

Education: Teaching English to Speakers of Other Languages (EDTE)

EDTE 540 THEORIES AND RESEARCH IN SECOND LANGUAGE ACQUISITION (3)

This course provides an overview and critical examination of the theories and research in second language acquisition (SLA) and explores relationships between this work and second language teaching and learning. Major theories examined will include those from cognitive, psycholinguistic, sociolinguistic, and sociocultural perspectives. Prerequisite: admission to the SOE M.A. Program.

EDTE 541 ADVANCED PEDAGOGICAL GRAMMAR (3)

In this course you will gain an understanding of the grammar of English and how to use this understanding in teaching English as a second or foreign language. We will explore a variety of current perspectives and approaches to describing and teaching grammar. Prerequisites: admission to SOE M.A. Program, EDTE 544.

EDTE 542 TEACHING MULTILINGUAL WRITERS (3)

This course investigates the theory and practice of learning to write in a second language from an applied linguistics perspective. Topics will include the theoretical developments in L1 and L2 composition, current research issues, and pedagogical concerns, among others. Prerequisite: Admission to the SOE M.A. Program, EDTE 544.

EDTE 543 PRACTICUM IN TEACHING ESL (2)

The practicum is designed to provide students with an opportunity to observe an ESL teacher(s) and to have a supervised experience in teaching English learners. A seminar accompanies the field experience. Prerequisites: admission to the SOE M.A. Program, EDTE 544.

EDTE 544 ADVANCED METHODS OF TEACHING ENGLISH AS A SECOND/FOREIGN LANGUAGE (3)

This course is designed to provide an in-depth study of methods for teaching English to non-native speakers at various levels. Students will link theory to practice through the study of current methods for teaching and developing speaking, listening, reading, and writing processes in English. Prerequisite: admission to the SOE M.A. Program.

EDTE 545 SPECIAL TOPICS IN TEACHING ESL/EFL (3)

Special Topics in the fields of applied and sociolinguistics related to teaching English as a second or foreign language will be offered on a rotating basis. Prerequisite: admission to the SOE M.A. Program.

Engineering Science (ES)

ES 101A COMMUNICATION IN THE DIGITAL AGE (3)

Concept of digital age, technology, and modern communications, understanding various routinely used technical terms and commonly known computer and communications components and devices; understanding digital voice, video and data communication, mobile communication, and communication through internet; ill effects such as radiation, invasion of privacy, unethical usages and protection from them; assessment of learning. (The companion laboratory course ES 101B is strongly recommended; the course does not apply to ES major). Prerequisite: GE math eligibility. This course meets GE Area B3 requirement.

ES 101B COMMUNICATION IN THE DIGITAL AGE LABORATORY (1)

Laboratory to demonstrate the concepts discussed in the course ES 101A and give hands-on experience to the students. (Does not apply to the ES major). Co-requisite: ES 101A, or permission of the instructor. This course meets the GE science laboratory requirement.

ES 110 INTRODUCTION TO ENGINEERING AND LABORATORY EXPERIENCE (2)

Lecture, 1 hour; Laboratory, 3 hours. This course is designed to introduce principles of engineering to the students and expose them to the electronics and computer lab environment. The students are given opportunity to design and build some simple analog and digital circuits and make measurements using various types of lab equipment.

ES 112 FUNDAMENTALS OF DIGITAL LOGIC DESIGN (1)

Lecture, 1 hour. Review of set theory and binary system, digital logic, Venn diagram, logic gates, minimization techniques, combinatorial logic and design of simple combinatorial logic circuits such as 1-bit adder; concept of coders, decoders, and integrated circuits. Prerequisites: ES 110 and MATH 142E, or consent of instructor.

ES 210 DIGITAL CIRCUITS AND LOGIC DESIGN (4)

Lecture, 3 hours, Laboratory, 3 hours Logic gates, combinatorial logic and analysis and design of combinatorial circuits, electronic circuits for various logic gates. Flip-flops, registers, and counters, sequential circuits and state machines. Various logic families and comparison of their electrical characteristics such as fan-out, rise and fall times, delay, etc. Concepts of machine, assembly and high level languages and relationships between them, basic principles of computer design. Laboratory work will include designing, building, and testing of digital circuits, logic, and sequential circuits. Prerequisites: ES112, Co-requisite: ES 230; or consent of instructor.

ES 220 ELECTRIC CIRCUITS (3)

Lecture, 3 hours. Review of Kirchhoff's laws, circuit design, node and mesh analysis, etc.; Thevenin's theorem, Norton's theorem, steady state and transient analysis, transfer function. AC power and three-phase circuits, Y-Delta equivalents. Multi-port networks, two-port networks with energy storage, ideal transformers. Amplifiers and frequency response, filters. Prerequisites: ES 110 and MATH 211; Co-requisite: ES 221 and PHYS 214; or consent of instructor.

ES 221 ELECTRIC CIRCUITS LABORATORY (1)

Laboratory, 3 hours. Laboratory work on material treated in ES 220 emphasizing elementary design principles. Prerequisite: ES 110. Co-requisite: ES 220.