

2021-2022 Degree Map Program: Bachelor of Science in Electrical Engineering, Major: Electrical Engineering

This map is a term-by-term sample course schedule. The milestones listed to the right of each term are designed to keep you on course to graduate in four years. The Sample Schedule serves as a general guideline to help you build a full schedule each term. See course descriptions and prerequisites at <http://www.atu.edu/catalog/>

Employment Information: Electrical engineers design, develop, build, and test, electrical and electronic devices and systems. These systems include robotics, controls, electric motors, radar and navigation systems, communications systems, electronic equipment, and power generation and distribution devices and systems including renewable energy applications.

#Prerequisite Courses: ENGL 0303 _____ MATH 0803 _____ MATH 1003 _____ MATH 0903 _____ MATH 1113 _____ MATH 1110 _____ MATH 1203 _____ MATH 1914 _____

| Sample Schedule | Milestones/Notes | |
|---|------------------|---|
| Semester 1 | Hrs. | Grade |
| ENGL 1013- Comp I (ACTS=ENGL 1013) | 3 | # |
| Fine Arts & Humanities | 3 | |
| CHEM 2124/2120- General Chemistry I (ACTS= CHEM 1414) | 4 | Milestone |
| MATH 2914- Calculus I (ACTS= MATH 2405) | 4 | # |
| ELEG 1011- Intro. to Electrical Engineering | 1 | |
| TECH 1001- Orientation to the University | 1 | |
| Total hours | 16 | GPA |
| Semester 2 | Hrs. | Grade |
| ENGL 1023- Comp II (ACTS= ENGL 1023) | 3 | # |
| COMS 2104- Foundations of Computer Programming I | 4 | # (COMS 1403/1411 not required) |
| MATH 2924- Calculus II (ACTS= MATH 2505) | 4 | # Milestone |
| ELEG 2134/2130- Digital Logic Design/ Lab | 4 | Pre-req: ELEG 1011 or COMS 2104 - Milestone |
| Total hours | 15 | GPA |

| Sample Schedule | Milestones/Notes | |
|--|------------------|------------------------------|
| Semester 5 | Hrs. | Grade |
| ELEG 3003 or MCEG 3003- Modeling Design | 3 | Milestone |
| ELEG 3103- Electronics I | 3 | Fall Only Course - Milestone |
| ELEG 3153- Electrical Machines | 3 | Fall Only Course- Milestone |
| Technical Elective- Department Approval Required | 3 | |
| ELEG Engineering Elective (3000-4000 level) | 3 | |
| Total hours | 15 | GPA |

| Sample Schedule | Milestones/Notes | |
|--|------------------|-------------------------|
| Semester 6 | Hrs. | Grade |
| ELEG 3123- Signals and Systems | 3 | Spring only |
| ELEG 3143- Electromagnetics | 3 | Spring only |
| ELEG 4103- Electronics II | 3 | Milestone - Spring Only |
| ELEG 4202 or MCEG 4202- Engineering Design | 2 | Milestone |
| COMS 2903 Discrete Structures or MATH 2703 Discrete Math | 3 | |
| Total hours | 14 | GPA |

| Sample Schedule | Milestones/Notes | |
|--|------------------|--------------|
| Semester 3 | Hrs. | Grade |
| COMS 2203- Foundations of Computer Prog II | 3 | |
| PHYS 2114/2000- Calculus-Based Physics I (ACTS= PHYS 2034) | 4 | Milestone |
| MATH 3243- Differential Equations I | 3 | Milestone |
| ELEG 2103- Electrical Circuits I | 3 | Milestone |
| ELEG 3133- Microprocessor Systems Design | 3 | |
| Total hours | 16 | GPA |

| Sample Schedule | Milestones/Notes | |
|--|------------------|--------------|
| Semester 7 | Hrs. | Grade |
| Social Sciences | 3 | |
| U.S. History/Government | 3 | |
| ELEG 4113-Digital Signal Processing | 3 | Fall Only |
| ELEG 4143- Communication Systems I | 3 | Fall Only |
| ELEG 4191- Electrical Design Project I | 1 | |
| ELEG 4303- Control Systems | 3 | |
| Total hours | 16 | GPA |

| Sample Schedule | Milestones/Notes | |
|---|------------------|--------------|
| Semester 4 | Hrs. | Grade |
| PHYS 2124/2010- Calculus-Based Physics II (ACTS= PHYS 2044) | 4 | Milestone |
| MATH 2934- Calculus III (ACTS= MATH 2603) | 4 | Milestone |
| ELEG 2113/2111- Electrical Circuits II/ Lab | 4 | Milestone |
| STAT 3153 Applied Statistics 1 | 3 | |
| Total hours | 15 | GPA |

| Sample Schedule | Milestones/Notes | |
|--|------------------|--------------|
| Semester 8 | Hrs. | Grade |
| ELEG 4122- Electrical Systems Lab | 2 | Spring only |
| Fine Arts & Humanities | 3 | |
| ELEG 4192- Electrical Design Project II | 2 | |
| Technical Elective- Department Approval Required | 3 | |
| ELEG Engineering Elective (3000-4000 level) | 3 | |
| Total Hours | 13 | GPA |

The Arkansas Course Transfer System (ACTS) is designed to assist in planning the academic progress of students. This system contains information about the transferability of courses within Arkansas public colleges and universities. The Arkansas Course Transfer System can be accessed at <https://www.adhe.edu/students-parents/colleges-universities/transfer-info.-for-students/>

| Fine Arts and Humanities |
|--|
| ART 2123 Experiencing Art (ACTS=ARTA1003) |
| MUS 2003 Introduction to Music (ACTS=MUSC1003) |
| TH 2273 Introduction to Theatre (ACTS=DRAM 1003) |
| ENGL 2173 Introduction to Film |
| JOUR 2173 Introduction to Film |
| ENGL 2183 Honors Introduction to Film |
| ENGL 2003 Introduction to World Literature (ACTS=ENGL2113) |
| ENGL 2013 Intro. to American Literature (ACTS=ENGL2653) |
| ENGL 2023 Honors World Literature |
| PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103) |
| PHIL 2043 Honors Introduction to Philosophy |
| PHIL 2053 Introduction to Critical Thinking (ACTS=PHIL 1003) |

| U.S. History & Government |
|---|
| HIST 1903 Survey of American History |
| HIST 2003 United States History to 1877 (ACTS=HIST2113) |
| HIST 2043 Honors United States History to 1877 |
| HIST 2013 United States History from 1877 (ACTS=HIST2123) |
| POLS 2003 American Government (ACTS=PLSC2003) |

General Electives: 0

indicates a "C" or better is required (C > required in COMS 2104 only as prereq for COMS 2203)

| Social Sciences |
|---|
| ECON 2013 Principles of Economics II (ACTS=ECON2203) |
| SOC 1003 Introductory Sociology (ACTS=SOC1013) |
| PSY 2003 General Psychology (ACTS=PSYC1103) |
| ANTH 1213 Intro. to Anthropology (ACTS=ANTH1013) |
| ANTH 2003 Cultural Anthropology (ACTS=ANTH2013) |
| GEOG 2013 Regional Geography of the World (ACTS=GEOG2103) |
| AMST 2003 American Studies |

Graduation Requirements:
 Min. hours 3000-4000 level courses: 40
 No more than 4 PE activity hours
 Min. hours required:120
 2.00+ GPA