></p>
<p>Geology 110 – Planet Earth</p>	<p><i>Review and update of course outline</i></p>
<p>Geology 111 – Planet Earth Laboratory</p>	<p><i>Review and update of course outline</i></p>
<p>Kumeyaay Studies 150 – Introduction to Cultural Resource Management</p> <p>An introduction to cultural resource management. Students will be exposed to archaeological methods, field practices, laws and regulations and learn how to be an effective cultural monitor to ensure the protection and preservation of Kumeyaay resources. Also listed as ANTH 150. Not open to students with credit in ANTH 150.</p>	<p>An introduction to cultural resource management. Students will be exposed to archaeological methods, field practices, laws and regulations and learn how to be an effective cultural monitor to ensure the protection and preservation of Kumeyaay resources. Not open to students with credit in ANTH 150.</p>
<p>Kumeyaay Studies 160 – Introduction to Archaeological Field Work</p> <p>This course is an introduction to the basic techniques of archaeological field work. Emphasis is placed on site survey, site layout, excavation, artifact identification, laboratory analysis and report writing. Topics also include use of compass and transit, Global Positioning Systems (GPS) and Geographic Information Systems (GIS). Students will be exposed to the techniques of data collection and analysis, cultural reconstruction and interpretation, and cultural resource management work. Through a series of workshops with guest experts on Kumeyaay indigenous knowledge, students will learn about Kumeyaay history, prehistory, traditions, politics, and beliefs while training in archaeological data collection and mapping methods. This course is designed for Anthropology and Kumeyaay Studies majors as well as students interested in prehistoric and/or historic research. Outdoor activities include walking up to 1/2 hour through mild terrain and vegetation. Students are responsible for their own transportation to and from off campus sites. Also listed as ANTH 160. Not open to students with credit in ANTH 160.</p>	<p>This course is an introduction to the basic techniques of archaeological field work. Emphasis is placed on site survey, site layout, excavation, artifact identification, laboratory analysis and report writing. Topics also include use of compass and transit, Global Positioning Systems (GPS) and Geographic Information Systems (GIS). Students will be exposed to the techniques of data collection and analysis, cultural reconstruction and interpretation, and cultural resource management work. Through a series of workshops with guest experts on Kumeyaay indigenous knowledge, students will learn about Kumeyaay history, prehistory, traditions, politics, and beliefs while training in archaeological data collection and mapping methods. This course is designed for Anthropology and Kumeyaay Studies majors as well as students interested in prehistoric and/or historic research. Outdoor activities include walking up to 1/2 hour through mild terrain and vegetation. Students are responsible for their own transportation to and from off campus sites. Not open to students with credit in ANTH 160.</p>
<p>Mathematics 078 – Foundations for Calculus for Business Social & Behavioral Sciences</p>	<p><i>Review and update of course outline</i></p>

PRESENT	PROPOSED CHANGES TO AREAS AS INDICATED
<p>Mathematics 080 –Foundations for Calculus & Analytic Geometry I</p> <p>Corequisite: MATH 180</p> <p>Support for this course focuses on the skills and concepts needed for success in Calculus and Analytic Geometry I. This course is for students concurrently enrolled in Calculus I (Math 180) at Cuyamaca College. Students will receive extra support in algebra, analytic geometry, trigonometry, technology, and study skills. Pass/No Pass only. Non-degree applicable.</p>	<p>Mathematics 021 – Foundations for Calculus I: Early Transcendentals</p> <p>Corequisite: MATH C2210 (formerly MATH 180)</p> <p>Support for this course focuses on the skills and concepts needed for success in Calculus and Analytic Geometry I. This course is for students concurrently enrolled in Calculus I (Math C2210 formerly MATH 180) at Cuyamaca College. Students will receive extra support in algebra, analytic geometry, trigonometry, technology, and study skills. Pass/No Pass only. Non-degree applicable.</p>
<p>Mathematics 120 – Quantitative Reasoning</p> <p>Prerequisite: Appropriate mathematics placement</p>	<p>Prerequisite: Appropriate placement beyond intermediate algebra or equivalent</p>
<p>Mathematics 126 – Structure and Concepts of Elementary Mathematics II</p>	<p><i>Review and update of course outline</i></p>
<p>Mathematics 178 – Calculus for Business, Social and Behavioral Sciences</p> <p>Presents a study of the techniques of calculus with emphasis placed on the application of these concepts to business and management related problems. The applications of derivatives and integrals of functions including polynomials, rational, exponential and logarithmic functions are studied. Not open to students with credit in MATH 180.</p>	<p>Presents a study of the techniques of calculus with emphasis placed on the application of these concepts to business and management related problems. The applications of derivatives and integrals of functions including polynomials, rational, exponential and logarithmic functions are studied. Not open to students with credit in MATH 180 or MATH C2210.</p>
<p>Mathematics 245 – Discrete Mathematics</p> <p>Prerequisite: “C” grade or higher or “Pass” in MATH 280 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in MATH C2220 (formerly MATH 280) or equivalent</p>
<p>Mathematics 281 – Multivariable Calculus</p> <p>Prerequisite: “C” grade or higher or “Pass” in MATH 280 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in MATH C2220 (formerly MATH 280) or equivalent</p>
<p>Mathematics 284 – Linear Algebra</p> <p>Prerequisite: “C” grade or higher or “Pass” in MATH 280 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in MATH C2220 (formerly MATH 280) or equivalent</p>
<p>Mathematics 285 – Differential Equations</p> <p>Prerequisite: “C” grade or higher or “Pass” in MATH 280 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in MATH C2220 (formerly MATH 280) or equivalent</p>
<p>Nutrition 155 – Introduction to Nutrition</p> <p>Introduction to the basic principles of nutrition and its relationship to good health. Evaluation of current nutritional information (and misinformation) with emphasis on critical thinking to determine optimal dietary choices. Study of the major dietary goals and guidelines. Examination of weight maintenance techniques, eating disorders, food labeling, food safety, and special needs at various stages in the life cycle.</p>	<p>Nutrition 155 – Introduction to Human Nutrition</p> <p>This course is an introduction to the fundamentals of nutrition science, integrating concepts and research from biology, biochemistry, microbiology, physiology, and psychology to explain the interaction between nutrients and the human body. Current nutrition guidance models and approaches to medical nutrition are analyzed with an emphasis on evidence-based findings. A discussion of food selection, the nutritional components of food, metabolism and risks associated with excesses or deficiencies throughout the lifecycle are also discussed.</p>

PRESENT	PROPOSED CHANGES TO AREAS AS INDICATED
<p>Nutrition 255 – Science of Nutrition</p> <p>Prerequisite: “C” grade or higher or “Pass” in BIO 130, 131 and CHEM 120 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in BIOL C1000 (formerly BIO 120) and CHEM 120 or equivalent</p>
<p>Oceanography 112 – Introduction to Oceanography</p>	<p><i>Review and update of course outline</i></p>
<p>Oceanography 113 – Oceanography Laboratory</p>	<p><i>Review and update of course outline</i></p>
<p>Ornamental Horticulture 221 – Landscape Construction: Irrigation and Carpentry</p> <p>2 hours lecture, 2 units 3 hours laboratory, 1 unit Total units: 3</p> <p>Study of landscape construction methods and materials. Topics include: irrigation and drainage plan reading, materials and components, installation and construction, installation and troubleshooting of control valves and control clocks; basic materials and methods for construction of decks, overhead structures, wooden fences and gates; code and design requirements for irrigation, drainage, and landscape structures.</p>	<p>Ornamental Horticulture 221 – Landscape Construction: Irrigation</p> <p>2 hours lecture, 2 units 1.5 hours laboratory, 0.5 unit Total units: 2.5</p> <p>Study of landscape construction methods and materials. Topics include: irrigation and drainage plan reading, materials and components, installation and construction, installation and troubleshooting of control valves and control clocks; code and design requirements for irrigation and drainage.</p>
<p>Physics 130 – Fundamentals of Physics</p> <p>Prerequisite: “C” grade or higher or “Pass” or concurrent enrollment in MATH 180 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” or concurrent enrollment in MATH C2210 (formerly MATH 180) or equivalent</p>
<p>Physics 201 – Mechanics and Waves</p> <p>Prerequisite: “C” grade or higher or “Pass” in MATH 180 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in MATH C2210 (formerly MATH 180) or equivalent</p>
<p>Physics 202 – Electricity, Magnetism, and Heat</p> <p>Prerequisite: “C” grade or higher or “Pass” in PHYSICS 201 or equivalent; and “C” grade or higher or “Pass” or concurrent enrollment in MATH 280 or equivalent</p>	<p>Prerequisite: “C” grade or higher or “Pass” in PHYSICS 201 or equivalent; and “C” grade or higher or “Pass” or concurrent enrollment in MATH C2220 (formerly MATH 280) or equivalent</p>
<p>Social Work 130 – Introduction to Case Management</p>	<p><i>Review and update of course outline</i></p>

DEACTIVATIONS

Course	Reason For Deletion per Department Faculty and/or Advisory Committee Recommendations
GEOL 105 – Physical Geology: Earth Systems Laboratory	Recommendation of the department faculty. No longer want to offer due to low enrollment.

CERTIFICATE ADDITION

Creative Writing Certificate of Achievement

The Creative Writing Certificate of Achievement at Cuyamaca College helps students develop their literary voices through the study and practice of creative writing across multiple genres. Students read and analyze works by established and contemporary authors, create and revise original pieces, and participate in workshops and public readings. The program also introduces students to pathways for publication—from self-publishing to professional submission—offering a flexible option for writers pursuing personal, academic, or career goals. A total of 17–20 units is required to earn the Certificate.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Create and refine original creative work in multiple genres, demonstrating control of language, form, and style.
2. Apply critical and editorial skills to evaluate, revise, and strengthen both their own writing and the work of peers through workshop and feedback processes.
3. Evaluate creative writing as an artistic, cultural, and professional practice, drawing connections between their own work and the broader literary community.
4. Develop a cohesive creative portfolio that reflects growth as a writer and readiness for publication, performance, or further academic study in creative writing or literature.

Certificate of Achievement Requirements:

Course	Title	Units
ENGL C1000	Academic Reading and Writing	4
ENGL C1002	Introduction to Literature	3
ENGL 126	Creative Writing	3
ENGL 130	Short Fiction Writing I	3
ENGL 140	Poetry Writing I	3

Choose one of the following:

ENGL 131	Short Fiction Writing II	3
ENGL 132	Short Fiction Writing III	3
ENGL 133	Short Fiction Writing IV	3
ENGL 141	Poetry Writing II	3
ENGL 142	Poetry Writing III	3
ENGL 143	Poetry Writing IV	3
ENGL 201	Women, Gender, and Sexuality in Literature	3
ENGL 202	Introduction to Film as Literature	3
ENGL 217	Fantasy and Science Fiction	3
ENGL 236/ETHN 236	Chicana/o Literature	3
ENGL 238/ETHN 238	Black Literature	3
ENGL 200	Cooperative Work Experience in English	1-4

Total Units 17-20

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Yoga Instructor 200 Hour Certificate of Specialization

The Yoga Instructor 200hr Certificate prepares students to meet the Yoga Alliance standard for Registered Yoga Teacher (RYT 200) certification. The program provides foundational knowledge in anatomy, physiology, alignment principles, and yoga philosophy, integrating both English and Sanskrit terminology. Students gain practical experience in sequencing, cueing, and adapting yoga practices for diverse populations. Completion of the program prepares students for employment in yoga studios, fitness centers, and community wellness settings, or for self-employment as yoga instructors.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Design and lead inclusive, safe, and well-sequenced yoga classes that integrate proper alignment, modifications, and effective communication techniques.
2. Apply foundational knowledge of anatomy, physiology, and body mechanics to support functional movement and mindful practice.
3. Integrate core concepts of yoga philosophy, history, and ethics into personal practice and professional teaching.
4. Demonstrate competency in guiding pranayama, meditation, and mindfulness practices to promote self-awareness and balance.
5. Exhibit professionalism and reflective teaching skills consistent with Yoga Alliance standards for a Registered Yoga Teacher (RYT-200).

Certificate of Proficiency Requirements:

Course	Title	Units
ES 028A	Beginning Yoga	1.5
ES 280	Yoga Teacher Training Foundation	3
ES 281	Yoga Teacher Training Cultivation	3
	Total Units	7.5

Certificate of Specialization

Students who complete the requirements above qualify for a certificate in that area of emphasis. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

DEGREE AND CERTIFICATE MODIFICATIONS

ANTHROPOLOGY

Anthropology for Transfer (AA-T)

The AA-T in Anthropology for Transfer guides students in their quest to understand what it means to be human, and how humans make meaning in life. Students take courses from three subfields: archaeology, cultural anthropology and physical anthropology, and learn about human cultures and civilizations, past and present. The AA-T in Anthropology for Transfer is designed specifically to prepare students for transfer to a California State University, where a baccalaureate degree may be earned in Anthropology or a closely related field.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Demonstrate an understanding of the core concepts of archaeology, cultural anthropology and physical anthropology;
2. Demonstrate knowledge of cultural variation and diversity of perspectives, practices and beliefs found within and across cultures;
3. Understand long term changes in the conditions that have shaped humans and the environments they inhabit.

Associate in Arts Degree Requirements:

Core Curriculum:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ANTH 120	Cultural Anthropology	3
ANTH 130 C1001	Introduction to Biological Anthropology	3
ANTH 140	Introduction to Archaeology	<u>3</u>
		9

List A

Select one of the following:

PSY 215	Statistics for the Behavioral Sciences	4
STAT C1000	Introduction to Statistics	<u>4</u>
		4

List B

Select one or two of the following:

BIO 140	Human Anatomy	4
PSY 205	Research Methods in Psychology	4
GEOL 110	Planet Earth	3
& GEOL 111	and Planet Earth Laboratory ¹	1
GEOL 104	Earth Science	3
& GEOG 121	and Physical Geography: Earth Systems Laboratory ²	<u>1</u>
		4

List C

Select one of the following:

MUS 116	Introduction to World Music	3
or RELG 120	World Religions	<u>3</u>
		3

Units for the Major	20
Double-Counted Units	12-16
Plus General Education Requirements (Cal-GETC)	34
Total Transferable Elective Units	18-22
Total Units	60

¹ Must be taken if GEOL-110 Planet Earth is selected.

² Must be taken if GEOL-104 Earth Science is selected.

BIOLOGY

Biology for Transfer (AS-T)

The Associate in Science in Biology for Transfer presents the diverse, dynamic study of life through a required core of biology and supporting courses. This degree is specifically designed to prepare students for transfer to a California State University, where a baccalaureate degree may be earned in Biological Sciences or a closely related field.

The following is required for an Associate Degree for Transfer :

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Explain core principles of human biology and disease, including scientific inquiry and organism structure/function.
2. Integrate principles and skills in human health, including anatomy, physiology, microbiology, and chemistry as applied to healthcare settings.
3. Apply professional skills for healthcare practice, including effective communication, technology utilization, and collaborative investigation.
4. Synthesize content, skills, and knowledge from coursework to practice self-directed, lifelong learning.

Associate in Science Degree Requirements:

Core Curriculum:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BIO 230	Principles of Cellular, Molecular and Evolutionary Biology	4
BIO 240	Principles of Ecology, Evolution and Organismal Biology	<u>5</u>
		9

List A

Select one of the following:

CHEM 141	General Chemistry I	5
CHEM 142	General Chemistry II	5
MATH 180 C2210	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
PHYC 130	Fundamentals of Physics	4
& PHYC 131	and Fundamentals of Physics	4

List B

STAT C1000	Introduction to Statistics	4
	Units for the Major	36
	Double-Counted Units	10
	Plus General Education Requirements (Cal-GETC)	34
	Total Units	60

Biological Sciences

This degree program is designed to provide a two-year transfer program with emphasis on the uniformity and diversity of life. The curriculum fulfills the lower division requirements for majors in biology, dentistry, medicine, nursing, pharmacy, environmental health, microbiology and ecology.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Explain the basic structures and fundamental processes of life at the molecular, cellular, and organismal levels.
2. Identify the evolutionary processes that lead to adaptation and biological diversity.
3. Describe the relationship between life forms and their environment and ecosystems.
4. Collect, organize, analyze, interpret and present quantitative and qualitative data and incorporate them into the broader context of biological knowledge.
5. Effectively apply current technology and scientific methodologies for problem solving.
6. Find, select and evaluate various types of scientific information including primary research articles, mass media sources and World Wide Web information.
7. Communicate effectively in written and oral formats.

Career Opportunities

Aquatic Biologist¹
Athletic Trainer¹
Biologist¹
Biochemical Engineer¹
Biological Technician
Biomedical Equipment Technician
Biotechnologist
Botanist¹
Clinical Lab Technologist
Cytologist¹
Ecologist¹
Environmental Engineer¹
Environmental Technician
Environmental Microbiologist¹
Genetic Engineering Technician
Greenhouse Assistant
Laboratory Technician
Physical Therapist¹
Public Health Biologist¹
Purification Technician
Research Assistant
Safety Specialist
Teacher¹
Technical Writer
Waste Management Technician

¹ Bachelor Degree or higher required.

Associate in Science Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BIO 230	Principles of Cellular, Molecular and Evolutionary Biology	4
BIO 240	Principles of Ecology, Evolution and Organismal Biology	5
CHEM 141	General Chemistry I	5
CHEM 142	General Chemistry II	5
CHEM 231	Organic Chemistry I	5
MATH 180 C2210	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
PHYC 130	Fundamentals of Physics	4
PHYC 131	Fundamentals of Physics	4
STAT C1000	Introduction to Statistics	4
or PSY 215	Statistics for the Behavioral Sciences	4
	Total Units	41
	Plus General Education Requirements	

Biological Sciences: Pre-Allied Health

This program provides students with a pathway into allied health programs at baccalaureate institutions. Required science courses provide training in the methods of scientific inquiry, the fundamental principles of natural science, and the principle laws and theories governing the physical and life sciences. Recommended general education courses expose students to the necessary base of knowledge that will serve them well in any of the allied health fields. This degree prepares students for transfer to a baccalaureate institution or for advanced studies in an allied health major. Prior to enrolling in several courses in this major, students must take general biology and general biology laboratory as prerequisites. *It is recommended that students check with transfer institutions for specific program requirements.*

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Explain core principles of human biology and disease, including scientific inquiry and organism structure/function.
2. Integrate principles and skills in human health, including anatomy, physiology, microbiology, and chemistry as applied to healthcare settings.
3. Apply professional skills for healthcare practice, including effective communication, technology utilization, and collaborative investigation.
4. Synthesize content, skills, and knowledge from coursework to practice self-directed, lifelong learning.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BIO 140	Human Anatomy	4
BIO 141	Human Physiology	3
BIO 141L	Laboratory in Human Physiology	1
BIO 152	Paramedical Microbiology	5
CHEM 102	Introduction to General, Organic and Biological Chemistry	5
COMM C1000	Introduction to Public Speaking	3
PSYC C1000	Introduction to Psychology	3
SOC 120 <u>SOCI C1000</u>	Introductory Sociology <u>Introduction to Sociology</u>	<u>3</u>
	Total Units	27
	Plus General Education Requirements	

Recommended Electives: ~~CD 125~~ CDEV C1000 or PSY 150; STAT C1000

Marine Biology

The Marine Biology degree is designed to provide a two-year transfer program leading to a B.S. degree in Marine Biology with emphasis on the diversity of organisms and the biological and physical processes that affect these organisms, their populations and their coastal and oceanic ecosystems. This major requires a strong foundation in natural sciences that is provided in this two-year transfer degree that can lead to UC or CSU Marine Biology programs.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Explain the basic structures and fundamental processes of life at the molecular, cellular, and organismal levels.
2. Identify the evolutionary processes that lead to adaptation and biological diversity.
3. Describe the relationship between life forms and their environment and ecosystems.
4. Collect, organize, analyze, interpret and present quantitative and qualitative data and incorporate them into the broader context of biological knowledge.
5. Effectively apply current technology and scientific methodologies for problem solving.
6. Find, select and evaluate various types of scientific information including primary research articles, mass media sources and Internet information.
7. Communicate effectively in written and oral formats.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BIO 230	Principles of Cellular, Molecular and Evolutionary Biology	4
BIO 240	Principles of Ecology, Evolution and Organismal Biology	5
CHEM 141	General Chemistry I	5
CHEM 142	General Chemistry II	5
MATH 180 <u>C2210</u>	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
MATH 280 <u>C2220</u>	Analytic Geometry and Calculus II <u>Calculus II: Early Transcendentals</u>	4
MATH 281	Multivariable Calculus	4

Select one of the following options:

Option 1:

PHYC 201	Mechanics and Waves	5
PHYC 202	Electricity, Magnetism, and Heat	5
PHYC 203	Light, Optics, and Modern Physics	5

Option 2:

PHYC 130	Fundamentals of Physics	4
PHYC 131	Fundamentals of Physics	4

Total Units	40-47
Plus General Education Requirements	

BUSINESS

Business – General

This degree program is designed to develop and foster those skills and understandings which can be utilized for employment in an increasingly challenging business environment. The curriculum provides students with a broad preparation for a career in business. Business courses are included which provide a solid background for future promotion in a chosen occupational area. The degree is designed for students who do not plan to transfer to a four-year college or university.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Apply accounting concepts and methods to interpret financial statements for evaluating the financial position and performance of organizations.
2. Recognize and appropriately respond to ethical and legal concerns relating to human resource and organizational management.
3. Identify and analyze business problems or opportunities and effectively communicate recommendations for courses of actions.

Career Opportunities

Administrative Assistant
Bookkeeper
Budget Consultant¹
Buyer
Conciliator
Credit Analyst¹
Employment Interviewer
Hospital Administrator¹
Sales Agent
Trust Officer¹

¹ Bachelor Degree or higher required

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BUS 109	Elementary Accounting	3
or BUS 120	Financial Accounting	4
BUS 110	Introduction to Business	3
BUS 115	Human Relations in Business	3
BUS 125	Business Law: Legal Environment of Business	3
BUS 128	Business Communication	3
BUS 161	Business Internship	1-3
BUS 195	Principles of Money Management for Success	3
BOT 174	Computer Concepts and Applications	3
or CIS 110	Principles of Information Systems	4
ECON 110	Economic Issues and Policies	3
or ECON 120 <u>C2002</u>	Principles of Macroeconomics	<u>3</u>
	Total Units	25-29
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate of Achievement in Business–General. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Business Administration

This degree program is designed to provide students who choose to work toward a bachelor's degree a well-balanced introduction to a professional career in business. The curriculum fulfills the lower division requirements for most majors in the School of Business Administration at San Diego State University and is typical of requirements at other four-year schools. For specific requirements, transfer students should consult the catalog of their selected institution.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Apply accounting concepts and methods to interpret financial statements for evaluating the financial position and performance of organizations.
2. Recognize and appropriately respond to ethical and legal concerns relating to human resource and organizational management.
3. Identify and analyze business problems or opportunities and effectively communicate recommendations for courses of actions.

CAREER OPPORTUNITIES

Advertising/Marketing Manager¹
Agricultural Marketing Specialist¹
Banker¹
Broker¹
Consultant
Computer Operations Specialist¹
Credit Investigator
Economic Forecaster¹
Financial Analyst¹
Hospital Administrator¹
Import/Export Agent
Market Research Analyst¹
Personnel Manager¹
Real Estate Broker/Agent
Retail Manager
Securities Analyst/Trader¹

¹Bachelor Degree or higher required

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BUS 120	Financial Accounting	4
BUS 121	Managerial Accounting	4
BUS 125	Business Law: Legal Environment of Business	3
BUS 128	Business Communication	3
CIS 110	Principles of Information Systems	4
ECON 120 <u>C2002</u>	Principles of Macroeconomics	3
ECON 121 <u>C2001</u>	Principles of Microeconomics	3
STAT C1000	Introduction to Statistics	4
MATH 178	Calculus for Business, Social and Behavioral Sciences	<u>4</u>
	Total Units	32
	Plus General Education Requirements	

Recommended Elective: BUS 156 Principles of Management

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate of Achievement in Business Administration. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Business Administration 2.0 for Transfer (AS-T)

This program is designed to provide students with the common core of lower division courses required to transfer and pursue a baccalaureate degree in Business Administration. This includes business degrees with options such as accounting, finance, human resources management, international business, management, operations management, and marketing. This major aligns with the California State University (CSU) Bachelor of Science in Business Administration.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 or 90 quarter CSU-transferable semester units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or better in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Recognize essential functions and concerns specific to human resources, management, and general business operations.
2. Identify and analyze business problems or entrepreneurial opportunities and effectively communicate recommendations for courses of actions.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BUS 120	Financial Accounting	4
BUS 121	Managerial Accounting	4
BUS 125	Business Law: Legal Environment of Business	3
BUS 128	Business Communication	3
ECON 120 <u>C2002</u>	Principles of Macroeconomics	3
ECON 121 <u>C2001</u>	Principles of Microeconomics	3
MATH 178	Calculus for Business, Social and Behavioral Sciences	4
or MATH 180 <u>C2210</u>	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
STAT C1000	Introduction to Statistics	4
or PSY 215	Calculus for Business, Social and Behavioral Sciences	<u>4</u>
	Units for the Major	28-29
	Double-Counted Units	6
	Plus General Education Requirements (Cal-GETC)	34
	Total Transferable Elective Units	3-4
	Total Units	60

Please note: SDSU accepts this degree for students transferring into Business Administration (Financial Services) or Business Administration (General) majors.

CENTER FOR WATER STUDIES

Water Resources Management

This major prepares students to design, implement and evaluate water conservation/water resources management programs and to assist in developing more diversified water resource portfolios in the water and wastewater sector or in the landscape and property management field. Emphasis is on emerging technologies and methods that lead to long-term sustainability of our water and wastewater resources. Attaining a certificate or degree in this major will prepare students to enter careers in water conservation, watershed management, water resources and groundwater, public information, and community education. Careers in landscape and facilities maintenance, irrigation system design, urban water management, and landscape design are also options. Students successfully completing the core requirements for this major will qualify to take the American Water Works Association's Water Use Efficiency Practitioner certification examination, the Landscape Water Management certification offered by the California Landscape Contractor's Association, and the Certified Landscape Water Manager certification offered by the Irrigation Association. In addition to preparing students for entry level jobs in the water and wastewater field, courses in this major prepare students to transfer to a number of four-year college or university degree programs, including Water Resources, Environmental Sciences, and Natural Resources Management.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Describe the essential uses of water, the infrastructure that has been developed to meet demand, and the problems the water industry faces.
2. Identify a specified number of legal and financial constraints which complicate efficient and effective water resource management.
3. Explain the concept and importance of water portfolio diversification.
4. Describe the political/organizational structures and list the major agencies involved in providing water in the greater San Diego region.
5. Compare and contrast the sources of wastewater, the major collection/transportation networks, and the major wastewater treatment/reclamation facilities operating in San Diego County.
6. Identify the major regulatory agencies that monitor and regulate the water/wastewater industry.
7. Explain how the current carbon footprint of the water and wastewater infrastructure significantly impacts California's energy and power demands.
8. Compare and contrast a specified number of resource recovery/alternative treatment methods.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CWS101	Fundamentals of Water & Wastewater	3
CWS 103	Water Resources Management	3
CWS 105	Water Conservation	3
CWS 115	Wastewater Reclamation and Reuse	3
OH 120	Fundamentals of Ornamental Horticulture	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 221	Landscape Construction: Irrigation and Carpentry	3 2.5
OH 250	Landscape Water Management	2
CWS 290	Cooperative Work Experience	2
or OH 290	Cooperative Work Experience Education	<u>2</u>
		26.5

Select two of the following:

CWS 102	Calculations in Water & Wastewater	3
CWS 112	Water Treatment Plant Operations	3
CWS 114	Wastewater Treatment Plant Operations	3
CWS 130	Water Distribution Systems	3
CWS 132	Wastewater Collection Systems	3
CWS 280	Backflow Tester Training	2
CWS 282	Cross-Connection Control Specialist	3
CWS 284	Cross-Connection Control Specialist-Recycled Water	<u>3</u>
		5-6

Select two of the following:

OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 140	Soils	3
OH 174	Turf and Ground Cover Management	3
OH 220	Landscape Construction: Concrete and Masonry	3
OH 235	Principles of Landscape Irrigation	4
OH 238	Irrigation System Design	3
OH 255	Sustainable Urban Landscape Principles and Practices	<u>2</u>
		4-7
	Total Required	34-38 33.5-37.5
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Water Resources Management. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

CHEMISTRY

Chemistry

The chemistry curriculum is designed to provide students who choose to work toward a bachelor's degree a well-balanced, lower division program with a strong emphasis on fundamentals and problem solving. This major fulfills the lower division requirements (except for analytical chemistry) for chemistry majors and is typical of the requirements at four-year colleges and universities.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Comprehend and describe the nature of matter, including its classification, composition and structure, and physical and chemical transformations.
2. Apply problem-solving skills to predict and interpret quantities related to physical and chemical processes.
3. Draw scientific conclusions about simple and complex systems by collecting, assessing, and analyzing information.

Career Opportunities

Chemists work in a variety of fields, primarily those of the chemical, biotechnological, environmental, biomedical, pharmaceutical, electronics, forensic, agricultural and food industries. They usually work in analysis, research, development or production of materials. Management, marketing and teaching opportunities are also available.

Agricultural Chemist¹

Air Quality Control¹

Analytical Chemist¹

Biochemist¹

Chemistry Teacher¹

Dietician¹

Environmental Technologist¹

Fishery Specialist

Food And Drug Inspector¹

Forensic Specialist¹

Laboratory Technician

Materials Scientist¹

Medical Technologist

Microbiologist¹

Organic Chemist¹

Physician¹

Polymer Chemist¹

Sales Representative

Sanitarian Technician

¹ Bachelor Degree or higher required.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CHEM 141	General Chemistry I	5
CHEM 142	General Chemistry II	5
CHEM 231	Organic Chemistry I	5
MATH 180 C2210	Analytic Geometry and Calculus I Calculus I: Early Transcendentals	5
MATH 280 C2220	Analytic Geometry and Calculus II Calculus II: Early Transcendentals	4
MATH 281	Multivariable Calculus	4
PHYC 201	Mechanics and Waves	5
PHYC 202	Electricity, Magnetism, and Heat	5
PHYC 203	Light, Optics, and Modern Physics	<u>5</u>
	Total Units	43
	Plus General Education Requirements	

Note:

1. Students pursuing an emphasis in biochemistry should also take the following courses: BIO 230, 240.
2. Students who intend to enroll at UCSD should take MATH 285 and check with the Counseling Center regarding program options.

CHILD DEVELOPMENT

Administration

This certificate offers specific training for individuals who are seeking a position as the director of a California Title 22 early childhood development program. Students who complete the requirements below qualify for a Certificate in Child Development: Administration. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Develop and manage the budget for a child care or preschool program.
2. Incorporate regulatory laws into planning for a preschool program.
3. Develop and apply school policies and procedures, including those related to personnel and families.

Career Opportunities

Students may find positions as the director or assistant director of early childhood programs licensed by California Title 22 for children from 2-5 years. Students wanting to direct programs that include infants and toddlers from birth-2 years should take a Child Development course specifically related to infants and toddlers (CD-124 Infant and Toddler Development or CD-143 Responsive Planning for Infant/Toddler Care).

Certificate of Specialization Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CD 125 CDEV C1000	Child Growth and Development	3
CD 131	Child, Family and Community	<u>3</u>
		6
Select one of the following:		
CD 126	Art for Child Development	3
CD 127	Science and Mathematics for Child Development	3
CD 128	Music and Movement for Child Development	3
CD 129	Language and Literature for Child Development	<u>3</u>
		3
Select one of the following:		
CD 124	Infant and Toddler Development	3
CD 136	Adult Supervision	3
CD 143	Responsive Planning for Infant/Toddler Care	<u>3</u>
		3
Select one of the following:		
CD 137	Administration of Child Development Programs I	3
CD 138	Administration of Child Development Programs II	<u>3</u>
	3	
	Total Units	15

Child and Adolescent Development for Transfer (AA-T)

The Associate in Arts in Child and Adolescent Development for Transfer is designed to provide students with the lower division coursework needed to transfer to a California State University for a bachelor's degree in Child Development or Child and Adolescent Development or a closely related field.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Integrate the key developmental concepts and teaching strategies into a cogently articulated philosophy of child and adolescent education and care.
2. Employ curriculum that is well planned, developmentally appropriate and based on the interests and needs of children and adolescents.
3. Implement effective guidance strategies with children and adolescents.
4. Demonstrate the ability to plan programs for children and adolescent which enhance their physical, intellectual, emotion and social development.

Associate in Arts for Transfer Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CD 125 <u>CDEV C1000</u>	Child Growth and Development	3
PSYC C1000	Introduction to Psychology	3
STAT C1000	Introduction to Statistics	<u>4</u>
		10

List A

Select nine units from the following:

CD 131	Child, Family and Community	3
BIO 130 <u>BIOL C1001</u>	General Biology <u>Introduction to Biology</u>	3
CD 130	Curriculum: Design and Implementation	3
CD 213	Observation and Assessment	3
	Units for the Major	19
	Double-Counted Units	9-12
	Plus General Education Requirements (Cal-GETC)	34
	Total Transferable Elective Units	16-19
	Total Units	60

Early Childhood Education for Transfer (AS-T)

The AS-T in Early Childhood Education is designed to prepare students planning to transfer to a California State University for a bachelor's degree in Child Development or Early Childhood Education by providing lower division course preparation. This degree facilitates a clearly defined career pathway for students wishing to pursue a career in early childhood development and care.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Integrate the key developmental concepts and teaching strategies into a cogently articulated philosophy of early childhood education and care, which is sensitive to diversity, equity and inclusion, with an emphasis on developmentally appropriate practice, based on the interests and needs of children.
2. Employ appropriate classroom organizational and management techniques in a variety of early childhood education settings, demonstrating the ability to create curricula resources, while implementing a curriculum based on the needs of the whole child which supports the usage of effective and sensitive discipline and guidance strategies directly with children.
3. Assess their own professional competence and progress and develop a plan for professional career steps and growth with consideration of all potential career opportunities.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CD 123	Principles and Practices of Programs and Curriculum for Young Children	3
CD 125 CDEV C1000	Child Growth and Development	3
CD 130	Curriculum: Design and Implementation	3
CD 131	Child, Family and Community	3
CD 134	Health, Safety and Nutrition of Young Children	3
CD 153	Teaching in a Diverse Society	3
CD 212	Practicum in Early Childhood Education	3
CD 213	Observation and Assessment	3
	Units for the Major	24
	Double-Counted Units	3
	Plus General Education Requirements (Cal-GETC)	34
	Total Transferable Elective Units	5
	Total Units	60

Early Childhood Intervention

This certificate prepares students for entry-level positions and greater opportunities for advancement in the early childhood field. It is designed to demonstrate an area of expertise in working with young children with special needs in typical early childhood programs or those specifically designed for young children with special needs.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Observe and document specific behaviors, skills, and interests of young children.
2. Plan and implement schedule, curriculum, and guidance strategies adapted for a young child with special needs.

Career Opportunities

Students may find employment as an inclusion specialist, inclusion aide, or intervention assistant in a wide variety of programs serving young children with special needs. These programs include but are not limited to corporate child care, Head Start, State Preschools, special day classes, intervention programs, home visit programs, community-based programs such as park, recreation and camping programs, and faith-based early childhood programs.

Certificate Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CD 125 <u>CDEV C1000</u>	Child Growth and Development ¹	3
CD 134	Health, Safety and Nutrition of Young Children	3
CD 141	Working with Children with Special Needs	<u>3</u>
		9

Select two of the following:

CD 126	Art for Child Development ¹	3
CD 127	Science and Mathematics for Child Development ¹	3
CD 128	Music and Movement for Child Development ¹	3
CD 129	Language and Literature for Child Development ¹	3
CD 131	Child, Family and Community ¹	3
CD 145	Child Abuse and Family Violence in Our Society	3
CD 210	Working with Young Children with Challenging Behaviors	3
	Total Units	15

¹ Meets the educational components of the Department of Social Services license regulations for child care programs.

At least 50% of the units required for the Certificate of Specialization must be completed at Cuyamaca College.

Elementary Education

This degree program is designed to provide lower division preparation for transfer to San Diego State University as a Liberal Studies major. Because the degree emphasizes a strong general education approach, it may be an appropriate major for a variety of career options. Students are encouraged to refer to the San Diego State University catalog and/or consult with an academic advisor before selecting the various options listed below. Upon completion, students may request certification of lower division general education course work required by the California State University system. Students interested in transferring to another college or university should check the requirements of that institution.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Demonstrate global awareness and cultural sensitivity.
2. Be prepared to request certification of lower division general education course work required by the California State University system.
3. Demonstrate effective communication and interpersonal skills in diverse teaching and learning settings.

CAREER OPPORTUNITIES

Administrator¹
 Audiovisual Specialist
 School Clerical Worker
 Counselor¹
 Educational Consultant¹
 Educational Psychologist¹
 Educational Therapist¹
 Educational Writer¹
 Food Service
 Guidance Worker¹
 Librarian¹
 Library Technician
 Social Psychologist¹
 Speech Pathologist/Audiologist¹
 Teacher¹
 Teacher's Aide
 Tutor

¹Bachelor Degree or higher required

Associate in Arts Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
COMPOSITION, ORAL COMMUNICATION, AND LITERATURE		
1. Composition:		3-6 4-6
ENGL C1000	Academic Reading and Writing	3 4
ESL 122	College Rhetoric	6
Select one of the following:		3
COMM 137	Critical Thinking in Group Communication	3
COMM 145	Argumentation	3
ENGL C1001	Critical Thinking and Writing	3
PHIL 125	Critical Thinking and Philosophical Composition	3
PHIL 130	Logic	3
2. Communication (minimum three units):		
COMM 120 <u>C1004</u>	Interpersonal Communication	3
COMM C1000	Introduction to Public Speaking	3
3. Literature (minimum three units):		
ENGL 122 <u>C1002</u>	Introduction to Literature	3
MATHEMATICS AND SCIENCES		
4. Mathematics:		
MATH 125	Structure and Concepts of Elementary Mathematics I	3
MATH 126	Structure and Concepts of Elementary Mathematics II	3

(Elementary Education continued)

5. Biological Sciences:

BIO 130	General Biology I	3
BIO 131	General Biology I Laboratory	1
<u>BIOL C1000</u>	<u>Introduction to Biology with Lab</u>	<u>4</u>

6. Physical Sciences:

GEOL 104	Earth Science	3
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SOCIAL SCIENCE AND HISTORY

7. Global Perspective:

GEOG 106	World Regional Geography	3
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8. American Institutions:

Select one of the following:

HIST 108 <u>C1001</u>	Early American History <u>United States History to 1877</u>	3
HIST 109 <u>C1002</u>	Modern American History <u>United States History Since 1865</u>	3
POLS C1000	American Government and Politics	3

9. Civilizations

HIST 100	Early World History	3
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VISUAL AND PERFORMING ARTS/HUMANITIES

10. Theatre:

THTR 110	Introduction to Theatre	3
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11. Human Growth and Development:

CD 125 <u>CDEV C1000</u>	Child Growth and Development	3
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12. Ethnic Studies:

Select one from each section:

A. 6

HIST 118	U.S. History: Chicano/Chicana Perspectives I	3
HIST 119	U.S. History: Chicano/Chicana Perspectives II	3
HIST/ETHN 130	U.S. History and Cultures: Native American Perspectives I	3
HIST/ETHN 131	U.S. History and Cultures: Native American Perspectives II	3
HIST 180	U.S. History: Black Perspectives I	3
HIST 181	U.S. History: Black Perspectives II	3

B.

ENGL/ETHN 236	Chicana/o Literature	3
ENGL/ETHN 238	Black Literature	3
ETHN/HIST 107	History of Race & Ethnicity in the United States	3
ETHN/SOC 114	Introduction to Race & Ethnicity	3

13. Additional Requirements:

ED 200	Teaching as a Profession	3
ES 253	Physical Education in Elementary Schools	3
HED 105	Health Education for Teachers	1
MATH 128	Children's Mathematical Thinking	2
MUS 118	Introduction to Music	4
ES Activity	(At least two ES courses listed in GE Area 7B)	<u>2-3</u>
	Total Units	61-65 <u>62-66</u>

Recommended Elective:

PSC 100†	Physical Science for Elementary Education	3
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† Offered at Grossmont College; required for major at SDSU

Elementary Teacher Education for Transfer (AA-T)

The Associate in Arts in Elementary Teacher Education for Transfer (AA-T in Elementary Teacher Education) is designed to provide lower division preparation for Liberal Arts, Liberal Studies, Integrated Teacher Education, or a similar major at a baccalaureate institution. It is an interdisciplinary program that provides students with a foundation of knowledge in the areas of English composition, oral communication, physical and life sciences, social sciences, arts and humanities, and critical thinking. Transfer students earning the AA-T in Elementary Teacher Education will receive a broad, general education focus that will prepare them to teach a variety of subjects at the elementary school level.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC); see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Use arithmetic, algebraic, geometric, and statistical methods to solve quantitative problems.
2. Describe U.S. political institutions and evaluate how social issues are shaped by political, geographical, and historical forces.
3. Apply concepts from the physical and biological sciences to evaluate information and solve scientific problems.
4. Analyze key elements and historical or philosophical contexts of artistic, cultural, and intellectual works, such as literature, art, music, theater, film, philosophy, and architecture.
5. Communicate clearly and effectively in diverse educational settings through both oral and written expression.

Associate in Arts Degree Requirements:

Core Curriculum:

Course	Title	Units
BIO C1000	Introduction to Biology with Lab	4
BIO 130	General Biology I	3
BIO 131	General Biology I Laboratory	1
CD 125 CDEV C1000	Child Growth and Development	3
COMM C1000	Introduction to Public Speaking	3
ED 200	Teaching as a Profession	3
ENGL C1000	Academic Reading and Writing	4
or ESL 122	College Rhetoric	6
ENGL 122 C1002	Introduction to Literature	3
or HIST 100	Early World History	3
HIST 108 C1001	Early American History United States History to 1877	3
POLS C1000	American Government and Politics	3
		25-28 <u>26-28</u>

List A

Choose 1 pair:		4-8
GEOL 104	Earth Science	
and GEOL 121	Physical Geography: Earth Systems Laboratory	
or		
CHEM 120	Preparation for General Chemistry	
and PHYC 110	Introductory Physics	

List B: Select one:

ART 100	Art Appreciation	3
MUS 110	Great Music Listening	3
THTR 110	Introduction to the Theatre	3
		<u>3</u>

List C: Complete eight units:

MATH 125	Structure and Concepts of Elementary Mathematics I	3
MATH 126	Structure and Concepts of Elementary Mathematics II	3
MATH 128	Children's Mathematical Thinking	2
		<u>8</u>
	Units in the Major	40-47 <u>41-47</u>
	28 total units that may be double-counted	
	Plus General Education Requirements Cal-GETC)	34
	Total Transferable Elective Units	<u>7-14</u> <u>7-13</u>
	Total Units	60

Please note: SDSU accepts this degree for students transferring into Liberal Studies Generalist Education.

Infants and Toddlers

The Child Development curriculum is designed to prepare students for employment as teachers, directors and aides in preschools and child care centers, including infant/toddler and extended day facilities. The curriculum is also appropriate for parents, administrators, health care professionals, and others working with children. Course work meets the educational components of the Department of Social Services license regulations for child care programs. The degree meets the Title 5 Department of Education educational requirements of the Assistant, Associate, Teacher, Master Teacher and Site Supervisor Child Development Permits. The curriculum meets lower division course preparation for students planning to obtain a bachelor's degree in Child Development at most CSU campuses.

The Department of Social Services Title 22 minimum requirements to be a preschool teacher are 12 units in Child Development which must include: ~~CD 125~~ CDEV C1000 (formerly CD 125), CD 131, one curriculum class (CD 123, 126, 127, 128, 129 or 130), and one additional CD course (3 units).

The California Department of Education Title 5 minimum education requirements at the Teacher level on the Child Development Matrix are 24 units in Child Development which must include: ~~CD 125~~ CDEV C1000 (formerly CD 125), CD 131, one curriculum class (CD 123, 126, 127, 128, 129 or 130), 12 additional units in CD, and 16 units of general education which must include one degree applicable course in each of four general education categories: English/Language Arts; Math or Science; Social Sciences; Humanities and/or Fine Arts.

The California Community Colleges' Curriculum Alignment Project (CAP) consolidates and clarifies the transfer requirements for teachers of young children in the state of California. The eight CAP courses, CD 123, ~~125~~, 130, 131, 134, 153, 212, ~~and 213~~ and CDEV C1000 (formerly CD 125), provide a strong foundation for transfer to four-year programs in Child Development of Early Childhood Education.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Integrate the key developmental concepts and teaching strategies into a cogently articulated philosophy of early childhood education and care.
2. Employ appropriate classroom organizational and management techniques in a variety of early childhood education settings, including the implementation of curriculum that is well planned, developmentally appropriate, and based on the interests and needs of the children.
3. Survey, assemble, and expand curricula resources for use in specific early childhood classrooms and centers.
4. Apply and implement effective and sensitive discipline and guidance strategies directly with children.
5. Clearly demonstrate the ability to plan child development programs which deliberately intend to advance, stimulate or otherwise enhance children's physical, intellectual, emotional and social development in ways which are appropriate to the children's developmental level.
6. Assess their own professional competence and progress and develop a plan for professional career steps and growth.

CAREER OPPORTUNITIES

Adoption Counselor¹
Camping Guide
Child Care Specialist
Child Psychologist¹
Curriculum Development
Development Specialist (Child, Adolescent and Family)¹
Early Intervention Aide¹
Educational Consultant¹
Infant/Toddler Teacher
Outdoor Education Specialist
Preschool Director
Preschool Teacher
Recreation Leader
Recreation Specialist¹
School Age Child Care Teacher
Social Service Specialist¹
Special Education Assistant – Children with Special Needs

¹Bachelor Degree or higher required

Associate in Science Degree Requirements:

Core Curriculum:

Course	Title	Units
CD 106	Practicum: Beginning Observation and Experience	1
CD 123	Principles and Practices of Programs and Curriculum for Young Children	3
CD 125 <u>CDEV C1000</u>	Child Growth and Development	3
CD 126	Art for Child Development	3
CD 127	Science and Mathematics for Child Development	3
CD 128	Music and Movement for Child Development	3
CD 129	Language and Literature for Child Development	3
CD 131	Child, Family and Community	3

(Infants and Toddlers continued)		
CD 134	Health, Safety and Nutrition of Young Children	3
CD 141	Working with Children with Special Needs	3
or CD 210	Working with Young Children with Challenging Behaviors	3
CD 153	Teaching in a Diverse Society	3

Areas of Emphasis:

INFANTS AND TODDLERS

CD 124	Infant and Toddler Development	3
CD 132	Observation and Assessment: Field Experience Seminar	3
CD 143	Responsive Planning for Infant/Toddler Care	3
CD 170	Practicum: Field Experience with Infants and Toddlers	<u>2</u>
		11
	Total Required Including Core Courses	42
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the courses required for the major including an area of emphasis qualify for a Certificate in Child Development in that area of emphasis. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Preschool Children

The Child Development curriculum is designed to prepare students for employment as teachers, directors and aides in preschools and child care centers, including infant/toddler and extended day facilities. The curriculum is also appropriate for parents, administrators, health care professionals, and others working with children. Course work meets the educational components of the Department of Social Services license regulations for child care programs. The degree meets the Title 5 Department of Education educational requirements of the Assistant, Associate, Teacher, Master Teacher and Site Supervisor Child Development Permits. The curriculum meets lower division course preparation for students planning to obtain a bachelor's degree in Child Development at most CSU campuses.

The Department of Social Services Title 22 minimum requirements to be a preschool teacher are 12 units in Child Development which must include: ~~CD 125~~ CDEV C1000 (formerly CD 125), CD 131, one curriculum class (CD 123, 126, 127, 128, 129 or 130), and one additional CD course (3 units).

The California Department of Education Title 5 minimum education requirements at the Teacher level on the Child Development Matrix are 24 units in Child Development which must include: ~~CD 125~~ CDEV C1000 (formerly CD 125), CD 131, one curriculum class (CD 123, 126, 127, 128, 129 or 130), 12 additional units in CD, and 16 units of general education which must include one degree applicable course in each of four general education categories: English/Language Arts; Math or Science; Social Sciences; Humanities and/or Fine Arts.

The California Community Colleges' Curriculum Alignment Project (CAP) consolidates and clarifies the transfer requirements for teachers of young children in the state of California. The eight CAP courses, CD 123, ~~125~~, 130, 131, 134, 153, 212, ~~and 213~~ and CDEV C1000 (formerly CD 125), provide a strong foundation for transfer to four-year programs in Child Development of Early Childhood Education.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Integrate the key developmental concepts and teaching strategies into a cogently articulated philosophy of early childhood education and care.
2. Employ appropriate classroom organizational and management techniques in a variety of early childhood education settings, including the implementation of curriculum that is well planned, developmentally appropriate, and based on the interests and needs of the children.
3. Survey, assemble, and expand curricula resources for use in specific early childhood classrooms and centers.
4. Apply and implement effective and sensitive discipline and guidance strategies directly with children.
5. Clearly demonstrate the ability to plan child development programs which deliberately intend to advance, stimulate or otherwise enhance children's physical, intellectual, emotional and social development in ways which are appropriate to the children's developmental level.
6. Assess their own professional competence and progress and develop a plan for professional career steps and growth.

CAREER OPPORTUNITIES

Adoption Counselor¹
Camping Guide
Child Care Specialist
Child Psychologist¹
Curriculum Development
Development Specialist (Child, Adolescent and Family)¹
Early Intervention Aide¹
Educational Consultant¹
Infant/Toddler Teacher
Outdoor Education Specialist
Preschool Director
Preschool Teacher
Recreation Leader
Recreation Specialist¹
School Age Child Care Teacher
Social Service Specialist¹
Special Education Assistant – Children with Special Needs

¹Bachelor Degree or higher required

Associate in Science Degree Requirements:

Core Curriculum:

Course	Title	Units
CD 106	Practicum: Beginning Observation and Experience	1
CD 123	Principles and Practices of Programs and Curriculum for Young Children	3
CD 125 <u>CDEV C1000</u>	Child Growth and Development	3
CD 126	Art for Child Development	3
CD 127	Science and Mathematics for Child Development	3
CD 128	Music and Movement for Child Development	3
CD 129	Language and Literature for Child Development	3
CD 131	Child, Family and Community	3

(Preschool Children continued)

CD 134	Health, Safety and Nutrition of Young Children	3
CD 141	Working with Children with Special Needs	3
or CD 210	Working with Young Children with Challenging Behaviors	3
CD 153	Teaching in a Diverse Society	3

Areas of Emphasis:

PRESCHOOL CHILDREN

CD 130	Curriculum: Design and Implementation	3
CD 132	Observation and Assessment: Field Experience Seminar	3
CD 133	Practicum–Field Experience: Student Teaching	<u>2</u> 3
		8

Total Units 39 40
Plus General Education Requirements

Certificate of Achievement

Students who complete only the courses required for the major including an area of emphasis qualify for a Certificate in Child Development in that area of emphasis. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

COMMUNICATION

Communication

This degree program is designed to provide students with a broad base of communication classes that provide training for entry into occupations in which verbal skills are important. Major requirements for the four-year degree in Communication vary from institution to institution. It is recommended that students check with transfer institutions for specific requirements.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Research, write and deliver an effective public speech.
2. Critically analyze, critique and synthesize arguments and information.
3. Communicate clearly and effectively in a variety of media and/or contexts.
4. Apply discipline-specific theories about language and communication to students' own practice or work.
5. Navigate norms related to communicating in diverse environments, including professional, intercultural, and/or specialized settings.

CAREER OPPORTUNITIES

Training
Education
Consulting
Human Resources
Public Relations
Sales

Communication graduates often pursue additional degrees in fields such as law, political science, management, and marketing.

Associate in Arts Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
COMM 120 C1004	Interpersonal Communication	3
COMM C1000	Introduction to Public Speaking	<u>3</u>
		6

List A: Select two from the following:

COMM 123	Advanced Public Speaking	3
COMM 137	Critical Thinking in Group Communication	3
COMM 145	Argumentation	<u>3</u>
		6

List B: Select two from the following:

COMM 110	Introduction to Mass Communication	3
COMM 124	Intercultural Communication	3
Any course not selected from list A above		3
		6

Total Units 18

Communication Studies for Transfer (AA-T)

This degree program is designed to provide students with a broad base of communication courses that provide training for entry into occupations in which public contact and verbal skills are important. Students will explore and analyze verbal communication methods, as well as develop and advance their oral communication skills. Students completing this degree may be interested in pursuing careers in community service, sales, performing arts, teaching, and other communication professions.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Research, write and deliver an effective public speech.
2. Critically analyze, critique and synthesize arguments and information.
3. Communicate clearly and effectively in a variety of media and/or contexts.
4. Apply discipline-specific theories about language and communication to students' own practice or work.
5. Navigate norms related to communicating in diverse environments, including professional, intercultural, and/or specialized settings.

Associate in Arts Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
COMM 120 C1004	Interpersonal Communication	3
COMM C1000	Introduction to Public Speaking	<u>3</u>
		6

List A: Select three of the following:

COMM 110	Introduction to Mass Communication	3
COMM 124	Intercultural Communication	3
COMM 137	Critical Thinking in Group Communication	3
COMM 145	Argumentation	<u>3</u>
		9

List B: Select one of the following:

COMM 123	Advanced Public Speaking	3
ENGL C1001	Critical Thinking and Writing	3
Any course not selected from list A above		3

Units for the Major	18
Double-Counted Units	6-9
Plus General Education Requirements Cal-GETC)	34
Total Transferable Elective Units	<u>14-17</u>
Total Units	60

Please note: SDSU accepts this degree for students transferring into the Health Communication Major and the Communication Major in Applied Arts and Sciences emphases.

COMPUTER-AIDED DRAFTING AND DESIGN

CADD Technology: Building Design Industry

Occupational preparation in Computer-Aided Drafting and Design is the primary purpose of the CADD Technology degree program. Students are required to complete two core courses and to select from two potential career paths: Building Design Industry or Manufacturing Industry. Adherence to industrial practices and standards is stressed, including problem solving in a simulated industrial environment.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Create 3D modeling objects of various orientations including sections and elevations of objects, and identify the relationships of objects or object features to demonstrate visualization proficiency.
2. Identify or describe the typical characteristics and uses of common construction or manufacturing materials, products and systems, document them in drawings, and make appropriate selections based on design project requirements.
3. Use the latest version of 2D/3D CADD and Solid Modeling software programs (AutoCAD and SolidWorks) to create industry standard architectural or engineering drawings.
4. Model the habits and attitudes for success in professional employment as a CADD technician including the preparation and presentation of a professional portfolio.
5. Demonstrate computation, communication, critical thinking, and problem-solving skills to perform effectively as a CADD technician in the field of architecture and/or the civil, electronic, mechanical, structural, and surveying engineering fields.

Career Opportunities

CAD Technician in the field of Architecture and Civil, Electronic, Mechanical, Structural, and Surveying Engineering

Associate in Science Degree Requirements:

Core Curriculum:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CADD 115	Engineering Graphics	3
CADD 120 <u>119</u>	Introduction to Computer-Aided Drafting and Design	<u>3</u>
		6

Areas of Emphasis: Building Design Industry

CADD 127/SURV 127	Survey Drafting Technology	3
CADD 131	Architectural Computer-Aided Drafting and Design	3
CADD 133	Advanced Architectural Computer-Aided Drafting and Design	3
CADD/OH 200	Introduction to Computer-Aided Landscape Design	<u>3</u>
		12

Select two of the following:

CADD 126	Electronic Drafting	3
CADD 128	Dimensioning and Tolerancing	3
CADD 132	Advanced Computer-Aided Drafting and Design in 3D Modeling	3
CADD 201/OH 201	Advanced Computer-Aided Landscape Design	<u>3</u>
		6
	Total Units	24
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the courses required for the major including an area of emphasis qualify for a Certificate in CADD Technology in that area of emphasis. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

CADD Technology: Manufacturing Industry

Occupational preparation in Computer-Aided Drafting and Design is the primary purpose of the CADD Technology degree program. Students are required to complete two core courses and to select from two potential career paths: Building Design Industry or Manufacturing Industry. Adherence to industrial practices and standards is stressed, including problem solving in a simulated industrial environment.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Create 3D modeling objects of various orientations including sections and elevations of objects, and identify the relationships of objects or object features to demonstrate visualization proficiency.
2. Identify or describe the typical characteristics and uses of common construction or manufacturing materials, products and systems, document them in drawings, and make appropriate selections based on design project requirements.
3. Use the latest version of 2D/3D CADD and Solid Modeling software programs (AutoCAD and SolidWorks) to create industry standard architectural or engineering drawings.
4. Model the habits and attitudes for success in professional employment as a CADD technician including the preparation and presentation of a professional portfolio.
5. Demonstrate computation, communication, critical thinking, and problem-solving skills to perform effectively as a CADD technician in the field of architecture and/or the civil, electronic, mechanical, structural, and surveying engineering fields.

Career Opportunities

CAD Technician in the field of Architecture and Civil, Electronic, Mechanical, Structural, and Surveying Engineering

Associate in Science Degree Requirements:

Core Curriculum:

Course	Title	Units
CADD 115	Engineering Graphics	3
CADD 120 119	Introduction to Computer-Aided Drafting and Design	3
CADD 128	Geometric Dimensioning and Tolerancing (GDT)	<u>3</u>
		9

Areas of Emphasis: Manufacturing Industry

Select three of the following:

CADD 125/ENGR 125	Solid Modeling Design	3
CADD 126	Electronic Drafting	3
CADD 129/SURV 129	Engineering Solid Modeling	3
CADD 132	Advanced Computer-Aided Drafting and Design in 3D Modeling	<u>3</u>
		9

Select two of the following:

CADD 127/SURV 127	Survey Drafting Technology	3
CADD 131	Architectural Computer-Aided Drafting and Design	3
CADD 133	Advanced Architectural Computer-Aided Drafting and Design	3
CADD 200/OH 200	Introduction to Computer-Aided Landscape Design	<u>3</u>
		6
	Total Units	27 24
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the courses required for the major including an area of emphasis qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

COMPUTER SCIENCE

Computer Science for Transfer (AS-T)

This program is designed to prepare students for transfer to a California State University (CSU) with the intent of earning a B.S. degree in Computer Science. The coursework provides a strong foundation in programming methodology, programming skills, and computer organization.

Most careers in computer science require a bachelor's degree, and some require a graduate-level degree. Computer science careers include software engineering, computer engineering, computer systems analysis, systems programming, mobile application development, artificial intelligence, robotics, and simulation. Computing technology now is used in most fields. Because of this, a wide range of jobs are open to people trained in Computer Science. Employment opportunities are expected to remain very strong.

A total of 33 units are required to fulfill the major portion of this degree. Students must also complete the California General Education Transfer Curriculum (Cal-GETC) for CSU admission requirements (see the "General Education Requirements and Transfer Information" section of the catalog). Students should speak with a counselor to verify that the requirements for this degree have been met. In addition, students planning to transfer to San Diego State University should consult with a counselor.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes:

Upon successful completion of this program, students will be able to:

1. Define and apply current Software Engineering design patterns, algorithms, and data structures to produce efficient, well-engineered software applications.
2. Apply problem-solving skills and the knowledge of computer science to solve real-world problems.
3. Define and demonstrate the concept of object oriented programming and object oriented design.

Associate in Science Degree Requirements:

Core Curriculum:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BIO 230	Principles of Cellular, Molecular and Evolutionary Biology	4
CS 165	Assembly Language and Machine Architecture	4
CS 181	Introduction to C++ Programming	4
or CS 182	Introduction to Java Programming	4
CS 240	Discrete Structures	3
CS 281	Intermediate C++ Programming and Fundamental Data Structures	4
or CS 282	Intermediate Java Programming and Fundamental Data Structures	4
MATH 180	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
MATH 280	Analytic Geometry and Calculus II <u>Calculus II: Early Transcendentals</u>	4
PHYC 201	Mechanics and Waves	5
	Units for the Major	33
	Double-Counted Units	10
	Plus General Education Requirements Cal-GETC)	34
	Total Transferable Elective Units	3
	Total Units	60

ECONOMICS

Economics for Transfer (AA-T)

The AA-T in Economics for Transfer provides a broad exposure to the field of economics. Students will learn about the factors that determine the production, distribution and consumption of goods and services. They will come to understand the behavior and interactions of economic agents and how economies work. This major prepares student to transfer to a California State University, where a baccalaureate degree may be earned in Economics or a closely related field.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units;
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes:

Upon successful completion of this program, students will be able to:

1. Use economic models to predict changes in societal outcomes based on changes in economic variables.
2. Identify and apply economic principles to personal-life decisions.

Associate in Arts for Transfer Degree Requirements:

Core Curriculum:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ECON 120 <u>C2002</u>	Principles of Macroeconomics	3
ECON 121 <u>C2001</u>	Principles of Microeconomics	3
MATH 178	Calculus for Business, Social and Behavioral Sciences	4
or MATH 180 <u>C2210</u>	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	4
STAT C1000	Introduction to Statistics	5

List A

Select one of the following:

BUS 120	Financial Accounting	4
BUS 121	Managerial Accounting	4
BUS 128	Business Communication	3
CIS 110	Principles of Information Systems	4
MATH 280 <u>C2220</u>	Analytic Geometry and Calculus II <u>Calculus II: Early Transcendentals</u>	4

List B

Select any List A course not used 3-4

Units for the Major	21-23
Double-Counted Units	6
Plus General Education Requirements Cal-GETC)	34
Total Transferable Elective Units	9-11
Total Units	60

ENGINEERING

Civil Engineering

This degree program is designed to cover the first two years of a four-year program leading to the bachelor's degree in engineering at most four-year colleges and universities. While the bachelor's degree is usually the minimum needed to practice as an engineer, the associate degree will permit an individual to find work in most engineering firms as an engineering aide.

CAREER OPPORTUNITIES

- Aerospace Engineer¹
- Agricultural Engineer¹
- Architectural Engineer¹
- Biomedical Engineer¹
- CAD/CAM Engineer¹
- Chemical Engineer¹
- Civil Engineer¹
- Civil Engineering Technician
- Computer Engineer¹
- Electrical Engineer¹
- Electrical Engineering Technician
- Environmental Engineer¹
- Geological Engineer¹
- Industrial Engineer¹
- Industrial Engineering Technician
- Manufacturing Engineer¹
- Marine Engineer¹
- Materials Engineer¹
- Mechanical Engineer¹
- Mechanical Engineering Technician
- Mining Engineer¹
- Nuclear Engineer¹
- Petroleum Engineer¹
- Structural Engineer¹
- Systems Engineer¹
- Robotics Engineer¹

¹Bachelor's degree or higher required

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Draw conclusions about simple and complex systems by collecting, assessing, and analyzing information.
2. Communicate technical ideas in group and professional settings in both written and oral form.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CHEM 141	General Chemistry I	5
ENGR 100	Introduction to Engineering and Design	4
ENGR 119	<u>Introduction to Computer-Aided Drafting and Design—Basic Engineering CAD</u>	3
or		
CADD 119	Introduction to Computer-Aided Drafting and Design	3
ENGR 218/SURV 218	Plane Surveying	4
ENGR 225	Mechanics for Civil Engineers	3
STAT C1000	Introduction to Statistics	4
MATH 180	<u>Analytic Geometry and Calculus I</u> <u>Calculus I: Early Transcendentals</u>	5
MATH 280	<u>Analytic Geometry and Calculus II</u> <u>Calculus II: Early Transcendentals</u>	4
MATH 281	Multivariable Calculus	4
MATH 285	Differential Equations	3
PHYC 201	Mechanics and Waves	5
PHYC 202	Electricity, Magnetism, and Heat	5
Total Units		49
Plus General Education Requirements		

Electrical and Computer Engineering

This degree program is designed to cover the first two years of a four-year program leading to the bachelor's degree in engineering at most four-year colleges and universities. While the bachelor's degree is usually the minimum needed to practice as an engineer, the associate degree will permit an individual to find work in most engineering firms as an engineering aide.

CAREER OPPORTUNITIES

Aerospace Engineer¹
 Agricultural Engineer¹
 Architectural Engineer¹
 Biomedical Engineer¹
 CAD/CAM Engineer¹
 Chemical Engineer¹
 Civil Engineer¹
 Civil Engineering Technician
 Computer Engineer¹
 Electrical Engineer¹
 Electrical Engineering Technician
 Environmental Engineer¹
 Geological Engineer¹
 Industrial Engineer¹
 Industrial Engineering Technician
 Manufacturing Engineer¹
 Marine Engineer¹
 Materials Engineer¹
 Mechanical Engineer¹
 Mechanical Engineering Technician
 Mining Engineer¹
 Nuclear Engineer¹
 Petroleum Engineer¹
 Structural Engineer¹
 Systems Engineer¹
 Robotics Engineer¹

¹ Bachelor's degree or higher required.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Visualize 3D objects and sketch them accurately in 2D.
2. Solve engineering problems through computer modeling, employing a computer language such as C or Java.
3. Design and write computer programs that employ linked list memory management, stacks, tree data structures, and searching and sorting algorithms.
4. Determine the DC and steady-state AC voltages and currents everywhere in an electric circuit composed of passive components.
5. Model linear systems of arbitrary size and complexity using linear algebra.
6. Model transient and steady-state electrical systems using systems of 2nd order differential equations.
7. Apply Green's theorem, Stokes' theorem, and Maxwell's equations to solve simple problems in electrostatics and electromagnetism.
8. Analyze and design combinational and sequential digital logic systems of arbitrary complexity, including (for example) Moore and Mealy sequential machines.

Associate in Science Degree Requirements:

Course	Title	Units
CHEM 141	General Chemistry I	5
CS 181	Introduction to C++ Programming	4
or CS 182	Introduction to Java Programming	4
CS 281	Intermediate C++ Programming	4
or CS 282	Intermediate Java Programming and Fundamental Data Structures	4
ENGR 100	Introduction to Engineering and Design	4
ENGR 210	Electric Circuits	4
ENGR 270	Digital Design	4
MATH 180 <u>C2210</u>	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
MATH 245	Discrete Mathematics	3
or MATH 281	Multivariable Calculus	4
MATH 280 <u>C2220</u>	Analytic Geometry and Calculus II <u>Calculus II: Early Transcendentals</u>	4
MATH 284	Linear Algebra	3
MATH 285	Differential Equations	3
PHYC 201	Mechanics and Waves	5
PHYC 202	Electricity, Magnetism, and Heat	5
Total Units		53-54
Plus General Education Requirements		

Mechanical and Aerospace Engineering

This degree program is designed to cover the first two years of a four-year program leading to the bachelor's degree in engineering at most four-year colleges and universities. While the bachelor's degree is usually the minimum needed to practice as an engineer, the associate degree will permit an individual to find work in most engineering firms as an engineering aide.

CAREER OPPORTUNITIES

Aerospace Engineer¹
 Agricultural Engineer¹
 Architectural Engineer¹
 Biomedical Engineer¹
 CAD/CAM Engineer¹
 Chemical Engineer¹
 Civil Engineer¹
 Civil Engineering Technician
 Computer Engineer¹
 Electrical Engineer¹
 Electrical Engineering Technician
 Environmental Engineer¹
 Geological Engineer¹
 Industrial Engineer¹
 Industrial Engineering Technician
 Manufacturing Engineer¹
 Marine Engineer¹
 Materials Engineer¹
 Mechanical Engineer¹
 Mechanical Engineering Technician
 Mining Engineer¹
 Nuclear Engineer¹
 Petroleum Engineer¹
 Structural Engineer¹
 Systems Engineer¹
 Robotics Engineer¹

¹ Bachelor's degree or higher required

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Visualize 3D objects and draw them in 2D, both by sketching and through the use of computer-aided drafting software; produce a complete set of drawings sufficient to manufacture a part, including dimensions and tolerances.
2. Solve engineering problems through computer modeling, employing an engineering computer language such as Matlab.
3. Design a rigid structure such as a bridge, determining forces in each part of the structure. Determine the weight and location of the structure's center of gravity.
4. Design a dynamic system such as a piston or linkage and compute forces, accelerations, and speeds of all components of the system.
5. Select an appropriate material for manufacturing a part or product and determine the appropriate material processing techniques to produce the part. Justify the choice of material on the basis of macroscopic mechanical properties as well as microstructure.
6. Determine the DC and steady-state AC voltages and currents everywhere in an electric circuit composed of passive components.
7. Model vibrating systems using systems of 2nd order differential equations.

Associate in Science Degree Requirements:

Course	Title	Units
CHEM 141	General Chemistry I	5
ENGR 100	Introduction to Engineering and Design	4
ENGR 120	Engineering Computer Applications	3
ENGR 200	Engineering Mechanics–Statics	3
ENGR 210	Electric Circuits	4
or ENGR 230	Mechatronics	3
ENGR 220	Engineering Mechanics–Dynamics	3
MATH 180 C2210	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
MATH 280 C2220	Analytic Geometry and Calculus II <u>Calculus II: Early Transcendentals</u>	4
MATH 281	Multivariable Calculus	4
MATH 285	Differential Equations	3
PHYC 201	Mechanics and Waves	5
PHYC 202	Electricity, Magnetism, and Heat	5
Total Units		47-48
Plus General Education Requirements		

ENGLISH

English

This major fulfills lower division requirements at most four-year colleges and universities and thus provides a broad-based foundation for transfer. For particular requirements, transfer students should consult the appropriate four-year college or university catalog. The English Department at Cuyamaca College provides students in the local community an opportunity to develop the skills a wide range of employers seek: strong communication, analytical reading, critical thinking, attention to detail, and the ability to work in diverse teams. The department encourages students to engage deeply with literature and nonfiction texts as well as other forms of cultural production, and to account for how those texts inform our ideologies, norms, and values.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate clearly and effectively in a variety of media and/or contexts.
2. Apply discipline-specific theories about language and communication to students' own practice or work.
3. Navigate norms related to communicating in diverse environments, including professional, intercultural, and/or specialized settings.
4. Develop and support an original argument or interpretation with analysis of relevant evidence.
5. Analyze how authors use language and/or texts to illuminate, critique, and/or shape reality.

CAREER OPPORTUNITIES

English majors have gone on to work in a variety of fields, including communications and publishing. In fact, English majors work in virtually every profession there is. Many English majors enter the following careers:

Advertising Manager

Editor

Freelance Writer

Interpreter & Translator

Lawyer

Librarian

News Reporter

Paralegal

Public Relations Manager

Public Relations Specialist

Teacher

Technical Writer

Writer & Author

Associate in Arts Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ENGL C1000	Academic Reading and Writing	3 4
ENGL 122 C1002	Introduction to Literature	3
ENGL C1001	Critical Thinking and Writing	3
ENGL 126	Creative Writing	3
ENGL 200	Cooperative Work Experience in English	<u>1-4</u>
		13-16 14-17

Select two of the following:

ENGL 221	British Literature I	3
ENGL 222	British Literature II	3
ENGL 231	American Literature I	3
ENGL 232	American Literature II	3
ENGL 271	World Literature II	<u>3</u>
		6

Select one of the following:

ENGL 130	Short Fiction Writing I	3
ENGL 140	Poetry Writing I	3
ENGL 201	Women, Gender, and Sexuality in Literature	3
ENGL 202	Introduction to Film as Literature	3
ENGL 217	Fantasy and Science Fiction	3
ENGL 236	Chicana/o Literature	3
ENGL 238	Black Literature	<u>3</u>
		3

Select one of the following:

ANTH 120	Cultural Anthropology	3
COMM 110	Introduction to Mass Communication	3
COMM 124	Intercultural Communication	3
COMM 145	Argumentation	3
HIST 100	Early World History	3
HIST 101	Modern World History	3
HUM 111	Culture, Art & Ideas of the United States	3
HUM 115	Arts and Culture in Local Context - San Diego	3
HUM 155	World Mythology through the Humanities	3
MUS 111	History of Jazz	3

(English Associate in Arts continued)		
MUS 123	History of Hip-Hop Culture	3
PHIL 110	A General Introduction to Philosophy	3
SOC 114/ETHN 114	Introduction to Race & Ethnicity	<u>3</u>
		3
	Total Units	25-28 <u>26-29</u>
	Plus General Education Requirements	

Recommended Electives: Students planning to transfer to four-year institutions to complete a bachelor's degree in English are STRONGLY urged to take the following courses, depending on the requirements at those schools: Two sequential semesters of a single foreign language (10 units).

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

English for Transfer (AA-T)

The English Department at Cuyamaca College provides students in the local community an opportunity to develop the skills a wide range of employers seek: strong communication, analytical reading, critical thinking, attention to detail, and the ability to work in diverse teams. The department encourages students to engage deeply with literature and nonfiction texts as well as other forms of cultural production, and to account for how those texts inform our ideologies, norms, and values.

The following is required for the AA-T in English for Transfer degree:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California State University General Education (CSU GE) Breadth pattern OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern; see Degree Requirements and Transfer Information section for more information. Note: If following IGETC, IGETC-CSU must be followed for admission to a CSU.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate clearly and effectively in a variety of media and/or contexts.
2. Apply discipline-specific theories about language and communication to students' own practice or work.
3. Navigate norms related to communicating in diverse environments, including professional, intercultural, and/or specialized settings.
4. Develop and support an original argument or interpretation with analysis of relevant evidence.
5. Analyze how authors use language and/or texts to illuminate, critique, and/or shape reality.

Associate in Arts Degree Requirements:

Core Curriculum:

Course	Title	Units
ENGL 122 C1002	Introduction to Literature	3
ENGL 124	Advanced Composition: Critical Reasoning and Writing	<u>3</u>
		6

List A:

Select two of the following:

ENGL 221	British Literature I	3
ENGL 222	British Literature II	3
ENGL 231	American Literature I	3
ENGL 232	American Literature II	3
ENGL 270	World Literature I	3
ENGL 271	World Literature II	<u>3</u>
		6

List B:

Select one of the following:

ENGL 126	Creative Writing	3
ENGL 201	Images of Women in Literature	3
ENGL 202	Introduction to Film as Literature	3
ENGL 214	Masterpieces of Drama	3
ENGL 217	Fantasy and Science Fiction	3
Any course from List A not selected above		<u>3</u>
		3

List C:

Select one of the following:

ENGL 236	Chicano/Chicana Literature	3
ENGL 238	Black Literature	3
ARBC 120	Arabic I	5
ARBC 121	Arabic II	5
ARBC 130	Arabic Literature and Culture	3
ARBC 220	Arabic III	5
ARBC 221	Arabic IV	5
SPAN 120	Spanish I	5
SPAN 121	Spanish II	5
SPAN 220	Spanish III	5
SPAN 221	Spanish IV	5
Any course from Lists A or B not selected above		<u>3</u>
		3-5

(English for Transfer continued)

Units in the Major (9 units may double counted with GE)	18-20
Total Units for CSU GE Breadth or IGETC-CSU	39-37
Total Transferable Elective Units	10--14
Total Units	60

Please note: SDSU accepts this degree for students transferring into English-Applied Arts and Sciences major.

ENGLISH SECOND LANGUAGE

ESL Pathway Behavioral and Social Sciences

The ESL Pathway Certificate program is designed to prepare English Language Learners (ELLs) for the academic rigor of degree-applicable coursework in the Behavioral and Social Sciences Academic and Career Pathway. Students completing these certificates have achieved academic English reading and writing skills at an advanced, post-secondary level; they have also achieved success in prerequisite or introductory coursework in a variety of degree, certificate, or general education patterns. These two elements combine to demonstrate significant achievement of a milestone along their pathways to degrees, certificates, or transfer. To earn a certificate, complete the required courses as listed with a grade of C or better.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate well-organized information, arguments and opinions through various modalities, including speaking and writing.
2. Analyze and evaluate academic texts to prepare for and complete academic writing.
3. Interact effectively with others in group work to complete academic tasks and work well in cross-cultural situations, taking into account others' diverse backgrounds, perspectives, and abilities.

Certificate of Achievement Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ESL 2	Accelerated Composition for English as a Second Language	6
ESL 122	College Rhetoric	6

Select three (3) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ANTH 120	Cultural Anthropology	3
CD 123	Principles and Practices of Programs and Curriculum for Young Children	3
ETHN 107 or HIST 107	History of Race & Ethnicity in the United States	3
POLS C1000	American Government and Politics	3
POSC 140	Introduction to California Governments and Politics	3
PSYC C1000	Introduction to Psychology	3
SW 110	Social Work Fields of Service	3
SOC 120 <u>SOCI C1000</u>	Introductory Sociology <u>Introduction to Sociology</u>	3

Select three (3-4) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
COMM 120 <u>C1004</u>	Interpersonal Communication	3
COMM C1000	Introduction to Public Speaking	3
PHIL 125	Critical Thinking and Philosophical Composition	3
MATH 120	Quantitative Reasoning	3
STAT C1000	Introduction to Statistics	4
Total Units		18-19

Certificate of Achievement

Students who complete the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ESL Pathway Business and Professional Studies

The ESL Pathway Certificate program is designed to prepare English Language Learners (ELLs) for the academic rigor of degree-applicable coursework in the Business and Professional Studies Academic and Career Pathway. Students completing these certificates have achieved academic English reading and writing skills at an advanced, post-secondary level; they have also achieved success in prerequisite or introductory coursework in a variety of degree, certificate, or general education patterns. These two elements combine to demonstrate significant achievement of a milestone along their pathways to degrees, certificates, or transfer. To earn a certificate, complete the required courses as listed with a grade of C or better.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate well-organized information, arguments and opinions through various modalities, including speaking and writing.
2. Analyze and evaluate academic texts to prepare for and complete academic writing.
3. Interact effectively with others in group work to complete academic tasks and work well in cross-cultural situations, taking into account others' diverse backgrounds, perspectives, and abilities.

Certificate of Achievement Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ESL 2	Accelerated Composition for English as a Second Language	6
ESL 122	College Rhetoric	6

Select three (3) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BUS 110	Introduction to Business	3
BUS 128	Business Communication	3
BOT 100	Basic Keyboarding	3
BOT 114	Essential Word	1
BOT 115	Essential Excel	1
BOT 117	Essential PowerPoint	1
BOT 132	Google Applications for Business	3
ECON 120 <u>C2002</u>	Principles of Macroeconomics	3
PARA 100	Introduction to Paralegal Studies	3
PARA 110	Civil Litigation Practices and Procedures	3
PARA 130	Legal research and Writing	3
PARA 132	Computer Assisted Legal Research	3
PARA 135	Bankruptcy Law	3
RE 190	Real Estate Principles	3
RE 191	Real Estate Practices	3

Select three (3-4) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
COMM 120 <u>C1004</u>	Interpersonal Communication	3
COMM C1000	Introduction to Public Speaking	3
PHIL 125	Critical Thinking and Philosophical Composition	3
MATH 120	Quantitative Reasoning	3
STAT C1000	Introduction to Statistics	4
Total Units		18-19

Certificate of Achievement

Students who complete the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ESL Pathway Culture, People, and Ideas

The ESL Pathway Certificate program is designed to prepare English Language Learners (ELLs) for the academic rigor of degree-applicable coursework in the Culture, People, and Ideas Academic and Career Pathway. Students completing these certificates have achieved academic English reading and writing skills at an advanced, post-secondary level; they have also achieved success in prerequisite or introductory coursework in a variety of degree, certificate, or general education patterns. These two elements combine to demonstrate significant achievement of a milestone along their pathways to degrees, certificates, or transfer. To earn a certificate, complete the required courses as listed with a grade of C or better.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate well-organized information, arguments and opinions through various modalities, including speaking and writing.
2. Analyze and evaluate academic texts to prepare for and complete academic writing.
3. Interact effectively with others in group work to complete academic tasks and work well in cross-cultural situations, taking into account others’ diverse backgrounds, perspectives, and abilities.

Certificate of Achievement Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ESL 2	Accelerated Composition for English as a Second Language	6
ESL 122	College Rhetoric	6

Select three (3) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ETHN 107	History of Race & Ethnicity in the United States	3
or HIST 107	History of Race & Ethnicity in the United States	3
HIST 108 <u>C1001</u>	Early American History <u>United States History to 1877</u>	3
HIST 118	Early American History <u>U.S. History: Chicano/Chicana Perspectives I</u>	3
KUMY 116	Kumeyaay Arts and Culture I	3
KUMY 117	Kumeyaay Arts and Culture II	3
PHIL 110	A General Introduction to Philosophy	3
HUM 110	Principles of Humanities	3

Select three (3-4) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
COMM 120 <u>C1004</u>	Interpersonal Communication	3
COMM C1000	Introduction to Public Speaking	3
PHIL 125	Critical Thinking and Philosophical Composition	3
MATH 120	Quantitative Reasoning	3
STAT C1000	Introduction to Statistics	4
Total Units		18-19

Certificate of Achievement

Students who complete the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ESL Pathway Environmental and Applied Technology

The ESL Pathway Certificate program is designed to prepare English Language Learners (ELLs) for the academic rigor of degree-applicable coursework in the Environmental and Applied Technology Academic and Career Pathway. Students completing these certificates have achieved academic English reading and writing skills at an advanced, post-secondary level; they have also achieved success in prerequisite or introductory coursework in a variety of degree, certificate, or general education patterns. These two elements combine to demonstrate significant achievement of a milestone along their pathways to degrees, certificates, or transfer. To earn a certificate, complete the required courses as listed with a grade of C or better.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate well-organized information, arguments and opinions through various modalities, including speaking and writing.
2. Analyze and evaluate academic texts to prepare for and complete academic writing.
3. Interact effectively with others in group work to complete academic tasks and work well in cross-cultural situations, taking into account others' diverse backgrounds, perspectives, and abilities.

Certificate of Achievement Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ESL 2	Accelerated Composition for English as a Second Language ¹	6
ESL 122	College Rhetoric	6

Select three (3-4) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
AUTO 099	Introduction to Automotive Technology	3
AUTO 100L	Introduction to Automotive Technology Laboratory ¹	1
CADD 115	Engineering Graphics	3
CADD 120 <u>119</u>	Introduction to Computer-Aided Drafting and Design	3
CWS 101	Fundamentals of Water & Wastewater	3
CWS 102	Calculations in Water & Wastewater	3
CIS 120	Computer Maintenance and A+ Certification	3
CS 165	Assembly Language and Machine Architecture	4
CS 182	Introduction to Java Programming	4
ENGR 100	Introduction to Engineering and Design	4
EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
OH 120	Fundamentals of Ornamental Horticulture	3

¹Required laboratory for AUTO 099

Select three (3-4) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
COMM 120 <u>C1004</u>	Interpersonal Communication	3
COMM C1000	Introduction to Public Speaking	3
PHIL 125	Critical Thinking and Philosophical Composition	3
MATH 120	Quantitative Reasoning	3
STAT C1000	Introduction to Statistics	4
Total Units		18-20

Certificate of Achievement

Students who complete the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ESL Pathway Health Sciences

The ESL Pathway Certificate program is designed to prepare English Language Learners (ELLs) for the academic rigor of degree-applicable coursework in the Health Science Academic and Career Pathway. Students completing these certificates have achieved academic English reading and writing skills at an advanced, post-secondary level; they have also achieved success in prerequisite or introductory coursework in a variety of degree, certificate, or general education patterns. These two elements combine to demonstrate significant achievement of a milestone along their pathways to degrees, certificates, or transfer. To earn a certificate, complete the required courses as listed with a grade of C or better.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate well-organized information, arguments and opinions through various modalities, including speaking and writing.
2. Analyze and evaluate academic texts to prepare for and complete academic writing.
3. Interact effectively with others in group work to complete academic tasks and work well in cross-cultural situations, taking into account others' diverse backgrounds, perspectives, and abilities.

Certificate of Achievement Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ESL 2	Accelerated Composition for English as a Second Language	6
ESL 122	College Rhetoric	6

Select three to four (3-4) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BIO 130	General Biology I	3
BIO 131	General Biology 1 Laboratory[‡]	1
<u>BIOL C1000</u>	<u>Introduction to Biology with Lab</u>	<u>4</u>
BIO 140	Human Anatomy	4
ES 250	Introduction to Kinesiology	3
HED 120	Personal Health and Lifestyles	3

[‡]Required lab for BIO 130

Select three (3-4) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
COMM 120 <u>C1004</u>	Interpersonal Communication	3
COMM C1000	Introduction to Public Speaking	3
PHIL 125	Critical Thinking and Philosophical Composition	3
MATH 120	Quantitative Reasoning	3
STAT C1000	Introduction to Statistics	4

Total Units	18-20
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Certificate of Achievement

Students who complete the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ESL Pathway Language and Communication

The ESL Pathway Certificate program is designed to prepare English Language Learners (ELLs) for the academic rigor of degree-applicable coursework in the Language and Communication Academic and Career Pathway. Students completing these certificates have achieved academic English reading and writing skills at an advanced, post-secondary level; they have also achieved success in prerequisite or introductory coursework in a variety of degree, certificate, or general education patterns. These two elements combine to demonstrate significant achievement of a milestone along their pathways to degrees, certificates, or transfer. To earn a certificate, complete the required courses as listed with a grade of C or better.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate well-organized information, arguments and opinions through various modalities, including speaking and writing.
2. Analyze and evaluate academic texts to prepare for and complete academic writing.
3. Interact effectively with others in group work to complete academic tasks and work well in cross-cultural situations, taking into account others' diverse backgrounds, perspectives, and abilities.

Certificate of Achievement Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ESL 2	Accelerated Composition for English as a Second Language	6
ESL 122	College Rhetoric	6

Select three (3-5) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ASL 120	American Sign Language I	4
ARBC 120	Arabic I	5
COMM 120 C1004	Interpersonal Communication ¹	3
COMM C1000	Introduction to Public Speaking ¹	3
ENGL 122 C1002	Introduction to Literature	3
SPAN 120	Spanish I	5
SPAN 121	Spanish II	5

Select three (3-4) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
COMM 120 C1004	Interpersonal Communication ¹	3
COMM C1000	Introduction to Public Speaking ¹	3
PHIL 125	Critical Thinking and Philosophical Composition	3
MATH 120	Quantitative Reasoning	3
STAT C1000	Introduction to Statistics	4

Total Units 18-21

¹ COMM-~~120~~ C1004 and COMM-C1000 can only be taken once for program credit.

Certificate of Achievement

Students who complete the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ESL Pathway STEM

The ESL Pathway Certificate program is designed to prepare English Language Learners (ELLs) for the academic rigor of degree-applicable coursework in the STEM Academic and Career Pathway. Students completing these certificates have achieved academic English reading and writing skills at an advanced, post-secondary level; they have also achieved success in prerequisite or introductory coursework in a variety of degree, certificate, or general education patterns. These two elements combine to demonstrate significant achievement of a milestone along their pathways to degrees, certificates, or transfer. To earn a certificate, complete the required courses as listed with a grade of C or better.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate well-organized information, arguments and opinions through various modalities, including speaking and writing.
2. Analyze and evaluate academic texts to prepare for and complete academic writing.
3. Interact effectively with others in group work to complete academic tasks and work well in cross-cultural situations, taking into account others' diverse backgrounds, perspectives, and abilities.

Certificate of Achievement Requirements:

Course	Title	Units
ESL 2	Accelerated Composition for English as a Second Language	6
ESL 122	College Rhetoric	6

Select three (4-5) units from the following:

Course	Title	Units
ASTR 110 <u>C1001</u>	Descriptive Astronomy <u>Introduction to Astronomy</u>	3
ASTR 112 <u>C1001L</u>	General Astronomy Laboratory <u>Introduction to Astronomy Lab</u> ¹	1
BIO 130	General Biology I	3
BIO 131	General Biology I Laboratory ²	1
<u>BIOL C1000</u>	<u>Introduction to Biology with Lab</u>	<u>4</u>
BIO 230	Principles of Cellular, Molecular and Evolutionary Biology	4
BIO 240	Principles of Ecology, Evolution and Organizational Biology	5
CHEM 120	Preparation for General Chemistry	4
MATH 180 <u>C2210</u>	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
PHYC 130	Fundamentals of Physics	4
PHYC 201	Mechanics and Waves	5

¹ Required laboratory for ASTR ~~110~~ C1001

² Required laboratory for ~~BIO 130~~

Select three (3-4) units from the following:

Course	Title	Units
COMM 120 <u>C1004</u>	Interpersonal Communication	3
COMM C1000	Introduction to Public Speaking	3
PHIL 125	Critical Thinking and Philosophical Composition	3
MATH 120	Quantitative Reasoning	3
STAT C1000	Introduction to Statistics	4
	Total Units	19-21

Certificate of Achievement

Students who complete the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ESL Pathway Visual and Performing Arts

The ESL Pathway Certificate program is designed to prepare English Language Learners (ELLs) for the academic rigor of degree-applicable coursework in the Visual and Performing Arts Academic and Career Pathway. Students completing these certificates have achieved academic English reading and writing skills at an advanced, post-secondary level; they have also achieved success in prerequisite or introductory coursework in a variety of degree, certificate, or general education patterns. These two elements combine to demonstrate significant achievement of a milestone along their pathways to degrees, certificates, or transfer. To earn a certificate, complete the required courses as listed with a grade of C or better.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate well-organized information, arguments and opinions through various modalities, including speaking and writing.
2. Analyze and evaluate academic texts to prepare for and complete academic writing.
3. Interact effectively with others in group work to complete academic tasks and work well in cross-cultural situations, taking into account others' diverse backgrounds, perspectives, and abilities.

Certificate of Achievement Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ESL 2	Accelerated Composition for English as a Second Language	6
ESL 122	College Rhetoric	6

Select three (3) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ART 120	Two-Dimensional Design	3
ART 124	Drawing I	3
GD 105	Fundamentals of Digital Media	3
MUS 110	Great Music Listening	3
THTR 110	Introduction to Theatre	3

Select three (3-4) units from the following:

<i>Course</i>	<i>Title</i>	<i>Units</i>
COMM 120 <u>C1004</u>	Interpersonal Communication	3
COMM C1000	Introduction to Public Speaking	3
PHIL 125	Critical Thinking and Philosophical Composition	3
MATH 120	Quantitative Reasoning	3
STAT C1000	Introduction to Statistics	4
	Total Units	18-19

Certificate of Achievement

Students who complete the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT

Environmental Management

California leads the United States in environmental protection and sustainability efforts, creating a demand for environmental technicians and specialists in every region and most industries. Whether serving entry-level students or refining the skills of existing EHS professionals, students in the EHSM department will receive innovative hands-on training, in-depth regulatory comprehension, and work experience in air, water, hazardous waste, solid waste, and pollution prevention topics. The program prepares students in a broad understanding of environmental topics currently affecting the local, state, federal, and global populations while including culturally sensitive management techniques. Graduates earning an associate degree in Environmental Management may work as a technician or specialist serving hazardous waste, solid waste, environmental health and safety, environmental sciences, sustainability, water pollution, and air pollution industries.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Perform work-related functions according to current industry standards.
2. Assess and resolve work-related problems using current industry-specific tools and resources.
3. Communicate effectively to prospective clients, managers and coworkers in a workplace setting.
4. Abide by industry regulations regarding occupational health and safety, and/or environmental standards.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 110	Pollution Prevention	3
EHSM 150	Hazardous Waste Management Applications	4
EHSM 200	Hazardous Materials Management (HMM) Applications	4
EHSM 210	Industrial Wastewater and Stormwater Management	4
EHSM 215	Air Quality Management	3
EHSM 230	Hazwoper Certification	<u>3</u>
		25

List A: select one of the following:

EHSM 240	Cooperative Work Experience	1-4
EHSM 250	EHS Field Applications	<u>3</u>
		1-4

List B: select either

BIO 130	General Biology I	3
and		
BIO 131	General Biology I Laboratory	1
<u>BIO C1000</u>	<u>Introduction to Biology with Lab</u>	<u>4</u>
or BIO 240	Principles of Ecology, Evolution and Organismal Biology	<u>5</u>
		4-5

List C: select one of the following:

CHEM 120	Preparation for General Chemistry	4
CHEM 141	General Chemistry	<u>5</u>
		4-5

List D: select one of the following:

CIS 110	Principles of Information Systems	4
COMM C1000	Introduction to Public Speaking	3
COMM 124	Intercultural Communication	3
SPAN 120	Spanish I	<u>5</u>
		3-5
	Total Units	37-44
	Plus General Education Requirements	

Occupational Safety and Health (OSH) Management

Since the beginning of the industrial revolution, there has been a steady increase in workplace injuries, illnesses, and death. California has the second-highest demand for Occupational Safety and Health technicians in the United States. OSH Technicians inspect workplaces, evaluate hazards, train employees, implement personal protective equipment programs, and help employers comply with safety regulations from local, state, and federal regulatory agencies. The EHSM program has developed a broad range of classes to ensure students have experience and in-depth understanding of safety inspections, air, noise, ventilation, radiological and biological testing, ergonomic services, and providing workplace illness and injury programs. We offer specialty courses in construction and laboratory safety. Students completing the associate degree in OSH management will obtain jobs as an Occupational Safety and Health Technician or Specialist, Environmental Safety and Health Technician or Specialist, Safety Technician or Specialist, Industrial Hygiene Technician or Specialist, and Risk Manager.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Perform work-related functions according to current industry standards.
2. Assess and resolve work-related problems using current industry-specific tools and resources.
3. Communicate effectively to prospective clients, managers and coworkers in a workplace setting.
4. Abide by industry regulations regarding occupational health and safety, and/or environmental standards.

Associate in Science Degree Requirements:

Course	Title	Units
EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 130	Environmental/Occupational Health Effects of Hazardous Materials	3
EHSM 135	General Industry Safety Standards	3
EHSM 200	Hazardous Materials Management (HMM) Applications	4
EHSM 201	Introduction to Industrial Hygiene and Occupational Health	4
EHSM 205	Safety and Risk Management Administration	4
EHSM 230	Hazwoper Certification	<u>3</u>
		25

List A: select one of the following:

EHSM 140	Laboratory Safety Management	4
EHSM 145	Construction Safety Standards	<u>3</u>
		3-4

List B: select one of the following:

EHSM 240	Cooperative Work Experience	1-4
EHSM 250	EHS Field Applications	<u>3</u>
		1-4

List C: select either:

BIO 130	General Biology I	3
and		
BIO 131	General Biology I Laboratory	1
<u>BIO C1000</u>	<u>Introduction to Biology with Lab</u>	<u>4</u>
<u>or BIO 240</u>	<u>Principles of Ecology, Evolution and Organismal Biology</u>	<u>5</u>
		4-5

List D: select one of the following:

CHEM 120	Preparation for General Chemistry	4
CHEM 141	General Chemistry I	<u>5</u>
		4-5

List E: select one of the following:

CIS 110	Principles of Information Systems	4
COMM C1000	Introduction to Public Speaking	3
COMM 124	Intercultural Communication	3
SPAN 120	Spanish I	<u>5</u>
		3-5
	Total Units	40-48
	Plus General Education Requirements	

EXERCISE SCIENCE

Kinesiology for Transfer (AA-T)

The Associate in Arts in Kinesiology for Transfer Degree is designed to prepare students for transfer to a California State University (CSU) by fulfilling lower-division requirements for the disciplines of Kinesiology, Exercise science and Physical Education. This major provides preparation for careers in physical therapy, coaching, personal training, and other allied health professions by including classes oriented toward fitness, wellness, and health promotion throughout the lifespan.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Apply core concepts of kinesiology and exercise science including biomechanics, anatomy, physiology, and motor learning, to analyze human movement and physical activity.
2. Demonstrate and evaluate movement competence in physical activity, fitness and sport, using scientific reasoning and discipline-appropriate evidence.
3. Analyze the physiological, psychological, and sociocultural dimensions of physical activity and sport across diverse populations.
4. Communicate kinesiology-related analysis using discipline-appropriate methods and evidence, including interpreting data and evaluating research findings.
5. Identify and discuss an upper-division kinesiology-related pathway, including necessary coursework and transfer requirements to support academic and/or career goals.

Associate in Arts Degree Requirements:

Course	Title	Units
BIO-140	Human Anatomy	4
BIO-141	Human Physiology	3
BIO-141L	Laboratory in Human Physiology	1
ES-250	Introduction to Kinesiology	3

Movement Based Courses

Select one course from three different areas for a minimum of three units:

3-4

Combatives

ES-180 Self Defense for Women

Fitness

ES-009A Beginning Aerobic Dance Exercise
ES-009B Intermediate Aerobic Dance Exercise
ES-014A Beginning Body Building
ES-014B Intermediate Body Building
ES-019A Beginning Physical Fitness
ES-019B Intermediate Physical Fitness
ES-024A Beginning Fitness Boot Camp
ES-024B Intermediate Fitness Boot Camp
ES-028A Beginning Yoga
ES-028B Intermediate Yoga

Individual Sports

ES-060A Beginning Badminton
ES-060B Intermediate Badminton
ES-076A Beginning Tennis
ES-076B Intermediate Tennis
ES-125A Beginning Golf
ES-125B Intermediate Golf

Team Sports

ES-155A Beginning Basketball
ES-155B Intermediate Basketball
ES-170A Beginning Soccer
ES-170B Intermediate Soccer
~~ES-175A Beginning Volleyball~~
~~ES-175B Intermediate Volleyball~~

List A

CHEM-102 Introduction to General, Organic and Biological Chemistry 5
or CHEM-141 General Chemistry I
STAT-C1000 Introduction to Statistics 4

(Kinesiology for Transfer continued)
or PSY-215

Statistics for the Behavioral Sciences

3-5

Total Units
Plus General Education Requirements

40-48

Recreational Leadership – School-Based Programs

This certificate offers specific training for entry-level positions or for advancement in child care and outdoor programs for children and families. It is designed to demonstrate an area of expertise that may be used to attain employment in areas of school-based recreation and fitness programs.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Describe and or demonstrate an hour of cooperative activity for children.
2. Describe how principles learned in class may be applied to improve cardiovascular endurance, muscle strength, muscle endurance, and flexibility and body composition, (the five basic components of fitness) in children using walking as a primary conditioning activity.
3. Investigate and list causes and risk factor associated with childhood obesity.
4. Describe and prepare appropriate snacks for children.
5. Demonstrate appropriate classroom organizational and management techniques.
6. Demonstrate the ability to plan school-based recreational programs which deliberately intend to advance, stimulate or otherwise enhance children’s physical, emotional and social development in ways which are appropriate to their developmental level.
7. Describe tested and proven teaching approaches to analyze and enhance movement competencies.

Career Opportunities

Students may find positions in an elementary or middle school, YMCA, recreation center, day or residential camp, or after school day care program. This is a great “stepping-stone” training for those who want to major in exercise science, recreation, elementary education or child development. Provides students with the expertise to enter the entrylevel job market with knowledge of sound principles of fitness and developmentally appropriate recreation.

Students who complete the requirements below and hold a current First Aid/CPR certification qualify for a Certificate in Recreational Leadership– School-Based Programs. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Certificate Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CD 125 <u>CDEV C1000</u>	Child Growth and Development	3
CD 134	Health, Safety and Nutrition of Young Children	3
ES 253	Physical Education in Elementary Schools	3
ES 270	Cooperative Games	1
ES 271	Fitness Walking with Children	1
ES 272	Issues in Childhood Obesity	1
	Total Units	12 <u>11</u>

GENERAL STUDIES

General Studies: Communication and Language Arts

The Associate Degree in General Studies with an Area of Emphasis provides an opportunity for students to design a program of study meaningful and appropriate to their own needs and academic interests. The degree includes general education and a focused area of study. Students may choose to earn this degree for preparation for employment or for personal development.

REQUIREMENTS

To meet the General Studies degree requirements, a student must complete the following:

- I. **AS or AA General Education Requirements** (see Degree Requirements and Transfer Information section)
AND
- II. Choose a minimum of 18 units
Students must complete a minimum of three units in Communication and three units in Language Arts. The remaining twelve units may be taken from either category.

The Associate in Arts in General Studies with an Emphasis in Communication and Language Arts will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses emphasize the study of how language works to express human ideas and feelings. Students will explore and analyze written and verbal communication methods, as well as develop and advance their oral and written communication skills.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Organize thoughts and ideas in both oral and written format.
2. Communicate effectively with diverse audiences in a variety of media and/or contexts.
3. Navigate norms related to communicating in diverse environments, including professional, intercultural, and/or specialized settings.

Communication

BUS 128

COMM C1000, C1004, 110, ~~120~~, 123, 124, 137, 145

Language Arts ARAM 120, 121, 220

ARBC 120, 121, 122, 123, 220, 221, 250, 251, 254, 256

ASL 120, 121, 220, 221

BUS 128

ENGL C1001, ~~122~~C1002, 126, 130, 131, 132, 133, 140, 141, 142, 143, 201, 202, 217, 221, 222, 231, 232, 236, 238, 271

ETHN 236, 238

KUMY 120, 121, 220

SPAN 120, 121, 220, 221, 250, 251

General Studies: Humanities and Fine Arts

The Associate Degree in General Studies with an Area of Emphasis provides an opportunity for students to design a program of study meaningful and appropriate to their own needs and academic interests. The degree includes general education and a focused area of study. Students may choose to earn this degree for preparation for employment or for personal development.

REQUIREMENTS

To meet the General Studies degree requirements, a student must complete the following:

- I. **AS or AA General Education Requirements** (see Degree Requirements and Transfer Information section)
AND
- II. Choose a minimum of 18 units
Students must complete a minimum of three units in Humanities and three units in Fine Arts. The remaining twelve units may be taken from either category.

The Associate in Arts in General Studies with an Emphasis in Humanities and Fine Arts will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses emphasize the study of cultural, humanistic activities and artistic expression of human beings. Students will evaluate and interpret the ways in which people through the ages in different cultures have responded to themselves and the world around them through artistic and cultural creation. Students will develop an aesthetic awareness and incorporate these concepts when constructing value judgments.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Analyze the principle elements of representative examples of art, architecture, literature, theater, philosophy, music, dance, film, or other relevant areas of cultural and/or intellectual creativity.
2. Employ the language, concepts and methods of interpretive criticism as applicable to the respective categories of human creativity.
3. When applicable, apply artistic processes and skills as a creative expression, using a variety of media to communicate meaning and intent in original works of art.
4. Analyze how power and privilege operate in society, through categories of race, class, gender, ethnicity, and sexuality.

Humanities

ARAM 120, 121, 220
ARBC 120, 121, 122, 123, 130, 145, 220, 221, 250, 251, 254, 256
ART ~~140, 141~~, 142, 143, 145, 146, 151
ARTH C1100, C1200
ASL 120, 121, 140, 220, 221
ENGL C1002, 122, 201, 202, 217, 221, 222, 231, 232, 236, 238, 270, 271
ETHN 236, 238
HIST 100, 101, 105, 106, 114, 115, 157
HUM 110, 111, 115, 116, 117, 118, 140, 155
KUMY 116, 117, 118, 120, 121, 220
PHIL 110, 115, 117, 140, 141
RELG 120, 135, 170, 175
SPAN 120, 121, 141, 145, 220, 221, 250, 251

Fine Arts

ART 100, 104, 119, 120, 121, 124, 125, 129, 135, ~~140, 141~~, 142, 143, 145, 146, 151, 184, 210, 211, 220, 221, 222, 224, 225, 230, 231, 232, 233, 235, 236, 240, 241, 242, 243, ARTH C1100, C1200
MUS 110, 111, 115, 116, 117, 123
THTR 110

General Studies: Lifelong Health, Well-Being, and Self-Development

The Associate Degree in General Studies with an Area of Emphasis provides an opportunity for students to design a program of study meaningful and appropriate to their own needs and academic interests. The degree includes general education and a focused area of study. Students may choose to earn this degree for preparation for employment or for personal development.

REQUIREMENTS

To meet the General Studies degree requirements, a student must complete the following:

I. AS or AA General Education Requirements (see Degree Requirements and Transfer Information section)

AND

II. Choose a minimum of 18 units

Students must complete a minimum of three units in Health, three units in Exercise Science, three units in Nutrition, and three units in Self-Development. The remaining six units may be taken from any category. A maximum of one course may be earned from any combination of ES-206 Intercollegiate Basketball, ES-209 Intercollegiate Cross-Country, ES-213 Intercollegiate Golf, ES-218 Intercollegiate Soccer, ES-224 Intercollegiate Tennis, ES-227 Intercollegiate Track, ES-230 Intercollegiate Volleyball and ES-249 Competencies for Intercollegiate Athletes.

The Associate in Arts in General Studies with an Emphasis in Lifelong Health, Well-Being and Self-Development will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses focus on the improvement of health and well-being and are designed to provide knowledge and tools of how to obtain optimal physical, psychological and emotional health and well-being throughout the lifespan. Potential entry-level positions of employment that students will be prepared for upon completion include those in recreation, education, and health fields.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Illustrate examples of optimal health and fitness in daily life through informed decision-making.
2. Describe basic principles of nutrition.
3. Explain the importance of physical activity through the lifespan.

Health

HED 105, 120, 201, 202, 203, 204, 251

Exercise Science

ES 206, 209, 213, 218, 224, 227, 230, 248, 249, 250, 253, 255, ~~270~~, 271, 272

Nutrition

NUTR 155, 158, 255

Self-Development

COUN 110, 120, 125, 130, 135, 140, 150

General Studies: Science and Mathematics

The Associate Degree in General Studies with an Area of Emphasis provides an opportunity for students to design a program of study meaningful and appropriate to their own needs and academic interests. The degree includes general education and a focused area of study. Students may choose to earn this degree for preparation for employment or for personal development.

REQUIREMENTS

To meet the General Studies degree requirements, a student must complete the following:

- I. **AS or AA General Education Requirements** (see Degree Requirements and Transfer Information section)
and
- II. Choose a minimum of 18 units
Students must complete a minimum of three units in Science and three units in Mathematics (limitation of one statistics course). The remaining twelve units may be taken from any category.

The Associate in Science in General Studies with an Emphasis in Science and Mathematics will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses emphasize the study of mathematical and quantitative reasoning skills and apply the facts and principles that form the foundations of living and non-living systems. Students will recognize and utilize the methodologies of science as investigative tools, as well as the limitations of science. Students will use mathematical skills to solve numerical problems encountered in daily life, and more advanced skills for applications in the physical and life sciences.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Solve problems using fundamentals of mathematics, engineering, natural and/or computer science.
2. Utilize mathematical skills to analyze data and/or solve problems.
3. Analyze basic concepts of physical and biological science to evaluate scientific information and solve scientific problems.
4. Draw scientific conclusions about simple and complex systems by collecting, assessing, and analyzing information.

Science

ANTH ~~130~~ C1001

ASTR ~~110, 112~~ C1001, C1001L

BIO 112, 122, ~~130, 131~~, 133, 134, 135, 140, 141, 141L, 152, 230, 240, 251

BIOL C1000, C1001

CHEM 102, 120, 141, 142, 231, 232

ET 110

GEOG 120, 121

GEOL 104, ~~105~~, 110, 111

KUMY 133, 134, 135

OCEA 112, 113

PHYC 110, 130, 131, 201, 202, 203

Mathematics

MATH 170, 175, 176, 178, ~~180~~ C2210, 245, ~~280~~ C2220, 281, 284, 285

PSY 215

STAT C1000

CADD and Engineering

CADD 115, ~~120~~ 119, 125, 129, 131

ENGR 100, 119, 120, 125, 129, 200, 210, 218, 220, 270

Computer Science

CS 119, 119L, 165, 181, 182, 240, 281, 282

General Studies: Social and Behavioral Sciences

The Associate Degree in General Studies with an Area of Emphasis provides an opportunity for students to design a program of study meaningful and appropriate to their own needs and academic interests. The degree includes general education and a focused area of study. Students may choose to earn this degree for preparation for employment or for personal development.

REQUIREMENTS

To meet the General Studies degree requirements, a student must complete the following:

- I. **AS or AA General Education Requirements** (see Degree Requirements and Transfer Information section)
and
- II. **Choose a minimum of 18 units**
Students must complete a minimum of three units in Social Science and three units in Behavioral Science. The remaining twelve units may be taken from either category.

The Associate in Arts in General Studies with an Emphasis in Social and Behavioral Sciences will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses emphasize the study and understanding of human behavior. Students will evaluate and interpret human societies; the institutions, organizations and groups that form them; the ways in which individuals and groups relate to one another; and various approaches and methodologies of the disciplines.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Describe general principles of the political institutions and government of the United States.
2. Analyze the role of social, political, and economic institutions within a historical perspective.
3. Evaluate the ways people act and interact in cultures, societies and social subgroups.
4. Assess how social issues are influenced by geographical and historical processes.
5. Apply knowledge of social and behavioral sciences theories and scientific methods in an assessment of real-world problems.

Social Science

ANTH 120, 140, ~~150, 160~~

ARBC 145

BIO 134

CD 145

COUN 120, 140

ECON ~~C2001, C2002~~, 110, ~~120, 121~~

ETHN 107, 114, 120, 128, 130, 131, 145, 162

GEND 116, 117

GEOG 106, 122, 130

HIST 100, 101, 105, 106, 107, ~~108, 109~~ 118, 119, 122, 123, 124, 128, 129, 130, 131, 148, 180, 181, 275, 276, 277, C1001, C1002

KUMY 128, 129, 150, 166, 160, 170

POLS C1000

POSC 120, 124, 130, 140, 145, 147, 148, 150, 165, 166, 170

SOC 114, ~~120~~, 125, 130, 138, 140, 150

SOCI C1000

SPAN 145

SW 170

Behavioral Science

CD 115, ~~125~~, 131

CDEV C1000

COMM 110, 124

ES 121

HED 120, 201, 203, 204, 251

GEND 119

NUTR 158

PSY 119, 121, 125, 132, 134, 138, 140, 150, 170, 201, 211, 220

PSYC C1000

HEALTH EDUCATION

Public Health for Transfer (AS-T)

The Associate in Science in Public Health for Transfer provides a broad exposure to the field of public health and related disciplines. Upon completion of this degree, students will be able to recognize effective strategies aimed at reducing threats to the health of our communities and the public at large. The program lays the foundation for student preparation in development, implementation, and evaluation of public health services in various settings and with diverse populations.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework;
3. Minimum of 18 semester or 27 quarter units in the major or area of emphasis.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Outline strategies for prevention, detection and control of infectious and chronic disease.
2. Describe the organization, financing and delivery of various medical and population-based services in the United States health care system.
3. Explain the role of Public Health in addressing the following issues: disparities among different populations, aging, injuries, obesity, control of emerging diseases and epidemics, and emergency preparedness.
4. Analyze reliable public data sources to find statistical and epidemiologic data on incidence, prevalence, and trends in drug, tobacco and alcohol use.
5. Review recent public health literature detailing ways that race, socioeconomic status and gender become embodied in disparate health outcomes.
6. Analyze the contribution of environmental conditions to disparate health outcomes, using case studies.

Career Opportunities

Career opportunities in Public Health are varied, but consist primarily of administration¹, teaching¹, research¹, program planning¹, health promotion¹, outreach, and administrative assistance duties in the following contexts:

Government agencies

Private Volunteer agencies

Hospitals

Clinics

International Relief programs

Environmental Health programs

Occupational Health programs

¹Bachelor degree or higher recommended.

Associate in Science for Transfer Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
Core Curriculum Requirements		
BIO 130	General Biology I	3
BIO 131	General Biology I Lab I	1
BIO C1000	Introduction to Biology with Lab	4
HED 120	Personal Health and Lifestyles	3
HED 201	Introduction to Public Health	3
STAT C1000	Introduction to Statistics	4
		14
List A		
Select one of the following (4-5 units):		
BIO 140	Human Anatomy	4
BIO 141	Human Physiology	3
and BIO 141L	Lab in Human Physiology	1
BIO 152	Paramedical Microbiology	5
List B		
Select one of the following		
HED 204	Health and Social Justice	3
List C		
Select one of the following		
HED 202	Health Professions and Organizations	3

(Public Health for Transfer continued)

HED 203	Substance Abuse and Public Health	3
PSY 134	Human Sexuality	3
	Units in the Major	24-25
	10-13 total units that may be double-counted	
	Plus General Education Requirements (Cal-GETC)	34
	Total Transferable Elective Units	11-15
	Total Units	60

HISTORY

History

This degree program is useful for students preparing for careers in education teaching, the law and legal field, journalism, government service, political science, museums and archives, consulting, and research. The history program offers a diverse transfer curriculum and is committed to equity-minded teaching in an atmosphere of academic excellence. History course offerings focus on global cultures, historically-underrepresented groups in the United States, and the development of American Institutions. History courses help students develop and refine research, writing, and interpretive skills that are essential in navigating both society and their careers. History faculty create a vibrant intellectual campus culture and promote civic engagement through a variety of panels, presentations, and field trips.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Interpret and evaluate evidence by analyzing biases, patterns, trends, and relationships.
2. Evaluate and apply subject matter to students' lived experiences and current events.
3. Analyze how power and privilege operate in society, through the categories of race, class, gender, ethnicity, and sexuality.
4. Develop and support arguments with evidence, including academic and organic (i.e. cultural, traditional, and experiential).
5. Research and explore career options and/or obtain experience in a career field.

CAREER OPPORTUNITIES

Anthropologist¹
 Archaeologist¹
 Archivist¹
 Attorney
 Editor¹
 Education Administrator¹
 History Professor/Historian¹
 Judicial Law Clerk¹
 Law Professor¹
 Legislative Assistant¹
 Legal Arbitrator, Mediator, and Conciliator¹
 Museum Curator¹
 Political Science Professor¹
 Politician
 Research Historian¹
 Reporter, Correspondent¹
 Secondary School (K-12) Teacher¹
 Social Worker¹
 Writer, Author, Editor¹

¹Bachelor Degree (B.A.) or higher required

Associate in Arts Degree Requirements:

Select twelve units from any two of the following sequences:

Course	Title	Units
HIST 100 & HIST 101	Early World History Modern World History	6
HIST 105 & HIST 106	Early Western Civilization Modern Western Civilization	6
HIST 108 <u>C1001</u> & HIST 109 <u>C1002</u>	Early American History <u>United States History to 1877</u> Modern American History <u>United States History Since 1865</u>	<u>6</u> 12

List A: Select one of the following:

HIST 107/ETHN 107	History of Race & Ethnicity in the United States	3
HIST 118	U.S. History: Chicano/Chicana Perspectives I	3
HIST 119	U.S. History: Chicano/Chicana Perspectives II	3
HIST 128/KUMY 128	Kumeyaay History I: Precontact - 1845	3
HIST 129/KUMY 129	Kumeyaay History II: 1846- Present	3
HIST 130/ETHN 130	U.S. History and Cultures: Native American Perspectives I	3
HIST 131/ETHN 131	U.S. History and Cultures: Native American Perspectives II	3
HIST 180	U.S. History: Black Perspectives I	3
HIST 181	U.S. History: Black Perspectives II	<u>3</u>

(History Associate in Arts continued)		3
List B: Select one of the following:		
HIST 114	Comparative History of the Early Americas	3
HIST 115	Comparative History of the Modern Americas	3
HIST 122	Women in Early American History	3
HIST 123	Women in Modern American History	3
HIST 124	History of California	3
HIST 148	The Modern Middle East	3
HUM 111	Culture, Art, & Ideas of the United States	3
HUM 115	Arts and Culture in Local Context-San Diego	3
KUMY 116/HUM 116	Kumeyaay Arts and Culture I	3
POSC 140	Introduction to California Government and Politics	3
KUMY 166/POSC 166	Introduction to Native American Politics and Policy	3
POSC 140	Introduction to California Governments and Politics	3
Any course from List A not selected		<u>3</u>
		6
	Total Units	18
	Plus General Education Requirements	

History for Transfer (AA-T)

This degree program is useful for students preparing for careers in teaching, the law, government service, and research. The history program offers a diverse transfer curriculum and is committed to equity-minded teaching in an atmosphere of academic excellence. History course offerings focus on global cultures, historically-underrepresented groups in the United States, and the development of American Institutions. History courses also emphasize research, writing, and interpretive skills that are essential to the college's General Education mission. History faculty create a vibrant intellectual campus culture and promote civic engagement through a variety of panels, presentations, and field trips.

The following is required for the AA-T in History for Transfer degree:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California State University General Education (CSU GE) Breadth pattern OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern; see Degree Requirements and Transfer Information section for more information. Note: If following IGETC, IGETC-CSU must be followed for admission to a CSU.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Interpret and evaluate evidence by analyzing biases, patterns, trends, and relationships.
- Evaluate and apply subject matter to students' lived experiences and current events.
- Analyze how power and privilege operate in society, through the categories of race, class, gender, ethnicity, and sexuality.
- Develop and support arguments with evidence, including academic and organic (i.e. cultural, traditional, and experiential).
- Research and explore career options and/or obtain experience in a career field.

Associate in Arts Degree Requirements

Core Curriculum:

Course	Title	Units
HIST 108	Early American History United States History to 1877	3
HIST 109	Modern American History United States History Since 1865	3
		<u>6</u>

List A: Select six units:

HIST 100	Early World History	3
or HIST 105	Early Western Civilization	3
HIST 101	Modern World History	3
or HIST 106	Modern Western Civilization	3
		<u>6</u>

List B: Select one course from each group:

Group 1: Select one of the following courses:

HIST/ETHN 107	History of Race & Ethnicity in the United States	3
HIST 118	U.S. History: Chicano/Chicana Perspectives I	3
HIST 119	U.S. History: Chicano/Chicana Perspectives II	3
HIST 128/KUMY 128	Kumeyaay History I: Precontact - 1845	3
HIST 129/KUMY 129	Kumeyaay History II: 1846- Present	3
HIST 130/ETHN 130	U.S. History and Cultures: Native American Perspectives I	3
HIST 131/ETHN 131	U.S. History and Cultures: Native American Perspectives II	3
HIST 180	U.S. History: Black Perspectives I	3
HIST 181	U.S. History: Black Perspectives II	3
or HIST 100 or 101 if not selected above		3
		<u>3</u>

Group 2: Select one of the following courses:

HIST 114	Comparative History of the Early Americas	3
HIST 115	Comparative History of the Modern Americas	3
HIST 122	Women in Early American History	3
HIST 123	Women in Modern American History	3
HIST 124	History of California	3
HIST 148	The Modern Middle East	3
HUM 111	Culture, Art, & Ideas of the United States	3
HUM 115	Arts and Culture in Local Context-San Diego	3
HUM 116	Kumeyaay Arts and Culture	3
KUMY 166/POSC 166	Introduction to Native American Politics and Policy	3
POSC 140	Introduction to California Government and Politics	3
or any course from Group 1 not selected		3
		<u>3</u>

(History for Transfer continued)

Total Units for Major	18
Double-Counted Units	6-12
Plus General Education Requirements (Cal-GETC)	34
Total Transferable Elective Units	14-20
Total Units	60

Please note: SDSU accepts this degree for students transferring into History B.A.

KUMEYAAY STUDIES

Kumeyaay Studies Associate in Arts

The Associate in Arts program in Kumeyaay Studies is designed to provide an understanding of Kumeyaay history, culture and heritage. It is a multi-disciplinary degree, drawing from the sciences, humanities, world languages and history departments. Through specific coursework that encompasses on-site learning experiences, students will learn about the Kumeyaay Nation of San Diego’s East County region.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Interpret and evaluate evidence by analyzing biases, patterns, trends, and relationships.
2. Evaluate and apply subject matter to students’ lived experiences and current events.
3. Analyze how power and privilege operate in society, through the categories of race, class, gender, ethnicity, and sexuality.
4. Develop and support arguments with evidence, including academic and organic (i.e. cultural, traditional, and experiential).
5. Research and explore career options and/or obtain experience in a career field.

Associate in Arts Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
KUMY 120	Kumeyaay Language I	4
KUMY 121	Kumeyaay Language II	4
KUMY/HIST 128	Kumeyaay History I: Precontact – 1845	3
KUMY/HIST 129	Kumeyaay History II: 1846 – Present	<u>3</u>
		14

List A, Select Four (4) Units:

KUMY/BIO 133	Ethnoecology	3
or		
KUMY/BIO 134	Ethnobotany	3
and		
KUMY/BIO 135	Ethnobotany/Ethnoecology Lab	<u>1</u>
		4

List B, Select Two Courses:

KUMY/HUM 116	Kumeyaay Arts and Culture I	3
KUMY/HUM 117	Kumeyaay Arts and Culture II	3
KUMY/HUM 118	Kumeyaay Pottery & Basketry	<u>3</u>
		6

List C, Select One Course:

KUMY/ ANTH 150	Introduction to Cultural Resource Management	3
KUMY 220	Kumeyaay III	4
KUMY/POSC 166	Introduction to Native American Politics and Policy	3
KUMY/SW 170	Kumeyaay Conflict Resolution	3
Or any course from List A or B not selected		3
		<u>3-4</u>
	Total Units	27-28
	Plus General Education Requirements	

Kumeyaay Studies Certificate of Achievement

The Certificate of Achievement in Kumeyaay Studies is designed to provide an understanding of Kumeyaay language, history, culture, heritage, and land management. Kumeyaay Studies is an interdisciplinary program, drawing from anthropology, biology, history, humanities, Kumeyaay language, and political science. Students will learn about the Kumeyaay Nation of San Diego’s East County region through specialized, interactive coursework and on-site learning experiences.

Program Learning Outcomes

Upon successful completion of this certificate, students will be able to:

1. Interpret and evaluate evidence by analyzing biases, patterns, trends, and relationships.
2. Evaluate and apply subject matter to students’ lived experiences and current events.
3. Analyze how power and privilege operate in society, through the categories of race, class, gender, ethnicity, and sexuality.
4. Develop and support arguments with evidence, including academic and organic (i.e. cultural, traditional, and experiential).
5. Research and explore career options and/or obtain experience in a career field.

Certificate of Achievement Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
KUMY 120	Kumeyaay Language I	4
KUMY/HIST 128	Kumeyaay History I: Precontact-1845	3
Select one of the following:		
KUMY/HUM 116	Kumeyaay Arts and Culture I	3
or		
KUMY/HUM 117	Kumeyaay Arts and Culture II	3
Select one of the following:		
KUMY/BIO 133	Ethnoecology	3
or		
KUMY/BIO 134	Ethnobotany	3
		13
Select one of the following:		
KUMY 121	Kumeyaay Language II	4
KUMY/HIST 129	Kumeyaay History II: 1846-Present	3
KUMY/ANTH 150	Introduction Cultural Resource Management	3
KUMY/POSC 166	Introduction to Native American Politics and Policy	3
KUMY 220	Kumeyaay Language III	4
or any course not taken above		<u>3</u>
		3-4
Total Units		16-17

Certificate of Achievement

Students who complete the requirements above qualify for a Certificate of Achievement in Kumeyaay Studies. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

MATHEMATICS

Mathematics

Since jobs requiring mathematical skills such as data analysis, problem solving, pattern recognition, statistics, and probability are in high demand, the mathematics major may benefit both educationally and economically from developing and pursuing an interest in mathematics. Mathematical skills and statistical methods are employed regularly by researchers testing hypotheses, by workers applying quality control in manufacturing, and by informed citizens who must evaluate information from the media in tabular, graphical, and report form in order to reach solutions. This major offers a foundation in these necessary skills. The emphasis is to prepare students for transfer to a four-year institution and/or for career preparation in a vocational or professional field.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Draw conclusions about simple and complex systems by collecting, assessing, and analyzing information.
2. Communicate technical ideas in group and professional settings in both written and oral form.

Career Opportunities

Accountant¹
 Actuary¹
 Air Traffic Controller
 Auditor¹
 Bank Officer²
 Budget Analyst¹
 Computer Operator
 Computer Programmer¹
 Cost Estimator²
 Credit and Collection Manager²
 Data Processing Manager
 Economist¹
 Engineer¹
 Financial Planner¹
 Insurance Agent/Broker
 Insurance Claim Examiner
 Laboratory Examiner
 Loan Officer
 Market Research Analyst¹
 Mathematician¹
 Mathematics Teacher¹
 Securities Trader¹
 Semiconductor Technician
 Statistician¹
 Surveyor
 Systems Analyst¹

¹Bachelor Degree or higher required.

²Bachelor Degree normally recommended.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
MATH 180 C2210	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
MATH 280 C2220	Analytic Geometry and Calculus II <u>Calculus II: Early Transcendentals</u>	4
MATH 281	Multivariable Calculus	<u>4</u>
		13

List A: select one of the following:

MATH 284	Linear Algebra	3
MATH 285	Differential Equations	<u>3</u>
		3

List B: select one of the following:

CS 181	Introduction to C++ Programming	4
ENGR 120	Engineering Computer Applications	3
STAT C1000	Introduction to Statistics	4
MATH 245	Discrete Math	3
PHYC 201	Mechanics and Waves	5
Any course from list A not selected:		<u>3</u>
		3-5

(Mathematics Associate in Science and Certificate of Achievement continued)

Total Units
Plus General Education Requirements as shown below

19-21

Recommended Electives: Students planning to transfer to four-year institutions to complete a bachelor's degree in Pure Mathematics, Applied Mathematics, or Statistics should select an emphasis in an applied discipline such as accounting, chemistry, computer science, economics, engineering, or physics. In particular, transfer students are strongly urged to elect the following physics courses: PHYC 201, 202, 203. Students preparing for a vocational or professional career are strongly encouraged to select an emphasis in a vocational/professional discipline such as business, computer and information science, CADD technology, electronics technology, or environmental health and safety management.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Mathematics. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Mathematics for Transfer (AS-T)

This program is designed to prepare students for transfer to a California State University (CSU) with the intent of earning a B.S. degree in Mathematics. Since jobs requiring mathematical skills such as data analysis, problem solving, pattern recognition, statistics, and probability are in high demand, the mathematics major may benefit both educationally and economically from developing and pursuing an interest in mathematics. Mathematical skills and statistical methods are employed regularly by researchers testing hypotheses, by workers applying quality control in manufacturing, and by informed citizens who must evaluate information from the media in tabular, graphical, and report form in order to reach solutions. This major offers a foundation in these necessary skills. The emphasis is to prepare students for transfer to a four-year institution and/or for career preparation in a vocational or professional field.

The following is required for the AS-T in Mathematics for Transfer degree:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
 2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
 3. Minimum of 18 semester or 27 quarter units in the major.
 4. A grade of "C" or higher or "Pass" in all courses required for the major.
 5. Certified completion of the California State University General Education (CSU GE) Breadth pattern OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern; see Degree Requirements and Transfer Information section for more information.
- Note: If following IGETC, IGETC-CSU must be followed for admission to a CSU.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Draw conclusions about simple and complex systems by collecting, assessing, and analyzing information.
2. Communicate technical ideas in group and professional settings in both written and oral form.

Associate in Science Degree Requirements:

Core Curriculum:

<i>Course</i>	<i>Title</i>	<i>Units</i>
MATH 180 <u>C2210</u>	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
MATH 280 <u>C2220</u>	Analytic Geometry and Calculus II <u>Calculus II: Early Transcendentals</u>	4
MATH 281	Multivariable Calculus	<u>4</u>
		13

List A: Select one of the following:

MATH 284	Linear Algebra	3
MATH 285	Differential Equations	<u>3</u>
		3

List B: Select one of the following:

CS 181	Intro to C++ Programing	4
MATH 160	Elementary Statistics	4
MATH 245	Discrete Mathematics	3
PHYC 201	Mechanics and Waves	5
Any course from List A not selected above		<u>3</u>
		3-5

Units for Major	19-21
Double-Counted Units	3-7
Plus General Education Requirements (Cal-GETC)	34
Total Transferable Elective Units	8-14
Total Units	60

Please note: SDSU accepts this degree for students transferring into Mathematics (Science Emphasis) B.S.

ORNAMENTAL HORTICULTURE

Arboriculture

This degree program provides students with entry level skills, upgrading of existing skills, and preparation for further training. It is designed for those interested in careers in nursery and greenhouse management, landscape design and construction, grounds management, retail nursery operations, irrigation system design, installation and maintenance of interior plantscaping, arboriculture and other related fields. Students will learn modern horticultural methods and procedures as well as the use of tools and equipment common to the field.

CAREER OPPORTUNITIES

- † Agricultural Inspector
- * Agricultural Researcher
- † Arboretum/Park Director
 - Arboriculture Technician
 - Botanical Illustrator
- † County/State Agricultural Advisor
- * Environmental Designer
 - Floral Designer
 - Flower Shop Manager
 - Golf Course Superintendent
 - Golf Course Worker
 - Greenhouse Manager
 - Grounds Maintenance Manager
 - Grower/Production Manager
- † Horticultural Journalist
 - Irrigation Consultant
- † Landscape Architect
 - Landscape Contractor
 - Landscape Designer
 - Landscape Technician
 - Nursery/Garden Center Manager
- † Park Planner/Manager
 - Plant Breeder/Propagator
 - Sports Field Manager
 - Turf Manager
 - Urban Forester
 - Water Auditor
- † Water Conservationist

* Bachelor Degree or higher required.

† Bachelor Degree normally recommended.

This major encompasses urban forestry, professional tree care, and tree trimming. Students will learn care and pruning of landscape trees, palms and related plants as well as common fruit trees. Course work includes skill development in tree climbing and pruning techniques, basic tree maintenance, and principles of urban forestry. Graduates are employed by private tree care companies, public agencies, landscape contractors, wholesale and retail nurseries, or may be self-employed.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Perform work-related functions according to current industry standards.
2. Assess and resolve work-related problems using current industry-specific tools and resources.
3. Communicate effectively to prospective clients, managers and coworkers in a workplace setting.
4. Abide by industry and government regulations regarding occupational health and safety, and/or environmental standards.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
OH 120	Fundamentals of Ornamental Horticulture	3
OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 260	Arboriculture	3
OH 290	Cooperative Work Experience Education ¹	<u>3</u>
		18

(Arboriculture continued)

Select two of the following:

OH 263	Urban Forestry	1
OH 264	Safe Work Practices in Tree Climbing and Arboriculture	1
OH 266	Science in Practice for Arboriculture	<u>1</u>
		2

Select one of the following:

BUS 110	Introduction to Business	3
BUS 111	Entrepreneurship: Starting and Developing a Business	3
BUS 125	Business Law: Legal Environment of Business	3
OH 190	Business Management for Turf and Horticulture	<u>3</u>
		3

Select at least nine units from the following:

OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 150	Landscape Architecture I	3
OH 174	Turf and Ground Cover Management	3
OH 221	Landscape Construction: Irrigation and Carpentry	<u>3 2.5</u>
OH 235	Principles of Landscape Irrigation	4
OH 250	Landscape Water Management	2
OH 255	Sustainable Urban Landscapes Principles and Practices	2
OH 275	Diagnosing Horticultural Problems	3
SPAN 120	Spanish I	<u>5</u>
		9
	Total Required	32
	Plus General Education Requirements	

¹Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Arboriculture. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Basic Ornamental Horticulture

This certificate prepares students to work in the horticulture industry at an entry or intermediate level by providing them with basic knowledge of horticultural principles and practices. Upon completion, students will be prepared to work in one of many fields of horticulture, or choose to continue their studies and apply their earned credits to a degree or certificate of achievement.

Program Learning Outcomes

Upon successful completion of this certificate, students will be able to:

1. Understand the basic principles of plant growth.
2. Identify 125 trees and shrub species commonly used in Southern California landscapes.
3. Understand the basic principles of soil science as they relate to plant growth and plant nutrition.
4. Apply basic horticultural knowledge to specific field of study in ornamental horticulture.
5. Understand business principles as they apply to working in ornamental horticulture.

Certificate Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
OH 120	Fundamentals of Ornamental Horticulture	3
OH 170	Plant Materials: Trees and Shrubs	<u>3</u>
		6

Select one of the following:

OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 180	Plant Materials: Annuals and Perennials	<u>3</u>
		3

Select one of the following:

BUS 110	Introduction to Business	3
BUS 111	Entrepreneurship: Starting and Developing a Business	3
BUS 125	Business Law: Legal Environment of Business	3
OH 190	Business Management for Turf and Horticulture	<u>3</u>
		3

Select at least three units from the following:

OH 114	Floral Design I	3
OH 121	Plant Propagation	3
OH 172	Introduction to Landscape Design	3
OH 174	Turf and Ground Cover Management	3
OH 220	Landscape Construction: Concrete and Masonry	3
OH 221	Landscape Construction: Irrigation and Carpentry	3.2.5
OH 260	Arboriculture	<u>3</u>
		3
	Total Required	15

Certificate of Specialization

Students who complete the requirements above qualify for a Certificate in Basic Ornamental Horticulture. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Golf Course and Sports Turf Management

Students in this major pursue careers as golf course superintendents or sports turf managers. The program is intended for those individuals wishing to enter the field as well as those who desire to upgrade their existing skills. Students may also transfer to a four-year degree program in agronomy, turf management, or related field. Course work is designed to study environmentally sound solutions for the efficient production and management of golf and sports turf.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Perform work-related functions according to current industry standards.
- Assess and resolve work-related problems using current industry-specific tools and resources.
- Communicate effectively to prospective clients, managers and coworkers in a workplace setting.
- Abide by industry and government regulations regarding occupational health and safety, and/or environmental standards.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
OH 120	Fundamentals of Ornamental Horticulture	3
OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 174	Turf and Ground Cover Management	3
OH 235	Principles of Landscape Irrigation	4
OH 290	Cooperative Work Experience Education ¹	<u>3</u>
		22

Select one of the following:

BUS 110	Introduction to Business	3
BUS 111	Entrepreneurship: Starting and Developing a Business	3
BUS 125	Business Law: Legal Environment of Business	<u>3</u>
		3

Select at least seven units from the following:

OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 220	Landscape Construction: Concrete and Masonry	3
OH 221	Landscape Construction: Irrigation and Carpentry	3 <u>2.5</u>
OH 250	Landscape Water Management	2
OH 265	Golf Course and Sports Turf Management	3
OH 275	Diagnosing Horticultural Problems	3
SPAN 120	Spanish I	<u>5</u>
		7
	Total Required	32
	Plus General Education Requirements as listed below	

¹ Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Golf Course and Sports Turf Management. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Irrigation Technology

This specialized field focuses on the design, installation and management of landscape irrigation systems. The program is designed for entry level students, those seeking to upgrade existing skills, or those wishing to transfer to a four-year degree program at Cal Poly or other institution. The use of current design theory, installation techniques, and management programs form the heart of the curriculum. Graduates are employed by landscape architects, irrigation consultants, landscape contractors, public agencies or may be self-employed.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Perform work-related functions according to current industry standards.
- Assess and resolve work-related problems using current industry-specific tools and resources.
- Communicate effectively to prospective clients, managers and coworkers in a workplace setting.
- Abide by industry and government regulations regarding occupational health and safety, and/or environmental standards.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 120	Fundamentals of Ornamental Horticulture	3
OH 140	Soils	3
OH 221	Landscape Construction: Irrigation and Carpentry	3 2.5
OH 235	Principles of Landscape Irrigation	4
OH 250	Landscape Water Management	2
OH 290	Cooperative Work Experience Education ¹	<u>3</u>
		20 <u>19.5</u>

Select one of the following:

BUS 110	Introduction to Business	3
BUS 111	Entrepreneurship: Starting and Developing a Business	3
BUS 125	Business Law: Legal Environment of Business	3
OH 190	Business Management for Turf and Horticulture	<u>3</u>
		3

Select at least nine units from the following:

OH 130	Plant Pest Control	3
OH 150	Landscape Architecture I	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 174	Turf and Ground Cover Management	3
OH/CADD 200	Introduction to Computer-Aided Landscape Design ²	3
OH 225	Landscape Contracting	3
OH 238	Irrigation System Design	3
SPAN 120	Spanish I	<u>5</u>
		9
	Total Required	32 <u>31.5</u>
	Plus General Education Requirements	

¹Student must complete six units within the major at Cuyamaca College to be eligible for this course.

²May also be offered at Southwestern College as LA 200.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Irrigation Technology. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Landscape Architecture

The Landscape Architecture major provides students with a multi-disciplined, project-based approach to landscape architecture for residential, public, and commercial sites. The curriculum covers the current trends in design and technologies in construction of the projects. Course work is designed to provide employable technical skill training in the field and provides foundation for students who plan to transfer to four-year degree programs in Landscape Architecture. Students earning an associate degree in Landscape Architecture are eligible to take the Landscape Architecture Registration Exam to achieve state licensure after completing requisite apprenticeship. Graduates may be employed by landscape architects, landscape contractors, public agencies, or may be self-employed.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Perform work-related functions according to current industry standards.
- Assess and resolve work-related problems using current industry-specific tools and resources.
- Communicate effectively to prospective clients, managers and coworkers in a workplace setting.
- Abide by industry and government regulations regarding occupational health and safety, and/or environmental standards.

Associate in Science Degree Requirements:

Course	Title	Units
CADD/OH 200	Introduction to Computer Aided Landscape Design	3
OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 120	Fundamentals of Ornamental Horticulture	3
OH 150	Landscape Architecture I	3
OH 151	Landscape Architecture II	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 220	Landscape Construction: Concrete and Masonry	3
OH 235	Principles of Landscape Irrigation	4
OH 290	Cooperative Work Experience Education ¹	<u>3</u>
		27

Select one of the following:

ART 140	Survey of Western Art I: Prehistory through Middle Ages	3
ART 141	Survey of Western Art II: Renaissance through Modern	<u>3</u>
		3

Select at least four units (minimum) from the following:

OH 180	Plant Materials: Annuals and Perennials	3
OH/CADD 201	Advanced Computer-Aided Landscape Design	3
OH 221	Landscape Construction: Irrigation and Carpentry	<u>3-2.5</u>
OH 222	Japanese Garden Design and Construction	1
OH 225	Landscape Contracting	3
OH 255	Sustainable Urban Landscape Principles and Practices	2
OH 263	Urban Forestry	<u>1</u>
		4-6
	Total Units	34-36
	Plus General Education Requirements	

¹Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate of Achievement. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Landscape Technology

Landscape installation and management forms the focus of this program. Students will learn the latest methods, materials and techniques in the landscape industry. Those seeking careers in landscape technology are entering a challenging career field that requires knowledge of plant material, turfgrass, landscape and irrigation design, soils, pest control and landscape construction. A professional in the field has the opportunity to be involved in working with people as well as plants as the manager must direct and supervise employees, deal with clients and suppliers, and may become involved in professional organizations. Students entering the landscape industry, those already employed but seeking to upgrade their skills, and those wishing to transfer to Cal Poly or other four-year degree programs will benefit from the curriculum. Graduates are employed by landscape contractors, public agencies or may be self-employed.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Perform work-related functions according to current industry standards.
2. Assess and resolve work-related problems using current industry-specific tools and resources.
3. Communicate effectively to prospective clients, managers and coworkers in a workplace setting.
4. Abide by industry and government regulations regarding occupational health and safety, and/or environmental standards.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
OH 120	Fundamentals of Ornamental Horticulture	3
OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 180	Plant Materials: Annuals and Perennials	3
OH 235	Principles of Landscape Irrigation	4
OH 250	Landscape Water Management	2
OH 290	Cooperative Work Experience Education ¹	<u>3</u>
		24

Select one of the following:

BUS 110	Introduction to Business	3
BUS 111	Entrepreneurship: Starting and Developing a Business	3
BUS 125	Business Law: Legal Environment of Business	3
OH 190	Business Management for Turf and Horticulture	<u>3</u>
		3

Select at least five units from the following:

OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 105	Edibles in Urban Landscapes	1.5
OH 150	Landscape Architecture I	3
OH 151	Landscape Architecture II	3
OH 174	Turf and Ground Cover Management	3
OH 220	Landscape Construction: Concrete and Masonry	3
OH 221	Landscape Construction: Irrigation and Carpentry	3 <u>2.5</u>
OH 222	Japanese Garden Design and Construction	1
OH 225	Landscape Contracting	3
OH 255	Sustainable Urban Landscapes Principles and Practices	2
OH 260	Arboriculture	3
OH 275	Diagnosing Horticultural Problems	3
SPAN 120	Spanish I	<u>5</u>
		5-5.5
	Total Required	<u>32-32.5</u>
	Plus General Education Requirements	

¹ Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Landscape Technology. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Nursery Technology

Students enrolled in this major pursue careers in the wholesale production and retail sales of horticultural crops. Course work will focus on plant propagation, greenhouse plant production, and horticultural practices related to production and sales of landscape and greenhouse plant material. Students entering the nursery industry, those already employed but seeking upgraded skills, and those wishing to transfer to Cal Poly or other four-year degree programs will benefit from the curriculum. Graduates are employed by wholesale and retail nurseries, public agencies or may be self-employed.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Perform work-related functions according to current industry standards.
2. Assess and resolve work-related problems using current industry-specific tools and resources.
3. Communicate effectively to prospective clients, managers and coworkers in a workplace setting.
4. Abide by industry and government regulations regarding occupational health and safety, and/or environmental standards.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
OH 120	Fundamentals of Ornamental Horticulture	3
OH 121	Plant Propagation	3
OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 180	Plant Materials: Annuals and Perennials	3
OH 290	Cooperative Work Experience Education ¹	<u>3</u>
		21

Select one of the following:

BUS 110	Introduction to Business	3
BUS 111	Entrepreneurship: Starting and Developing a Business	3
BUS 125	Business Law: Legal Environment of Business	3
OH 190	Business Management for Turf and Horticulture	<u>3</u>
		3

Select eight units from the following:

BIO 122	The Secret Life of Plants	4
OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 114	Floral Design I	3
OH 150	Landscape Architecture I	3
OH 240	Greenhouse Plant Production	3
SPAN 120	Spanish I	<u>5</u>
		8-9
	Total Required	32-33
	Plus General Education Requirements	

¹ Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Nursery Technology. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Sustainable Urban Landscapes

This curriculum is designed to investigate the current trends and provide practical experience in sustainable landscape design, construction and maintenance. Students will use technology, materials and methods that enhance the urban landscape with minimal input of labor and materials while reducing negative environmental impacts. Students entering the landscape industry, those already employed but seeking upgraded skills, and those wishing to transfer to four-year degree programs will benefit from the curriculum. Graduates are employed by landscape contractors, landscape architects and designers, public agencies, or are self-employed.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Perform work-related functions according to current industry standards.
2. Assess and resolve work-related problems using current industry-specific tools and resources.
3. Communicate effectively to prospective clients, managers and coworkers in a workplace setting.
4. Abide by industry and government regulations regarding occupational health and safety, and/or environmental standards.

CAREER OPPORTUNITIES

Irrigation Manager
 Landscape Design Consultant
 Landscape Maintenance Supervisor
 Landscape Manager
 Landscape Water Auditor
 Water Conservation Specialist

Associate in Science Degree Requirements:

Course	Title	Units
OH 120	Fundamentals of Ornamental Horticulture	3
OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 250	Landscape Water Management	2
OH 255	Sustainable Urban Landscape Principles and Practices	2
OH 263	Urban Forestry	1
OH 290	Cooperative Work Experience Education ¹	<u>3</u>
		20

Select one of the following:

BUS 110	Introduction to Business	3
BUS 111	Entrepreneurship: Starting and Developing a Business	3
BUS 125	Business Law: Legal Environment of Business	3
OH 190	Business Management for Turf and Horticulture	<u>3</u>
		3

Select at least a minimum of eight units from the following:

OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 105	Edibles in Urban Landscapes	1.5
OH 150	Landscape Architecture I	3
OH 180	Plant Materials: Annuals and Perennials	3
OH 220	Landscape Construction: Concrete and Masonry	3
OH 221	Landscape Construction: Irrigation and Carpentry	<u>3-2.5</u>
OH 235	Principles of Landscape Irrigation	4
OH 260	Arboriculture	3
OH 266	Science in Practice for Arboriculture	<u>1</u>
		8
	Total Required	31-31.5
	Plus General Education Requirements	

¹ Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Sustainable Urban Landscapes. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

PHYSICS

Physics

Physics is the study of the relationship between matter and energy in the universe. The curriculum is designed to provide students working toward a bachelor's degree a well-balanced, lower division program by emphasizing fundamental concepts and problem solving. The degree requirements are typical of what four-year colleges and universities require; see www.assist.org for requirements of specific transfer institution.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Draw scientific conclusions about simple and complex systems by collecting, assessing, and analyzing information.
- Communicate technical ideas in group and professional settings in both written and oral form.

CAREER OPPORTUNITIES

- *College or University Professor
- *Data Scientist
- *Engineer or Programmer
- *Government Laboratory Scientist
- *High School Physics Teacher
- *Industry Consultant
- *Medical Physicist
- *Private Sector Research and Development Scientist
- *Sales and Marketing Consultant

* Bachelor Degree or higher required

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CHEM 141	General Chemistry I	5
CHEM 142	General Chemistry II	5
MATH 180 <u>C2210</u>	Analytical Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
MATH 280 <u>C2220</u>	Analytical Geometry and Calculus II <u>Calculus II: Early Transcendentals</u>	4
MATH 281	Multivariable Calculus	4
PHYC 201	Mechanics and Waves	5
PHYC 202	Electricity, Magnetism, and Heat	5
PHYC 203	Light, Optics, and Modern Physics	<u>5</u>
	Total Required	38
	Plus General Education Requirements	

Physics for Transfer (AS-T)

Physics is the study of the relationship between matter and energy in the universe. The AS-T in Physics for Transfer degree is designed to prepare students to transfer to a California State University (CSU) with the intent of earning a baccalaureate degree in physics. The curriculum is designed to provide students working toward a bachelor's degree a well-balanced, lower division program by emphasizing fundamental concepts and problem solving. The degree requirements are typical of what baccalaureate institutions require.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Draw scientific conclusions about simple and complex systems by collecting, assessing, and analyzing information.
2. Communicate technical ideas in group and professional settings in both written and oral form.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
MATH 180 <u>C2210</u>	Analytic Geometry and Calculus I <u>Calculus I: Early Transcendentals</u>	5
MATH 280 <u>C2220</u>	Analytic Geometry and Calculus II <u>Calculus II: Early Transcendentals</u>	4
MATH 281	Multivariable Calculus	4
PHYC 201	Mechanics and Waves	5
PHYC 202	Electricity, Magnetism, and Heat	5
PHYC 203	Light, Optics, and Modern Physics	<u>5</u>
	Units for Major	28
	Double-Counted Units	7
	Plus General Education Requirements (Cal-GETC)	34
	Total Transferable Elective Units	5
	Total Units	60

Please note: SDSU accepts this degree for students transferring into the B.S. Physics (General) or B.S. Physics (Modern Optics Emphasis).

SOCIAL WORK

Social Work Associate in Arts

The Cuyamaca College Associate in Arts in Social Work prepares students to further enhance their education, seek employment in various social service settings, or both. Students who complete the program are eligible to transfer to four-year colleges or universities to continue their education toward advanced degrees and potential licensure in Social Work or related fields.

This program offers students coursework focused on skill development around core competencies for generalist practice, including assessment methods, treatment planning, case management, writing/documentation, critical thinking, ethical and professional behavior, advocacy, social justice, cultural competence and techniques for working with individuals, communities, and institutions.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Identify and analyze barriers and issues faced by under-represented and vulnerable communities through the lenses of cultural competence and trauma-informed care.
2. Apply critical thinking skills to case management, crisis intervention, and theory-based assessment to understand and support positive interactions between individuals and their environments.
3. Facilitate use of community resources, community linkages and government assistance programs which support social work practices in diverse environments.
4. Apply knowledge of biopsychosocial factors that affect human development and behavior across life span to case management strategies and approaches.
5. Identify diverse roles of social workers in micro, mezzo and macro levels of practice and evaluate own's professional identity and skills.

CAREER OPPORTUNITIES

Administration¹

Child Welfare¹

Clinical:

Counseling, Therapy¹

Community Organizations:

Advocacy, Politics, Education¹

Criminal Justice/Corrections¹

Developmental Disabilities¹

Gerontology¹

Health Care¹

Occupational:

Counseling¹

Organizational Development¹

Teaching¹

Wellness Promotion¹

Human Resources¹

Public Welfare:

Social Work¹

Research¹

¹Bachelor degree or higher recommended

Associate in Arts Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
BIO 130 <u>BIO C1001</u>	General Biology <u>Introduction to Biology</u>	3
ECON 120 <u>ECON C2002</u>	Principles of Macroeconomics	3
or ECON 121 <u>ECON C2001</u>	Principles of Microeconomics	3
HED 201	Introduction to Public Health	3
STAT C1000	Introduction to Statistics	4
or PSY 215	Statistics for the Behavioral Sciences	4
PSYC C1000	Introduction to Psychology	3
SOC 120 <u>SOCI C1000</u>	Introductory Sociology <u>Introduction to Sociology</u>	3
SW 110	Social Work Fields of Service	3
SW 120 100	Introduction to Social Work	3
	Total Units	25
	Plus General Education Requirements	

Social Work Certificate of Achievement

The Cuyamaca College Certificate of Achievement in ~~Social Work-Human Services~~ prepares students to further enhance their education, seek employment in various social service settings, or both. Students who complete the program are eligible to transfer to four-year colleges or universities to continue their education toward advanced degrees and potential licensure in Social Work or related fields.

This program offers students coursework focused on skill development around core competencies for generalist practice, including assessment methods, treatment planning, case management, writing/documentation, critical thinking, ethical and professional behavior, advocacy, social justice, cultural competence and techniques for working with individuals, communities, and institutions.

Award Note

Students intending to transfer into this major at a CSU or UC should consult with a counselor and visit www.assist.org for guidance on appropriate transfer coursework.

Program Learning Outcomes

Upon successful completion of this Social Work Certificate of Achievement, students will be able to:

1. Identify and analyze barriers and issues faced by under-represented and vulnerable communities through the lenses of cultural competence and trauma-informed care.
2. Apply critical thinking skills to case management, crisis intervention, and theory-based assessment to understand and support positive interactions between individuals and their environments.
3. Facilitate use of community resources, community linkages and government assistance programs which support social work practices in diverse environments.
4. Apply knowledge of biopsychosocial factors that affect human development and behavior across life span to case management strategies and approaches.
5. Identify diverse roles of social workers in micro, mezzo and macro levels of practice and evaluate own’s professional identity and skills.

CAREER OPTIONS

Most career options directly related to professional (licensed) social work require graduate level degrees. However, there are applied and paraprofessional occupations that value the Certificate of Achievement, which allows students to begin working in the field while they are finishing their educational goals. Social services departments, hospitals, academic and community mental health facilities, child care programs, services for the aged, alcohol and other drug treatment programs, family services agencies, and other community organizations are all examples of settings which employ both professional and paraprofessional social service providers.

Certificate of Achievement Requirements:

Courses Required for the Major:

<i>Course</i>	<i>Title</i>	<i>Units</i>
PSYC C1000	Introduction to Psychology	3
SOC 120 <u>SOCI C1000</u>	Principles of Introduction to Sociology	3
SW 110	Social Work Fields of Service	3
SW 120 <u>SW 100</u>	Introduction to Social Work	3
SW 130	Introduction to Case Management	<u>3</u>
		15

Select ~~two~~ one of the following:

BIOL 130 <u>C1001</u>	General Introduction to Biology	3
or		
PSY 140	Physiological Psychology	3
<u>ECON C2001</u>	Principles of Microeconomics	<u>3</u>
ECON 120 <u>C2002</u>	Principles of Macroeconomics	3
PSY 150	Developmental Psychology	3
PSY 170	Abnormal Psychology	3
SOC 130	Contemporary Social Problems	<u>3</u>
		<u>63</u>

Total Units 2518

Certificate of Achievement

Students who complete the requirements above qualify for a Certificate in Social Work. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

SOCIOLOGY

Sociology for Transfer (AA-T)

This degree program is designed to provide students with a broad understanding of human interaction, social processes, social structures, and tools of sociological investigation. Students completing this degree may be interested in pursuing careers in teaching, research, social work, and other behavioral science professions.

The following is required for an Associate Degree for Transfer:

1. Minimum of 60 semester or 90 quarter CSU-transferable units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Minimum of 18 semester or 27 quarter units in the major.
4. A grade of "C" or higher or "Pass" in all courses required for the major.
5. Certified completion of the California General Education Transfer Curriculum (Cal-GETC) pattern; see Degree Requirements and Transfer Information section for more information.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Evaluate society and make appropriate suggestions for improvement directed at social change.
2. Analyze and interpret the diversity of social experience using a sociological perspective.
3. Engage in critical thinking, analysis and problem solving about social issues.
4. Employ theoretical and methodological approaches to sociological observations of everyday life.
5. Evaluate the implications of multicultural diversity and global interdependence.

Associate in Arts Degree Requirements:

Core Curriculum:

<i>Course</i>	<i>Title</i>	<i>Units</i>
SOC 120	Introductory Introduction to Sociology	3
SOC 130	Contemporary Social Problems	3
STAT C1000	Introduction to Statistics	4
or PSY 215	Statistics for the Behavioral Sciences	<u>4</u>
		10

List A: Select two of the following:

SOC 114	Introduction to Race and Ethnicity	3
SOC 125	Marriage, Family and Alternative Lifestyles	3
PSY 138/SOC 138	Social Psychology	3
SOC 140	Sex and Gender Across Cultures	<u>3</u>
		6

List B: Select one of the following:

ANTH 120	Cultural Anthropology	3
PSY 120	Introductory Psychology	3
Any course not already used in list A		<u>3</u>
		3

Units for Major	19-20
Double-Counted Units	6-12
Plus General Education Requirements (Cal-GETC)	34
Total Transferable Elective Units	12-19
Total Units	60

Please note: SDSU accepts this degree for students transferring into Sociology B.A.

UNIVERSITY STUDIES

University Studies: Communication and Language Arts

The Associate Degree in University Studies with an Area of Emphasis is intended to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each four-year transfer institution, courses used to complete this degree should be selected with the assistance of a counselor. The completion of the University Studies Degree does not guarantee acceptance into either a baccalaureate major or a four-year institution.

REQUIREMENTS:

- I. Complete 60 Transferable units
 - a. CSU or UC transferable units
- II. California General Education Transfer Curriculum (Cal-GETC)
 - a. Complete 34 units of transfer general education as required for Cal-GETC (see Degree Requirements section of catalog)
- III. Choose a minimum of 18 units
 - a. Students must complete a minimum of three units in Communication, and three units Language Arts. The remaining twelve units may be taken from either category.

While 18 units are required in a specific area to meet the requirements of the degree, it is strongly recommended that as many lower division preparation for the major courses as possible be completed at the community college prior to transfer. Some baccalaureate majors and four-year institutions require a higher GPA than is necessary for the associate degree. Courses that are not UC-transferable will not be used in the UC University Studies Area of Emphasis Degrees. Completion of the University Studies degree does not guarantee admission to a four-year institution.

Courses for the Associate in Arts in University Studies with an Emphasis in Communication and Language Arts focus on the study of how language works to express human ideas and feelings. Students will explore and analyze written and verbal communication methods, as well as develop and advance their oral and written communication skills. Students completing this area may be interested in the following baccalaureate majors: communication, English, foreign language, literature, journalism, and linguistics.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Organize thoughts and ideas in both oral and written format.
2. Communicate effectively with diverse audiences in a variety of media and/or contexts.
3. Navigate norms related to communicating in diverse environments, including professional, intercultural, and/or specialized settings.

Communication

BUS 128

COMM C1000, C1004, 110, ~~120~~, 123, 124, 137, 145

Language Arts ARAM 120, 121, 220

ARBC 120, 121, 122, 123, 220, 221, 250, 251, 254, 256

ASL 120, 121, 220, 221

BUS 128

ENGL C1001, ~~122~~C1002, 126, 130, 131, 132, 133, 140, 141, 142, 143, 201, 202, 217, 221, 222, 231, 232, 236, 238, 271

ETHN 236, 238

KUMY 120, 121, 220

SPAN 120, 121, 220, 221, 250, 251

University Studies: Humanities and Fine Arts

The Associate Degree in University Studies with an Area of Emphasis is intended to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each four-year transfer institution, courses used to complete this degree should be selected with the assistance of a counselor. The completion of the University Studies Degree does not guarantee acceptance into either a baccalaureate major or a four-year institution.

REQUIREMENTS:

- I. Complete 60 Transferable units
 - a. CSU or UC transferable units
- II. California General Education Transfer Curriculum (Cal-GETC)
 - a. Complete 34 units of transfer general education as required for Cal-GETC (see Degree Requirements section of catalog)
- III. Choose a minimum of 18 units
 - a. Students must complete a minimum of three units in Humanities, and three units in Fine Arts. The remaining twelve units may be taken from either category.

While 18 units are required in a specific area to meet the requirements of the degree, it is strongly recommended that as many lower division preparation for the major courses as possible be completed at the community college prior to transfer. Some baccalaureate majors and four-year institutions require a higher GPA than is necessary for the associate degree. Courses that are not UC-transferable will not be used in the UC University Studies Area of Emphasis Degrees. Completion of the University Studies degree does not guarantee admission to a four-year institution.

Courses for the Associate in Art in University Studies with an Emphasis in Humanities and Fine Arts focus on the study of cultural, humanistic activities, and artistic expression of human beings. Students will evaluate and interpret the ways in which people through the ages in different cultures have responded to themselves and the world around them through artistic and cultural creation. Students will develop an aesthetic awareness and incorporate these concepts when constructing value judgments. Students completing this area may be interested in the following baccalaureate majors: art, humanities, music, philosophy, religious studies, and theatre arts.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Analyze the principle elements of representative examples of art, architecture, literature, theater, philosophy, music, dance, film, or other relevant areas of cultural and/or intellectual creativity.
2. Employ the language, concepts and methods of interpretive criticism as applicable to the respective categories of human creativity.
3. When applicable, apply artistic processes and skills as a creative expression, using a variety of media to communicate meaning and intent in original works of art.
4. Analyze how power and privilege operate in society, through categories of race, class, gender, ethnicity, and sexuality.

Humanities

ARAM 120, 121, 220
ARBC 120, 121, 122, 123, 130, 145, 220, 221, 250, 251, 254, 256
ART ~~140, 141~~, 142, 143, 145, 146, 151
ARTH C1100, C1200
ASL 120, 121, 140, 220, 221
ENGL ~~C1002, 122~~, 201, 202, 217, 221, 222, 231, 232, 236, 238, 270, 271
ETHN 236, 238
HIST 100, 101, 105, 106, 114, 115, 157
HUM 110, 111, 115, 116, 117, 118, 140, 155
KUMY 116, 117, 118, 120, 121, 220
PHIL 110, 115, 117, 140, 141
RELG 120, 135, 170, 175
SPAN 120, 121, 141, 145, 220, 221, 250, 251

Fine Arts

ART 100, 104, 119, 120, 121, 124, 125, 129, 135, ~~140, 141~~, 142, 143, 145, 146, 151, 184, 210, 211, 220, 221, 222, 224, 225, 230, 231, 232, 233, 235, 236, 240, 241, 242, 243, ARTH C1100, C1200
MUS 110, 111, 115, 116, 117, 123
THTR 110

University Studies: Science and Mathematics

The Associate Degree in University Studies with an Area of Emphasis is intended to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each four-year transfer institution, courses used to complete this degree should be selected with the assistance of a counselor. The completion of the University Studies Degree does not guarantee acceptance into either a baccalaureate major or a four-year institution.

REQUIREMENTS:

- I. Complete 60 transferable units
 - a. CSU or UC Transferable Units
- II. California General Education Transfer Curriculum (Cal-GETC)
 - a. Complete 34 units of transfer general education as required for Cal-GETC (see Degree Requirements section of catalog)
- III. Choose a minimum of 18 units
 - a. Students must complete a minimum of three units in Science, and three units in Mathematics (limitation of one Statistics course). The remaining twelve units may be taken from either category.

While 18 units are required in a specific area to meet the requirements of the degree, it is strongly recommended that as many lower division preparation for the major courses as possible be completed at the community college prior to transfer. Some baccalaureate majors and four-year institutions require a higher GPA than is necessary for the associate degree. Courses that are not UC-transferable will not be used in the UC University Studies Area of Emphasis Degrees. Completion of the University Studies degree does not guarantee admission to a four-year institution.

Courses for the Associate in Science in University Studies with an Emphasis in Science and Mathematics focus on the study of mathematical and quantitative reasoning skills and the application of facts and principles that form the foundations of living and non-living systems. Students will recognize and utilize the methodologies of science as investigative tools, as well as the limitations of science. Students will use mathematical skills to solve numerical problems encountered in daily life, as well as more advanced skills for applications in the physical and life sciences. Students completing this area may be interested in the following baccalaureate majors: astronomy, biological sciences, chemistry, computer science, engineering, geography, geology, mathematics, oceanography, physical science, and physics.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Utilize high level mathematical skills to analyze data and/or solve problems.
2. Analyze concepts of physical and biological science to evaluate scientific information and solve scientific problems.
3. Draw scientific conclusions about simple and complex systems by collecting, assessing, and analyzing information.

Science

ANTH ~~130~~ C1001

ASTR ~~110, 112~~ C1001, C1001L

BIO 122, ~~130, 131~~, 133, 134, 135, 140, 141, 141L, 152, 230, 240, 251

BIOL C1000, C1001

CHEM 102, 120, 141, 142, 231, 232

CS 119, 119L, 181, 182, 281, 282

GEOG 120, 121

GEOL 104, ~~105~~, 110, 111

KUMY 133, 134, 135

OCEA 112, 113

PHYC 110, 130, 131, 201, 202, 203

Mathematics

MATH 170, 175, 176, 178, ~~180~~ C2210, 245, ~~280~~ C2220, 281, 284, 285

PSY 215

STAT C1000

University Studies: Social and Behavioral Sciences

The Associate Degree in University Studies with an Area of Emphasis is intended to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each four-year transfer institution, courses used to complete this degree should be selected with the assistance of a counselor. The completion of the University Studies Degree does not guarantee acceptance into either a baccalaureate major or a four-year institution.

REQUIREMENTS:

- I. Complete 60 Transferable units
 - a. CSU or UC transferable units
- II. California General Education Transfer Curriculum (Cal-GETC)
 - a. Complete 34 units of transfer general education as required for Cal-GETC (see Degree Requirements section of catalog)
- III. Choose a minimum of 18 units
 - a. Students must complete a minimum of three units in Social Science and three units in Behavioral Science. The remaining twelve units may be taken from either category.

While 18 units are required in a specific area to meet the requirements of the degree, it is strongly recommended that as many lower division preparation for the major courses as possible be completed at the community college prior to transfer. Some baccalaureate majors and four-year institutions require a higher GPA than is necessary for the associate degree. Courses that are not UC-transferable will not be used in the UC University Studies Area of Emphasis Degrees. Completion of the University Studies degree does not guarantee admission to a four-year institution.

Courses for the Associate in Arts in University Studies with an Emphasis in Social and Behavioral Sciences focus on the study and understanding of human behavior. Students will evaluate and interpret human societies; the institutions, organizations, and the groups that form them; the ways in which individuals and groups relate to one another; and various approaches and methodologies of the disciplines. Students completing this area may be interested in the following baccalaureate majors: anthropology, child development, education, history, nutrition, political science, psychology, social work, and sociology.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Describe general principles of the political institutions and government of the United States.
2. Analyze the role of social, political, and economic institutions within a historical perspective.
3. Evaluate the ways people act and interact in cultures, societies and social subgroups.
4. Assess how social issues are influenced by geographical and historical processes.
5. Apply knowledge of social and behavioral sciences theories and scientific methods in an assessment of real-world problems.

Social Science

ANTH 120, 140, ~~150, 160~~

BIO 134

COUN 120, 140

ECON ~~C2001, C2002~~, 110, ~~120, 121~~

ETHN 107, 114, 120, 128, 130, 131, 145, 162

GEND 116, 117

GEOG 106, 130

HIST 100, 101, 105, 106, 107, ~~108, 109~~, 118, 119, 122, 123, 124, 128, 129, 130, 131, 148, 180, 181, 275, 276, 277, C1001, C1002

KUMY 128, 129, 150, 160, 166, 170

POLS C1000

POSC 120, 124, 130, 140, 145, 147, 148, 150, 165, 166, 170

SOC 114, ~~120~~, 125, 130, 138, 150, 140

SOCI C1000

SPAN 145

SW 170

Behavioral Science

CD 115, ~~125~~, 131, 145

CDEV C1000

COMM 110, 124

ES 121

GEND 119

HED 120, 201, 203, 204, 251

PSY 119, 121, 125, 132, 134, 138, 140, 150, 170, 201, 211, 220

PSYC C1000