ENGR 003  Introduction to Engineering  3 Units
Students will be introduced to the engineering profession and to the
devices, processes, and techniques utilized in solving engineering
problems. Students will learn modern engineering tools in hands-on and
computer-based labs. They will further develop engineering leadership
and team self-management skills. As an orientation to the engineering
field, students will learn what engineers do and what guides their thinking,
both analytically and ethically. Students will learn and employ research-
driven, affective strategies for academic success. As they explore
career and academic pathways, students will develop their long-term
engineering goals and will leave with a detailed plan for success in the
inspiring world of engineering. (C-ID ENGR 110).
Lecture Hours: 2  Lab Hours: 3  Repeatable: No  Grading: L
Advisory Level: Read: 3  Write: 3  Math: 4
Transfer Status: CSU/UC  Degree Applicable: AA/AS
CSU GE: None  IGETC: None  District GE: None

ENGR 006  Engineering Graphics  3 Units
Students will learn how to communicate engineering designs through
engineering drawings. Students will be introduced to 2-D and 3-D
computer-aided design (CAD) software. Topics include sketching,
orthographic projections, visualization skills, mechanical dimensioning
and tolerancing practices, and the engineering design process. (C-ID ENGR 150).
Lecture Hours: 2  Lab Hours: 3  Repeatable: No  Grading: L
Prerequisite: MATH 022 or MATH 025 with a C or better
Advisory Level: Read: 3  Write: 3
Transfer Status: CSU/UC  Degree Applicable: AA/AS
CSU GE: None  IGETC: None  District GE: None

ENGR 008  Programming and Problem-Solving in MATLAB  3 Units
Students will learn computer-based problem-solving methods relevant
to science and engineering utilizing the MATLAB environment. This
course draws from practical applications in engineering, physics,
and mathematics. Topics include procedural and object-oriented
programming, numerical analysis, and data structures. (C-ID ENGR 220).
Lecture Hours: 2  Lab Hours: 3  Repeatable: No  Grading: L
Prerequisite: MATH 071 or MATH 071H with a C or better
Advisory Level: Read: 3  Write: 3
Transfer Status: CSU/UC  Degree Applicable: AA/AS
CSU GE: None  IGETC: None  District GE: None

ENGR 032  Statics  3 Units
Students will analyze engineering structures in equilibrium. This is the
first course in engineering mechanics and covers principles of statics as
applied to particles and rigid bodies in two and three dimensions under
concentrated and distributed force systems. Topics include properties
of forces, moments, couples and resultants; two- and three-dimensional
force systems, analysis of trusses, and beams; distributed forces, shear
and bending moment diagrams, center of gravity, centroids, friction, and
area and mass moments of inertia. (C-ID ENGR 130).
Lecture Hours: 3  Lab Hours: None  Repeatable: No  Grading: L
Prerequisite: PHYS 004A and MATH 072; both with C or better
Advisory Level: Read: 3  Write: 3
Transfer Status: CSU/UC  Degree Applicable: AA/AS
CSU GE: None  IGETC: None  District GE: None