

# ENGINEERING

## Faculty

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**Full-Time**  
Alex Lynch

**Part-Time**  
John Craig  
Jess Sandoval

## Engineering Courses

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### **ENGR R100—Introduction to Engineering 2 units**

*1 hour lecture, 3 hours lab weekly*

Study of engineering, including the professions's requirements, opportunities, and responsibilities. Through lab assignments, students will be introduced to some of the computer skills needed in the engineering profession, such as word processing, spreadsheets, computer-aided design using the Internet and e-mail communications.

*Transfer credit: UC, CSU*

### **ENGR R105—Introduction to Engineering Design 3 units**

*1 hour lecture, 6 hours lab weekly*

Course designed to further students' understanding of the engineering profession by means of lecture/laboratory on systematic design techniques of engineering graphics, such as views, projections, sections, intersections developments, symbols used in mechanical and electrical drawings, materials and parts specifications, dimensioning, fits and tolerances. Freehand sketching and computer-aided design and drafting (CADD) systems are used.

*Transfer credit: UC, CSU*

### **ENGR R110—Engineering Materials 3 units**

*Prerequisites: CHEM R120.*

*3 hours lecture weekly*

This introductory course on engineering properties of materials applies basic principles of atomic and crystal structure of solids to the study of properties, and to selection and use of engineering materials.

*Transfer credit: UC, CSU*

### **ENGR R115—Engineering Statics and Strength of Materials 4 units**

*Prerequisites: MATH R121, ENGR R110.*

*4 hours lecture weekly*

Course covers equivalent force systems, free body diagrams and equilibrium, structural mechanics, behavior of deformable solids, stress and strain, tension, compression, flexure, torsion, beams, columns, statically indeterminate problems, multi-axial stresses, theories of strength. Course uses vector analysis and calculus.

*Transfer credit: UC, CSU*