ENGINEERING (ENG) SOLANO CAMPUS

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ENG Courses

ENG 1100 Engineering Graphics (2 units)
Term Typically Offered: F

Offered at Solano Campus. Introduction to engineering graphics, the primary media for developing and communicating engineering system design information. Preparation of technical drawings using drafting instruments and computer-aided design (CAD) software is based on ANSI standards and includes orthographic projections, dimensioning, and tolerances. 2 lectures. Formerly ENG 100 at Cal Maritime.

ENG 1110 Introduction to Engineering and Technology (1 unit)
Term Typically Offered: F

Offered at Solano Campus. Introduction to the engineering and technology professions and curricula, including the professional responsibilities of engineers and engineering technologists, the organization of the engineering and technology profession, and the library and internet research, along with outside speakers from the profession. 1 lecture. Formerly ENG 110 at Cal Maritime.

ENG 1112 Introduction to Technical Communication (2 units)
Term Typically Offered: F, SP
2026-28 or later catalog: GE Area 1C
2020-26 catalogs: GE Area A1

Offered at Solano Campus. Introduction to oral communication with an emphasis on its application to the engineering profession. Development and practice in oral presentations to both technical and non-technical audiences. 2 lectures. Fulfills GE Area 1C (GE Area A1 for students on the 2020-26 catalogs). Formerly ENG 112 at Cal Maritime.

ENG 1120L Marine Engineering Laboratory (1 unit)
Term Typically Offered: SP
Concurrent: NAU 120 or NAU 1120.

Offered at Solano Campus. Common shipboard systems, their functions, arrangement, major components and principles of operation. Shipboard electrical systems/electronics and electronic troubleshooting using electrical/electronic test equipment such as multimeters, the reading and interpretation of schematics, and the use of technical manuals. 1 laboratory. Formerly ENG 120L at Cal Maritime.

ENG 2210 Engineering Computer Programming (2 units)
Term Typically Offered: F
Concurrent: COM 210L or COM 2210L for Oceanography majors.

Offered at Solano Campus. Introduction to the use and engineering applications of MATLAB, and an introduction to computer programming using MATLAB. Main topics include array and matrix manipulation, plotting in 2 and 3 dimensions, solving linear systems of equations, and solving nonlinear equations. In addition, the basic programming constructs, including input and output formatting, functions, conditional statements, and loops are introduced. Introduction to linear algebra. 2 lectures. Formerly COM/ENG 210 at Cal Maritime.

ENG 2250 Electrical Circuits and Electronics (3 units)
Term Typically Offered: SP
Prerequisite: PHY 205 or PHY 2205. Concurrent: ENG 250L or ENG 2250L.

Offered at Solano Campus. Theory and analysis of DC and AC circuits. Real and ideal sources, power transfer and power factor. Resistor, capacitor, and inductor circuits, transient response, frequency response and transfer functions. Single phase and multiphase power systems, and amplifier circuits and semiconductor devices. 3 lectures. Formerly ENG 250 at Cal Maritime.

ENG 2250L Electrical Circuits and Electronics Laboratory (1 unit)
Term Typically Offered: SP
Prerequisite: PHY 205 or PHY 2205. Concurrent: ENG 250 or ENG 2250.

Offered at Solano Campus. Provides hands-on experience in circuit and electronics analysis to support instruction and theory. Use of meters, scopes and breadboard techniques to construct and measure transient and steady-state responses. MATLAB simulations used in response prediction. 1 laboratory. Formerly ENG 250L at Cal Maritime.

ENG 3310 Engineering Ethics (3 units)
Term Typically Offered: SP
2026-28 or later: Upper-Div GE Area 4
2020-26 catalogs: Upper-Div GE Area D
Prerequisite: Senior standing; and EGL 220 or EGL 2220.

Offered at Solano Campus. Addresses the major concepts of ethics as applied to the discipline and practice of engineering. Including the scope and aims of engineering ethics, moral reasoning and ethical theories, engineering and society, ethics and the law, the engineer's responsibility for safety, engineers and the corporation, conflict of interest/crime in the workplace, rights of engineers/rules of professional conduct, ethics, global ethical issues involving the engineering community, engineering ethics in the computer age, environmental ethics, engineers as managers and leaders, engineers as expert witnesses, and steps to principled reasoning/common rationalizations. 3 lectures. Fulfills GE Upper-Division 4 (GE Area Upper-Division D for students on the 2020-26 catalogs). Formerly ENG 310 at Cal Maritime.

ENG 4430 Naval Architecture (3 units)
Term Typically Offered: F
Prerequisite: One of the following: ET 332, ET 3332, ME 332, or ME 3332; and one of the following: ET 340, ET 3340, ME 340 or ME 3340.

Offered at Solano Campus. Covers ship nomenclature, initial and damaged stability theory and calculations, hull structural design considerations, ship resistance and propulsion power prediction. 3 lectures. Formerly ENG 430 at Cal Maritime.

ENG 4472 Facilities Management (3 units)
Term Typically Offered: SP
Prerequisite: CEP 270 or CEP 2270.

Offered at Solano Campus. Introductory course to the Facilities Engineering profession. Issues from various engineering and technology disciplines are covered and integrated into a structure consistent with the understanding and experiences needed in the facilities engineering management profession. 3 lectures. Formerly ENG 472 at Cal Maritime.