

NAME:

8-Semester Guaranteed Program

T#:

DATE:

Rev. 2/25/2021

2021-2022 Degree Map Program: Bachelor of Science in Electrical Engineering, Major: Electrical Engineering With Biomedical 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/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.

Total hours 17 GPA Semester 2 Hrs. Semester 2 ENGL 1023 - Comp II (ACTS= ENGL 1023) 3 # BIOL 2014: Human Anatomy (ACTS=BIOL 2404) 4 # MATH 2924 - Calculus II (ACTS= MATH 2505) 4 # MATH 2924 - Calculus II (ACTS= CHEM 1424) 4 ELEG 3143 - Electromagnetics CHEM2134/2130: General Chemistry II (ACTS= CHEM 1424) 4 ELEG 4103 - Electronics II Total hours 15 GPA ELEG 4122 - Electronics II Semester 3 Hrs. Semester 3 ELEG 4122 - Electronics II CHEM3254/3250: Fundamentals of Org. Chemistry 4 Milestone PHYS 2114/2000- Calculus-Based Physics I (ACTS= PHYS 2034) 4 Milestone ELEG 21332 - Differential Equations I 3 Milestone BIOL 3034: Genetic Circuits I 3 Milestone BIOL 3034: Genetic S (optional see note) 4 Recommended for Medical Track Total hours 14/18 GPA ELEG 4121 - Electrical Design Project I	3 4 4 3 4	GPA	Semester 5 Milestone Milestone Fall Only Course - Milestone Recommended for Medical Track
BIOL1114: Principles of Biology (ACTS= BIOL 1014) 4 MATH 2914 - Calculus II (ACTS= MATH 2405) 4 MATH 2914 - Calculus II (ACTS= MATH 2405) 4 MATH 2914 - Calculus II (ACTS= MATH 2405) 4 MATH 2914 - Calculus II (ACTS= MATH 2405) 4 MATH 2914 - Calculus III (ACTS= MATH 2405) 4 MATH 2914 - Calculus III 4 MIlestone ELEG 0111 - Intro. to Electrical Engineering 1 CHEM 3344: Principles of Biohemistry (optional see note) Total hours 17 GPA Semester 2 Semester 2 Hrs. Semester 3 Semester 3 BIOL 2014: Human Anatomy (ACTS=BIOL 2404) 4 Milestone ELEG 3113- Signals and Systems BIOL 2014: Human Anatomy (ACTS=BIOL 2404) 4 Milestone ELEG 4112- Electrical Systems Lab Total hours 15 GPA Total hours Total hours Semester 3 Chemistry II (ACTS= Chemistry 4 Milestone PHYS 2114/2000- calculus Based Physics I (ACTS= PHYS 2034) 4 Milestone RCHEM3254/3250: Fundamentals of Org. Chemistry 4 Milestone ELEG 4113- Digital Ugit Design/ Lab <th>3 4 .8 3 3 3</th> <th>GPA</th> <th>Mileston Fall Only Course - Mileston</th>	3 4 .8 3 3 3	GPA	Mileston Fall Only Course - Mileston
MATH 2914- Calculus 1 (ACTS= MATH 2405) 4 # Milestone CHEM 2124/2120- General Chemistry 1 (ACTS= CHEM 1414) 4 # ELEG 1011- intro. to Electrical Engineering 1 ELEG 1011- intro. to Electrical Engineering 1 CHEM 3242/2120- Calculus-Based Physics II (ACTS= PHYS 2044) ELEG 3103- Electronics I CHEM 3344: Principles of Biochemistry (optional see note) Total hours 17 GPA Semester 2 Total hours 14/1 Semester 2 Hrs. Semester 2 Semester 3 Semester 4 Semester 6 BIOL 2014: Human Anatomy (ACTS= BIOL 2024) 4 # Milestone ELEG 3123- Signals and Systems ELEG 3143- Electronics II CHEM 2134/2130: General Chemistry II (ACTS= CHEM 1424) 4 ELEG 4103- Electronics II ELEG 4103- Electronics II Semester 3 Hrs. Semester 3 FPS 2124/2010- Calculus-Based Physics I (ACTS= PHYS 2034) FPS 2126 (AUS - Electronics II NATH 3243- Differential Equations I 3 Milestone Semester 7 Hrs. Semester 4 Hrs. Semester 4 Fecommended for Medical Track ELEG 4113-Digital Logic Design ELEG 4113-Digital Logic Design ELEG 4113-Digital Signal Processing BIOL 2034: Geneta 4 Hrs. Semester	3 4 .8 3 3 3	GPA	Mileston Fall Only Course - Mileston
MATH 2914- Calculus 1 (ACTS= MATH 2405) 4 # Milestone CHEM 2124/2120- General Chemistry 1 (ACTS= CHEM 1414) 4 # ELEG 1011- intro. to Electrical Engineering 1 ELEG 1011- intro. to Electrical Engineering 1 CHEM 3242/2120- Calculus-Based Physics II (ACTS= PHYS 2044) ELEG 3103- Electronics I CHEM3344: Principles of Biochemistry (optional see note) Total hours 17 GPA Semester 2 Total hours 14/1 Semester 2 Hrs. Semester 2 Semester 3 Semester 4 Semester 6 BIOL 2014: Human Anatomy (ACTS= BNGL 1023) 3 # ELEG 3123- Signals and Systems ELEG 3123- Signals and Systems ELEG 3123- Signals and Systems ELEG 4123- Electronics II MATH 2924- Calculus II (ACTS= CHEM 1424) 4 ELEG 4103- Electronics II ELEG 4103- Electronics II Total hours 15 GPA Total hours Semester 7 Semester 3 Hrs. Semester 3 Semester 7 Hrs. CHEM3254/3250: Fundamentals of Org. Chemistry 4 Milestone ELEG 3103- Electronics II ELEG 3103- Modeling Design PMYS 2114/2000- calculus-Based Physics I (ACTS= PHYS 2034) 4 Milestone ELEG 3103 - Modeling Design ELEG 4113-Digital Sig	3 4 .8 3 3 3	GPA	Fall Only Course - Milestone
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CHEM3254/3250: Fundamentals of Org. Chemistry 4 PSY 2003- General Psychology (ACTS = PSYC 1103) MATH 3243- Differential Equations I 3 Milestone PHYS 2114/2000- Calculus-Based Physics I (ACTS = PHYS 2034) 4 Milestone ELEG 2103- Electric Circuits I 3 Milestone BIOL 3034: Genetics (optional see note) 4 # Recommended for Medical Track Total hours 14/18 GPA Semester 4 Hrs. Semester 4 Hrs. Semester 4	16	GPA	APPLY FOR GRADUATION
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BIOL 3034: Genetics (optional see note) 4 # Recommended for Medical Track ELEG 4143- Communication Systems I Image: Communication Systems I Total hours 14/18 GPA ELEG 4191- Electrical Design Project I Image: Communication Systems I	3		Fall Only
Total hours 14/18 GPA ELEG 4191- Electrical Design Project I Image: Constraint of the second s	3		Fall Only
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Semester 4 Hrs. Semester 4 Semester 8 Hrs.	17	GPA	
			Semester 8
	3		Graduation Requirements
SOC 1003- Introductory Sociology (ACTS = SOCI 1013) 3 BIOL3074: Human Physiology	4		Min. hours 3000-4000 level courses: 40
COMS 2104- Foundations of Computer Programming I 4 # (COMS 1403/1411 not required) ELEG 3133- Microprocessor Systems Design	3		No more than 4 PE activity hours
ELEG 2113/2111- Electric Circuits II/ Lab 4 Milestone ELEG 4192- Electrical Design Project II	2	ļ	Min. hours required:122
CHEM3264: Mechanistic Organic Chemistry (optional see note) 4 Recommended for Medical Track ELEG 4303- Control Systems	3	Ļ	2.00+ GPA
BIOL4033: Cell Biology (optional see note)	3	Ļ	Recommended for Medical Track
Total hours 14/18 GPA ELEG ADVISOR ASSIGNED Total Hours 15/1	.8	GPA	
The Arkansas Course Transfer System (ACTS) is designed to assist in planning the academic progress of students. This system contains information General Electives: 0			
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-universites/transfer-info_for-students/ # indicates a "C" or better is required (C > required in COMS 210			(COMC 2202)
https://www.adhe.edu/students-parents/colleges-universites/transfer-infofor-students/ # INDICATES a C OF DETTER IS rEQUIFED (C > required in COMS 210	4 only	y as prereq t	for COMS 2203)
Fine Arts and rumanities U.S. instrument Art 2123 Experiencing Art (ACTS=ARTA1003) HIST 1903 Survey of American History			
MUS 2003 Introduction to Music (ACTS=MUSC003) HIST 2003 United States History to 1877 (ACTS=HIST2113)			
The 2273 Introduction to Theatre (ACTS=DRAM 1003) HIST 2043 Honors United States History to 1877			
ENGL 2173 Introduction to Film HIST 2013 United States History from 1877 (ACTS=HIST2123)			
JOUR 2173 Introduction to Film POLS 2003 American Government (ACTS=PLSC2003)			

- 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)