

Electrical Engineering BSEE Program - 2022-2023

| 1st Semester | 2nd Semester | 3rd Semester | 4th Semester | 5th Semester | 6th Semester | 7th Semester | 8th Semester |
|--|--|--|---|--|--|---|---|
| FALL | SPRING | FALL | SPRING | FALL | SPRING | FALL | SPRING |
| MA125 (4) Calculus I | MA126 (4) Calculus II <MA125> | MA227 (4) Calculus III <MA126> | MA238 (3) Diff. Equations (MA227) | EE331 (3) Physical Electronics <PH202, CH131, MA238> | EE334 (3) Digital Electronics <EE331> | EE431 (3) Analog Electronics <EE334> | EE437 (1) Electronics Lab <EE334> (EE431) |
| CH131 (4) Chemistry I | PH201 (4) Physics I (cal based) <MA125, EH101> | PH202 (4) Physics II (cal based) <PH201, MA126> <EH101> | EE223 (3) Network Analysis <EE220, PH202> (MA227, MA238) | EE321 (3) Signals & Systems <EE223, MA238> | EE328 (3) Feedbk Control Sys. <EE321> | *EE401 (1) W Intro to ECE Design <CA110, EE321> (EE334, EE368) | **EE404 (3) W ECE Design <EE328, EE334> <EE368, EE401> |
| EH101 (3) Composition I | EH102 (3) Composition II <EH101> | EE220 (3) Circuit Analysis <MA125, PH201> | MA237 (3) Linear Algebra I <MA126> | EE227 (1) Circuits and Dev Lab (EE223, EH102) | EE322 (3) Prob. & Stat. Anal <MA238> (EE321) | EE465 (3) Digital Signal Proc. <EE321, EE322> | EE4XX (3) Tech Elective |
| EG101 (2) Intro to Engineer. <MA112> | CPE260 (3) Intro. to C++ (MA125) | EE263 (3) Digital Logic <CPE260> | EE264 (3) Microproc. <EE263 or CSC228> | EE368 (1) Microproc. Lab <EE268>, (EE264) | EE372 (3) Communications <EE321>, (EE322) | EE4XX (3) Tech Elective | EE4XX (3) Tech Elective |
| General Ed (3) L/H/FA or H/SBS | General Ed (3) L/H/FA or H/SBS | General Ed (3) L/H/FA or H/SBS | EE268 (1) Digital Logic Lab <EE263 or CSC228> | EE381 (3) Electrom. Conv. (EE223) | EE385 (1) Energy Conv. Lab <EE381, EE 227> | EE4XXL (1) Tech Elective Lab | General Ed (3) L/H/FA or H/SBS |
| | | | EG 270 (3) Thermodynamics <MA126> | EE354 (3) Electromag. I <MA237, MA238> <PH202> | EE355** (3) Electromag. II <EE354> | EG 231 (3) Ethics & Eng Econ <MA126> | |
| | | | | General Ed (3) L/H/FA or H/SBS | | General Ed (3) L/H/FA or H/SBS | |

< > indicates prerequisite courses; () indicates corequisite courses

Courses in shaded boxes indicate PCS course: C-grade or higher required

* EE Courses only taught in the fall semester

** EE Courses only taught in the spring semester

| | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 16 cr-hr | 17 cr-hr | 17 cr-hr | 16 cr-hr | 17 cr-hr | 16 cr-hr | 17 cr-hr | 13 cr-hr |
|----------|----------|----------|----------|----------|----------|----------|----------|

| General Education Requirements | | | |
|---|---------------------|--|-------------------------|
| All students are required to take EH 101 and EH 102, English Composition I and II, plus 18 hours of general education courses | | | |
| Literature, Humanities and Fine Arts: 9 hrs total | | History, Social Sciences, and Behavioral Sciences: 9 hrs total | |
| L/H/FA | | H/SBS | |
| <u>Literature - 3 hrs required</u> | | <u>History -3 hrs required</u> | |
| EH 215, 216 | British Literature | HY 101, 102 | History of Civilization |
| EH 225, 226 | American Literature | HY 135, 136 | US History |
| EH 235, 236 | World Literature | | |
| <u>Fine Arts - 3 hrs required</u> | | <u>Social and Behavioral Sciences - 3 hrs required</u> | |
| ARH 100 | Survey of Art | GS 101 | Gender Studies |
| ARH 103, 123 | Art History | AIS 201 | Seasons of Life |
| ARS 101 | Art Appreciation | AN 100, 101 | Anthropology |
| DRA 110 | Intro to Drama | CA 100, 211 | Communications |
| MUL 101 | Intro to Music | ECO 215, 216 | Economics |
| | | GEO 114, 115 | Geography |
| | | PSC 130 | US Government |
| <u>Humanities - 3 hrs required</u> | | | |
| CA 110 | Public Speaking | PSY 120, 250, 121 | Psychology |
| | | SY 109, 112 | Sociology |
| | | IS 100 | Global Issues |

Student Responsibility: The University of South Alabama will endeavor to provide timely and accurate advisement. However, students are ultimately responsible for selecting and registering for courses, meeting course pre-requisites and graduation requirements, and adhering to University policies and procedures.

| BSEE Elective Requirements | | | |
|---|--------------------------------|--|--------------------------------|
| Three EE technical electives are required and must include a two-course concentration from the following concentration areas | | | |
| Concentration area | | Two courses required in one concentration area | |
| Control Systems: | | EE 422, EE 423, EE 424, EE 427, EE438, EE 468 | |
| Communications and Networks: | | EE 441, EE 444, EE 453, EE 456, EE 471, EE 473 | |
| Digital Systems: | | EE 438, EE 440*, EE 441, EE 443*, EE 454, EE 457, EE 468, EE 469 | |
| Electromagnetics and Optics: | | EE 450, EE 452, EE 453, EE 455, EE 456, EE 458, EE 488 | |
| Electronics: | | EE 430, EE 432, EE 438, EE 439, EE 455, EE 470, EE 482, EE 486 | |
| Power Systems: | | EE 430, EE 481, EE 482, EE 483, EE 484, EE 485, EE 486, EE 488, EE 489 | |
| Courses | | | |
| EE 422 | Adv Feedback Control Systems | EE 456 | Fiber Optic Communication Sys |
| EE 423 | Modern Control Theory | EE 457 | Embedded System Design |
| EE 424 | Nonlinear Control Systems | EE 458 | Radar Systems |
| EE 427 | Digital Control Systems | EE 465 | Digital Signal Processing |
| EE 430 | Power Semiconductor Dev | EE 468 | Programmable Logic Controllers |
| EE 432 | Microelectronic Devices | EE 469 | Signal Integrity |
| EE 438 | Virtual Instrumentation | EE 470 | Synth Active-Passive Networks |
| EE 439 | VSLI Technology-Fabrication | EE 471 | Wireless Communication |
| EE 440* | HDL Logic Synthesis | EE 473 | Advanced Communication Systems |
| EE 441 | Computer Networks | EE 481 | Electrical Machines |
| EE 443* | HDL Logic Simulation | EE 482 | Switch Mode Power Conversion |
| EE 444 | Wireless Networks | EE 483 | Power Systems I |
| EE 450 | Fundamentals of Fourier Optics | EE 484 | Power Systems II |
| EE 452 | Microwave Engineering | EE 485 | Power Distrib and Utilization |
| EE 453 | Antenna Theory and Design | EE 486 | Power Electronics |
| EE 454 | Digital Computer Architecture | EE 488 | Illumination Engineering |
| EE 455 | Optoelectronics | EE 489 | Renewable Energy |
| Credit for both EE 440 & EE 443 not allowed | | | |
| Senior Lab -May be selected from | | | |
| EE 446 | Embedded System Design Lab | | |
| EE 447 | Programmable Logic Devices Lab | | |
| EE 449 | Control and Communications Lab | | |