

ED 4901, 4902, 4903 Selected Topics **One to three hours**

An intensive study of a selected area of the school curriculum designed to meet the particular needs of teacher candidates and in-service teachers or administrators. Specific subtitles may be added. Division of Teacher Education approval required.

Offered each semester

EE (Electrical Engineering)

EE 2113 Electrical Systems I **Three hours**

An introduction to electrical circuits, circuit laws and electronics. A study of the basic components of analog and digital systems such as energy sources, resistors, capacitors, inductors, diodes, operational amplifiers, filters, gates and switches. Use of case studies and a design project in engineering electrical systems. Three hours lecture-discussion per week. Prerequisites: EN 1123, MTH 1134

Offered fall semester

EE 2123 Electrical Systems II **Three hours**

A study of network descriptions, network functions, operational amplifiers, frequency response and time response of R-C, R-L, R-L-C networks, network theorems, two-port theory, polyphase networks and magnetically coupled networks. Three hours lecture-discussion per week. Prerequisites: EE 2113 and MTH 2114

Offered spring semester

EE 3211 Electronics Laboratory **One hour**

Application of discrete and integrated components to linear and digital electronic circuits. Laboratory reporting procedures. Includes a design component. One three-hour laboratory each week. Prerequisite or corequisite: EE 3213

Offered fall semester

EE 3213 Electronics I **Three hours**

A study of diodes and transistors and the circuits that use them. Topics include biasing, low and high frequency effects, amplifier design, power supplies and operational amplifiers. Includes a design component. Three hours lecture-discussion per week. Prerequisite: EE 2123

Offered fall semester

EE 3223 Digital Electronics **Three hours**

A study of bipolar and MOS switching circuits, combinational and sequential logic design and programmable logic devices. Includes a design component. Two hours lecture-discussion and one three-hour laboratory per week. Prerequisite: EE 2113 and EN 2112

Offered spring semester

EE 3501, 3502, 3503 Selected Topics **One to three hours**

A study of a special area of electrical engineering such as computer design, microprocessor applications, transmission line applications, power electronics, active filters, electric motor design or direct energy converters. May also be used as internship credit or independent study. Prerequisite: consent of department head.

Offered upon sufficient request

EE 4123 Electromagnetics **Three hours**

Application of Maxwell's equations to transmission lines, waveguides and antennas. Includes antenna design. Three hours lecture-discussion per week. Prerequisite or corequisite: EN 3224

Offered spring semester

- EE 4303 Digital Signal Processing** **Three hours**
Theory and techniques of characterizing discrete time signals. Includes Fourier and Z-transform, flow graphs, digital filter design, quantization effects and spectral estimation. Includes a design component. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisite: EE 2123
Offered upon sufficient request
- EE 4313 Analog Signal Processing** **Three hours**
Includes signal representation, Fourier techniques, convolution, correlation, modulation, spectral density, filter synthesis and signal design. Includes a design project. Three hours lecture-discussion per week. Prerequisite: EE 2123
Offered fall semester
- EE 4323 Digital Systems** **Three hours**
Topics may be selected from advanced logic design, coding, digital filters, computer systems, digital communications, or digital control. Two hours lecture-discussion and one three-hour laboratory per week. Prerequisites: EN 3123, EE 3213, 3223
Offered upon sufficient request
- EE 4423 Communication Systems** **Three hours**
Amplifiers, oscillators, phase-locked loops, mixers, amplitude modulation, angle modulation, pulse modulation and an introduction to information theory. Includes a design project. Three hours lecture-discussion-laboratory per week. Prerequisite: EE 4313
Offered spring semester
- EE 4503 Data and Computer Communications** **Three hours**
A study of data transmission, encoding, multiplexing, networking, circuit and packet switching, and local and wide area networks. Also computer communication architecture including networking and protocols. Includes a design component. Two hours discussion and one three-hour laboratory per week. Prerequisite: EE 2123
Offered upon sufficient request
- EE 4603 Electronics II** **Three hours**
Analysis and design of analog circuits using bipolar and field effect transistors. Includes high frequency amplifiers, power amplifiers oscillators, active filters, digital to analog conversion and analog to digital conversion. Includes a design component. Two hours lecture-discussion and one three-hour laboratory per week. Prerequisite: EE 3213
Offered upon sufficient request
- EE 4703 Antennas** **Three hours**
A study of antenna systems including the monopole, dipole, loop, helical, microstrip antennas, and parabolic dish, as well as arrays. The course covers the topics of radiation pattern, directivity, gain, efficiency, impedance tuning, and an introduction to propagation. Includes antenna system design. Three hours lecture-discussion per week. Prerequisite: EN 3224.
Offered upon sufficient request

EE 4803 Waveguide Structures

Three hours

This study of waveguide structures begins with a brief review of field theory and transmission lines. Topics include waveguide transmission, higher order modes, cavities, active and passive devices. Laboratory measurements of frequency, wavelength, power, attenuation, impedance and coupling are covered. Two hours lecture and one two-hour laboratory per week. Prerequisite: EN 3224

Offered upon sufficient request

EGL (English)

EGL 1013 English I

Three hours

Essay writing featuring several rhetorical styles: exposition, narration, argumentation, and description.

Offered each semester

EGL 1023 English II

Three hours

An introduction to literature through the study of short stories, drama, poetry, and novels. In addition to short compositions, a lengthy research paper is required.

Prerequisite: EGL 1013

Offered each semester

EGL 1093H Honors: Composition

Three hours

A course which has as its thematic core Native American and Ozark cultures. Focus is on research, problem solving, and speaking skills. Methods include experiential, reflective, integrative, and collaborative learning, and teaching by way of field experiences, group projects, interviews, guest speakers, and seminar-type participation. Prerequisite: admission to the Honors Program or permission of the Honors Committee

Offered fall semester

EGL 2213 World Literature I

Three hours

Readings from the major writers of the Western World from ancient through Renaissance. Includes readings from related non-Western literature. A scholarly paper is required. Prerequisite: EGL 1023

Offered fall semester (odd-numbered years)

EGL 2223 World Literature II

Three hours

Readings from writers of the Western World from the Enlightenment through the contemporary period. Includes readings from related non-Western literature. A scholarly paper is required. Prerequisite: EGL 1023

Offered spring semester (even-numbered years)

EGL 2243 Young Adult Literature

Three hours

An introduction to young adult literature as a genre, including an overview of the history of the field, experiences with representative samples of the literature, and guidelines to be used in the promotion and evaluation of such works for use in the classroom and family settings.

Offered spring semester

EGL 2313

See Adult and Continuing Education.