MATH 255	Differential Equations	3
PHIL 205	Critical Thinking and Writing in Philosophy	3
SOCO 101	Principles of Sociology	3
CHIN 101	First Course in Mandarin Chinese	5
CHIN 102	Second Course in Mandarin Chinese	5
CHIN 201	Third Course in Mandarin Chinese	5
CHIN 202	Fourth Course in Mandarin Chinese	5
FREN 101	First Course in French	5
FREN 102	Second Course in French	5
FREN 201	Third Course In French	5
FREN 202	Fourth Course in French	5
GERM 101	First Course in German	5
GERM 102	Second Course in German	5
GERM 201	Third Course in German	5
ITAL 101	First Course in Italian	5
ITAL 102	Second Course in Italian	5
ITAL 201	Third Course in Italian	5
JAPN 101	First Course in Japanese	5
JAPN 102	Second Course in Japanese	5
JAPN 201	Third Course in Japanese	5
LATI 101	First Course in Latin	5
LATI 102	Second Course in Latin	5
LATI 201	Third Course in Latin	5
RUSS 101	First Course in Russian	5
RUSS 102	Second Course in Russian	5
RUSS 201	Third Course in Russian	5
SPAN 101	First Course in Spanish	5
SPAN 102	Second Course in Spanish	5
SPAN 201	Third Course in Spanish	5
SPAN 202	Fourth Course in Spanish	5
SPAN 215	Spanish for Spanish Speakers I	5
SPAN 216	Spanish for Spanish Speakers II	5
TAGA 101	First Course in Tagalog	5
TAGA 102	Second Course in Tagalog	5
TAGA 201	Third Course in Tagalog	5
VIET 101	First Course in Vietnamese	5
VIET 102	Second Course in Vietnamese	5
VIET 201	Third Course in Vietnamese	5

Category B: Select one course from the following courses or any course(s) not selected in category A (3–4 units):

ECON 220	Economics of the Environment	3
MATH 252	Calculus with Analytic Geometry III	4

Total Units = 18–23

Electives as needed to meet maximum of 60 units required for the degree.

Education

Award Type	Units
Associate in Arts for Transfer Degree:	
Elementary Teacher Education	48–60

Associate in Arts in Elementary Teacher Education for Transfer Degree:

Description:
The Associate in Arts for Transfer in Elementary Teacher Education is intended for students who plan to complete a bachelor's degree in Elementary Teacher Education or a related major in the California State University (CSU) system. It is recommended by some but not all CSU campuses. Students who complete this degree and transfer to a participating CSU campus will be required to complete no more than 60 units after transfer to earn a bachelor's degree. It may not be appropriate preparation for students transferring to a CSU campus that does not recommend the degree.

Note: Students who plan to complete this degree should consult a counselor and visit www.assist.org for additional information about participating CSU campuses as well as university admission, degree and transfer requirements.

Award Notes:
Students are required to complete 60 semester or 90 quarter CSU transferable units, with a minimum overall grade point average of 2.0, to include the following:

Major:
- A minimum of 18 semester or 27 quarter units.
- A minimum grade of "C" or "P" or better for each course required in the major.

General Education: Complete one of the following general education options:
- The California State University General Education Breadth (CSUGE-B) pattern.
- The Intersegmental General Education Transfer Curriculum (IGETC) pattern.

Electives, as needed, to meet the 60 semester or 90 quarter CSU transferable units required for the degree.

Note: Completion of the California State University American Institutions graduation requirement is strongly recommended prior to transfer.

Program Goals

The purpose of this Associate in Arts degree program in Elementary Teacher Education is to offer an organized course of study that will prepare students intending to major in Elementary Teacher Education at the California State University.

Program Emphasis

The Elementary Teacher Education Associate in Arts for Transfer program emphasizes preparation for the major in Elementary Teacher Education at the California State University.

Courses Required for the Major:		Units
BIOL 107	General Biology – Lecture and Laboratory	4
CHIL 101	Human Growth and Development	3
COMS 103	Oral Communication	3
ENGL 101	Reading and Composition	3
ENGL 208	Introduction to Literature	3
EDUC 200	Teaching as a Profession	2
EDUC 203	Field Experience for Prospective Teachers	1
GEOG 104	World Regional Geography	3
GEOL 104	Earth Science	3
GEOL 120	Earth Science Laboratory	1
HIST 100	World History I	3
HIST 109	History of the United States I	3
POLI 102	Introduction to American Government	3
MATH 210A	Concepts of Elementary School Mathematics I	3
PHYN 105	Physical Science for Elementary Education	3
	or	
PHYS 100	Introductory Physics	4
	and	
CHEM 100	Fundamentals of Chemistry	3
	and	
CHEM 100L	Fundamentals of Chemistry Laboratory	1

Category A: Select one course (3 units)

ENGL 205	Critical Thinking and Intermediate Composition	3
PHIL 205	Critical Thinking and Writing in Philosophy	3

Category B: Select one course (3 units)

ARTF 100	Art Orientation	3
DRAM 105	Introduction to Dramatic Arts	3
MUSI 100	Introduction to Music	3

Category C: Select 0 to 12 additional units

ARTF 110	Art History: Prehistoric to Gothic	3
ARTF 111	Art History: Renaissance to Modern	3
ARTF 155A	Freehand Drawing I	3
BIOL 210A	Introduction to the Biological Sciences I	4
BIOL 210B	Introduction to the Biological Sciences II	4
BIOL 215	Introduction to Zoology	4
BIOL 235	Human Physiology	4
BIOL 250	Introduction to Botany	4
BLAS 140A	History of the U.S., Black Perspectives	3
BLAS 140B	History of the U.S, Black Perspectives	3
CHIC 141A	United States History from a Chicano Perspective	3
CHIC 141B	United States History from a Chicano Perspective	3
COMS 135	Interpersonal Communication	3
COMS 160	Argumentation	3
COMS 170	Small Group Communication	3
DANC 181	History of Dance	3
ENGL 105	Composition and Literature	3
ENGL 210	American Literature I	3
ENGL 211	American Literature II	3
ENGL 215	English Literature I: 800–1799	3
ENGL 216	English Literature II: 1800 – Present	3
ENGL 220	Masterpieces of World Literature I: 1500 BCE – 1600 CE	3
ENGL 221	Masterpieces of World Literature II: 1600 – Present	3
EXSC 240	Physical Education in the Elementary Schools	3
GEOG 102	Cultural Geography	3
GEOL 100	Physical Geology	3
GEOL 101	Physical Geology Laboratory	1
HIST 110	History of the United States II	3
HIST 150	Native Americans in United States History I	3
HIST 151	Native Americans in United States History II	3
HIST 175	California History	3
HUMA 103	Introduction to the New Testament	3
HUMA 104	Introduction to the Old Testament	3
HUMA 106	World Religions	3
MATH 119	Elementary Statistics	3
MATH 210B	Concepts of Elementary School Mathematics II	3
MATH 212	Children's Mathematical Thinking	1
MUSI 110	Music for Elementary School Teachers	3
PHIL 100	Logic and Critical Thinking	3
PHIL 102A	Introduction To Philosophy: Reality and Knowledge	3
PHIL 102B	Introduction To Philosophy: Values	3

PHIL 103	Historical Introduction To Philosophy	3
PHYN 100	Survey of Physical Science	3
PHYN 101	Survey of Physical Science Laboratory	1
PSYC 101	General Psychology	3
PSYC 230	Psychology of Lifespan Development	3

Total Units = 48–60

Electives as needed to meet maximum of 60 units required for the degree.

Liberal Studies

See "Liberal Studies Elementary Education Preparation" on page 282.

Engineering

Award Type	Units
Certificate of Achievement:	
Engineering	35
Associate of Science Degree:	
Engineering	35*

* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.

Description

Upon completion of the required pattern of engineering courses and other degree graduation requirements an Associate of Science Degree in Engineering will be granted. A certificate program is also offered in engineering.

Emphasis

The Engineering Program allows the student to fulfill the lower division engineering requirements for transfer programs to four-year institutions as well as acquire the necessary skills for employment in engineering.

Career Options

Most careers in engineering require education beyond the associate degree and some require a graduate degree. Career opportunities include Mechanical Engineering, Civil and Environmental Engineering, Electrical Engineering, Bioengineering, Computer Engineering, Industrial Engineering, Engineering Physics, Chemical Engineering, and Aerospace Engineering.

Program Learning Outcomes

Students who complete the Engineering Program will display the ability to:

- use proportional reasoning and graphical analysis to establish and analyze relationships between measured quantities.
- apply conceptual and mathematical tools to correctly predict the future state of physical systems.
- clearly communicate scientific principles, experimental results, and their implications.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Certificate of Achievement: Engineering

Courses Required for the Major:		Units
ENGE 151	Engineering Drawing	2
ENGE 200	Statics	3
ENGE 210	Properties of Materials	3
ENGE 250	Dynamics	3
Select 24 units from the following:		
CHEM 200	General Chemistry I – Lecture	3
CHEM 200L	General Chemistry I – Laboratory	2
CHEM 201	General Chemistry II – Lecture	3
CHEM 201L	General Chemistry II – Laboratory	2
ENGE 116	Computational Methods in Engineering	3
ENGE 260	Electric Circuits	3
MATH 141	Precalculus	5
MATH 150	Calculus with Analytic Geometry I	5
MATH 151	Calculus with Analytic Geometry II	4
MATH 252	Calculus with Analytic Geometry III	4
PHYS 195	Mechanics	5
PHYS 196	Electricity and Magnetism	5
PHYS 197	Waves, Optics and Modern Physics	5

Total Units = 35

Associate of Science Degree: Engineering

Courses Required for the Major:		Units
ENGE 151	Engineering Drawing	2
ENGE 200	Statics	3
ENGE 210	Properties of Materials	3
ENGE 250	Dynamics	3