ARKANSAS TECH UNIVERSITY

NAME:_____ T#:_____ DATE:_____

8-Semester Guaranteed Program

Rev. 3/4/2016

2016-2017 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/academics/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.

#Remedial Courses (if applicable):ENGL 0303____ ENGL 0404____ READ 0103____ MATH 0803____ MATH 0903____

Prerequisites (if applicable):MATH 1914(ACTS=MATH1305)____ OR MATH 1203(ACTS=MATH1203)____

Sample Schedule			Milestones/Notes
Semester 1	**Hrs.**	**Grade**	**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
TECH1001: Orientation to the University	1		
ELEG 1011- Intro. to Electrical Engineering	1		
BIOL1114: Principles of Biology (ACTS= BIOL 1014)	4		
Total hours	17	GPA	
Semester 2	**Hrs.**		**Semester 2**
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
CHEM2134/2130: General Chemistry II (ACTS= CHEM 1424)	4		
MATH 2924- Calculus II (ACTS= MATH 2505)	4		Milestone
U.S. History/Government	3		
PSY 2003- General Psychology (ACTS = PSYC 1103)	3		
Total hours	17	GPA	

Sample Schedule			Milestones/Notes
Semester 5	**Hrs.**	**Grade**	**Semester 5**
BIOL2014: Human Anatomy (ACTS=BIOL 2404)	4	#	
SOC 1003- Introductory Sociology (ACTS = SOCI 1013)	3		
ELEG 3103- Electronics I	3		Fall Only Course - Milestone
COMS 2104- Foundations of Computer Programming I	4	#	(COMS 1403/1411 not required)
CHEM3344: Principles of Biochemistry (optional see note)	4		Recommended for Medical Track
Total hours	14/18	GPA	
Semester 6	**Hrs.**		**Semester 6**
ELEG 3173 or MATH 3173- Math Methods	3		Spring only
ELEG 3123- Signals and Systems	3		Spring only
ELEG 3143- Electromagnetics	3		Spring only
ELEG 4103- Electronics II	3		Milestone - Spring Only
ELEG 4122- Electrical Systems Lab	2		Spring only
COMS 2203- Foundations of Computer Prog II	3		
Total hours	17	GPA	**APPLY FOR GRADUATION**
Semester 7	**Hrs.**		**Semester 7**
ELEG 2134/2130- Digital Logic Design/ Lab	4		
ELEG 4191- Electrical Design Project I	1		
ELEG 3003 or MCEG 3003- Modeling Design	3		Milestone
ELEG 4143- Communication Systems I	3		Fall Only
ELEG 4113-Digital Signal Processing	3		Fall Only
ELEG 4202 or MCEG 4202- Engineering Design	2		Milestone
Total hours	16	GPA	
Semester 8	**Hrs.**		**Semester 8**
ELEG 3133- Microprocessor Systems Design	3		**Graduation Requirements:**
ELEG 4303- Control Systems	3		Min. hours 3000-4000 level courses: 40
ELEG 4192- Electrical Design Project II	2		No more than 4 PE activity hours
BIOL3074: Human Physiology	4		Min. hours required:122
Fine Arts & Humanities	3		2.00+ GPA
BIOL4033: Cell Biology (optional see note)	3		Recommended for Medical Track
Total Hours	15/18	GPA	

Semester 3	**Hrs.**		**Semester 3**
CHEM3254/3250: Fundamentals of Org. Chemistry	4		
PHYS 2114/2000- General Physics I (ACTS= PHYS 2034)	4		Milestone
MATH 3243- Differential Equations I	3		Milestone
ELEG 2103- Electrical Circuits I	3		Milestone
BIOL3034: Genetics (optional see note)	4	#	Recommended for Medical Track
Total hours	14/18	GPA	

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 2113/2111- Electrical Circuits II/ Lab	4		Milestone
CHEM3264: Mechanistic Organic Chemistry (optional see note)	4		Recommended for Medical Track
Total hours	12/16	GPA	**ELEG ADVISOR ASSIGNED**

General Electives: 0

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

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

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 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

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)

Social Sciences

HIST 1503 World Civilization to 1500 (ACTS=HIST1113)
HIST 1513 World Civilization since 1500 (ACTS=HIST1123)
HIST 1543 Honors World Civilization to 1500
HIST 2003 U.S. History to 1877 (ACTS=HIST2113)
HIST 2013 U.S. History since 1877 (ACTS=HIST2123)
HIST 2043 Honors U.S. History to 1877
HIST 1903 Survey of American History
POLS 2003 American Government (ACTS=PLSC2003)
ECON 2003 Principles of Economics I (ACTS=ECON2103)
ECON 2103 Honors Principles of Economics I
ECON 2013 Principles of Economics II (ACTS=ECON2203)
SOC 1003 Introductory Sociology (ACTS=SOCI1013)
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