

156L. Advanced Thermodynamics—Fluid Mechanics Laboratory (1)

Prerequisite: Engr 136L, 156 (or concurrently). Applications of advanced experimental methods used in engineering practice to thermo-fluid systems. (3 lab hours)

164. Machine Design (2)

Prerequisite: M E 154, Engr 136, 160 (or concurrently). Projects on the design of complete machines. (2–3 hour lecture-labs)

180. Senior Project (1)

Prerequisite: senior standing in mechanical engineering, approved subject, Engr 182 (or concurrently). Study of a problem under supervision of a faculty member; final typewritten report required. (Individual project except by special permission)

190. Independent Study (1–3; max see reference)

See *Academic Placement—Independent Study*.

191T. Topics in Mechanical Engineering (1–3; max total 6)

Prerequisite: permission of instructor. Investigation of selected mechanical engineering subjects not in current courses.

GRADUATE COURSES (Engr)

(See *Course Numbering Systems—Definitions and Eligibility*)

205. Computing in Engineering Analysis (3)

Prerequisite: Graduate status in engineering. Solution of engineering problems using digital computation. Modeling of engineering systems for numerical analysis.

221. Incompressible Fluids (3)

Prerequisite: Graduate status in engineering. The kinematics of liquids and gases, LaGrangian and Eulerian frames of reference. Equations of motion. Potential motion and potential functions. Stream functions.

231. Structures and Structural Dynamics (3)

Prerequisite: Graduate status in engineering. Analysis of elastic beams, frames, plates, and shells. Response of structures to transient and steady-state forcing functions.

290. Independent Study (1–3; max total 3)

Prerequisite: Graduate status in engineering. See General Information, CSUF Catalog, Independent Study.

291T. Topics in Civil Engineering (3; max total 6)

Prerequisite: Permission of instructor. Investigation of selected Civil Engineering topics.

298. Project (6; max total 6)

Prerequisite: Graduate status in engineering. See thesis, project and thesis alternative. Independent investigation of advanced character as the culminating requirement for the master's degree.

299. Thesis (6; max total 6)

Prerequisite: See Master's Degree—Thesis Requirements. Preparation, completion, and submission of an acceptable thesis for Master's Degree.

IN-SERVICE COURSES

(See *Course Numbering System*)

311. Professional Examination Review (2; may be repeated in different fields)**321. Professional Engineering Seminar (1–3; may be repeated in different fields)**