

2017-2018 Degree Map Program: Bachelor of Science Electrical Engineering, Major: Electrical Engineering With Computer Engineering Option

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/academics/catalog/>.

Employment Information: Electrical and Computer engineers design, develop, build, and test computer hardware, software, and systems. Other electrical systems may include robotics, controls, communications systems, and electronic equipment.

#Prerequisite Courses: ENGL 0303 _____ ENGL 0404 _____ READ 0103 _____ MATH 0803 _____ MATH 1003 _____ MATH 0903 _____ MATH 0900 _____ MATH 1110 _____ MATH 1203 _____ MATH 1914 _____

| Sample Schedule | | Milestones/Notes | |
|---|----|------------------|--|
| Semester 1 | | Hrs. | Semester 1 |
| ENGL 1013 -Comp I (ACTS=ENGL 1013) | 3 | # | |
| CHEM 2124/2120- General Chemistry I (ACTS= CHEM 1414) | 4 | | |
| MATH 2914- Calculus I (ACTS= MATH 2405) | 4 | | #C or > required for Gen Ed. Milestone |
| TECH 1001- Orientation to the University | 1 | | |
| ELEG 1011- Intro. to Electrical Engineering | 1 | | |
| U.S. History/Government | 3 | | |
| Total hours | 16 | GPA | |
| Semester 2 | | Hrs. | Semester 2 |
| 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 | | Milestone |
| Total hours | 15 | GPA | |
| Semester 3 | | Hrs. | Semester 3 |
| PHYS 2114/2000- General Physics I (ACTS= PHYS 2034) | 4 | | Milestone |
| COMS 2203- Foundations of Computer Prog II | 3 | | 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 4 | | Hrs. | Semester 4 |
| PHYS 2124/2010- General Physics II (ACTS= PHYS 2044) | 4 | | Milestone |
| MATH 2934- Calculus III (ACTS= MATH 2603) | 4 | | Milestone |
| ELEG 3173 or MATH 3173- Math Methods | 3 | | Spring only |
| ELEG 2113/2111- Electrical Circuits II/ Lab | 4 | | Milestone |
| Total hours | 15 | GPA | ELEG ADVISOR ASSIGNED |

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 <http://acts.adhe.edu/>

| Fine Arts and Humanities | U.S. History & Government |
|---|---|
| ART 2123 Experiencing Art (ACTS=ARTA 1003) | HIST 1903 Survey of American History |
| MUS 2003 Intro to Music (ACTS=MUSC 1003) | HIST 2003 United States History to 1877 (ACTS=HIST2113) |
| TH 2273 Intro to Theatre (ACTS =DRAM 1003) | HIST 2043 Honors United States History to 1877 |
| ENGL 2173 Intro to Film | HIST 2013 United States History from 1877 (ACTS=HIST2123) |
| JOUR 2173 Intro to Film | POLS 2003 American Government (ACTS=PLSC2003) |
| ENGL 2003 Intro to World Literature (ACTS=ENGL 2113) | |
| ENGL 2013 Intro to American Literature (ACTS=ENGL 2653) | |
| ENGL 2023 Honors World Literature | |
| PHIL 2003 Intro to Philosophy (ACTS=PHIL 1103) | |
| PHIL 2043 Honors Introduction to Philosophy | |

| Sample Schedule | | Milestones/Notes | |
|---|----|------------------|-------------------|
| Semester 5 | | Hrs. | Semester 5 |
| Social Sciences | 3 | | |
| ELEG 3003 or MCEG 3003- Modeling Design | 3 | | Milestone |
| ELEG 3103- Electronics I | 3 | | Fall Only |
| COMS 2903-Discrete Structures | 3 | | |
| Fine Arts & Humanities | 3 | | |
| Total hours | 15 | GPA | |

| Sample Schedule | | Milestones/Notes | |
|--|----|------------------|-----------------------------|
| Semester 6 | | Hrs. | Semester 6 |
| COMS 2213- Data Structures | 3 | | Spring only |
| COMS 2223- Computer Organization and Prog. | 3 | | Spring only |
| ELEG 3123- Signals and Systems | 3 | | Spring only |
| ELEG 3143- Electromagnetics | 3 | | Spring only |
| ELEG 4103- Electronics II | 3 | | Spring only |
| Total hours | 15 | GPA | APPLY FOR GRADUATION |

| Sample Schedule | | Milestones/Notes | |
|--|----|------------------|-------------------|
| Semester 7 | | Hrs. | Semester 7 |
| ELEG 4113-Digital Signal Processing | 3 | | Fall Only |
| ELEG 4133- Advanced Digital Design | 3 | | Fall Only |
| ELEG 4143- Communication Systems I | 3 | | Fall Only |
| ELEG 4202 or MCEG 4202- Engineering Design | 2 | | Milestone |
| ELEG 4303- Control Systems | 3 | | |
| ELEG 4191- Electrical Design Project I | 1 | | |
| Total hours | 15 | GPA | |

| Sample Schedule | | Milestones/Notes | |
|---|----|------------------|----------------------------------|
| Semester 8 | | Hrs. | Semester 8 |
| Fine Arts & Humanities | 3 | | Graduation Requirements: |
| COMS 3703- Operating Systems | 3 | | Spring only |
| ELEG 4122- Electrical Systems Lab | 2 | | Spring only |
| ELEG 4192- Electrical Design Project II | 2 | | No more than 4 PE activity hours |
| Engineering Elective (3000-4000 level) | 3 | | Min. hours required:120 |
| Total Hours | 13 | GPA | 2.00+ GPA |

General Electives: 0

indicates a "C" or better is required

| General Electives | Social Sciences |
|---|---|
| HIST 1503 World Civilization to 1500 (ACTS=HIST1113) | ECON 2013 Principles of Economics II (ACTS=ECON2203) |
| HIST 1513 World Civilization since 1500 (ACTS=HIST1123) | SOC 1003 Introductory Sociology (ACTS=SOCI1013) |
| HIST 1543 Honors World Civilization to 1500 | PSY 2003 General Psychology (ACTS=PSYC1103) |
| HIST 2003 U.S. History to 1877 (ACTS=HIST2113) | ANTH 1213 Intro. to Anthropology (ACTS=ANTH1013) |
| HIST 2013 U.S. History since 1877 (ACTS=HIST2123) | ANTH 2003 Cultural Anthropology (ACTS=ANTH2013) |
| HIST 2043 Honors U.S. History to 1877 | GEOG 2013 Regional Geography of the World (ACTS=GEOG2103) |
| HIST 1903 Survey of American History | AMST 2003 American Studies |
| POLS 2003 American Government (ACTS=PLSC2003) | |
| ECON 2003 Principles of Economics I (ACTS=ECON2103) | |
| ECON 2103 Honors Principles of Economics I | |