












2016 - 2017 Major Map


Electrical Engineering, BSE




School/College: Ira A. Fulton Schools of Engineering
ESEEBSE



Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 265: Calculus for Engineers I (MA)	3	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, IELTS, or TOEFL score determines placement into first-year composition courses ASU Mathematics Placement Test score determines placement in mathematics course. ASU 101 or college-specific equivalent First-Year Seminar required of all freshman students and should be taken the first semester. If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
ASU 101-EEE: The ASU Experience	1		
CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4		
CSE 100: Principles of Programming with C++ (CS)	3		
FSE 100: Introduction to Engineering	2		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		



Term 2 16 - 32 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
EEE 120: Digital Design Fundamentals	3		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C	
Humanities, Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	3		
 Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		



Term 3 32 - 46 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 EEE 202: Circuits I	4		
MAT 267: Calculus for Engineers III (MA)	3	C	

MAT 275: Modern Differential Equations (MA)	3	C
PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C
PHY 132: University Physics Laboratory II (SQ)	1	C
 Minimum 2.00 GPA ASU Cumulative.		
Complete Mathematics (MA) requirement.		
Term hours subtotal:	14	

Term 4 46 - 61 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 EEE 203: Signals and Systems I	3		
 EEE 241: Fundamentals of Electromagnetics	3		
MAT 342: Linear Algebra OR MAT 343: Applied Linear Algebra	3	C	
PHY 241: University Physics III	3	C	
Humanities, Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	15		

Term 5 61 - 75 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 EEE 334: Circuits II	4		
EEE 230: Computer Organization and Assembly Language Programming	3		
EEE 350: Random Signal Analysis	3		
Upper Division Area Pathway Course	4		
Term hours subtotal:	14		

Term 6 75 - 90 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 <i>Complete 3 courses:</i> Upper Division Area Pathway Course	12		
ECN 211: Macroeconomic Principles (SB) OR ECN 212: Microeconomic Principles (SB)	3		
Term hours subtotal:	15		

Term 7 90 - 105 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 EEE 488: Senior Design Laboratory I (L)	3		
<i>Complete 2 courses:</i>	6		

Upper Division Technical Elective

BIO OR CHM OR PHY OR MAT OR AEE OR BME OR CEE OR CHE
OR CPI OR CSE OR FSE OR IEE OR MAE OR MSE Upper Division
Elective OR
Upper Division Technical Elective

3

Social-Behavioral Sciences (SB) AND Global Awareness (G)

3

Term hours subtotal: 15

**Term 8 105 - 120 Credit Hours Necessary course signified
by ★**

Hours

**Minimum
Grade**

Notes



EEE 489: Senior Design Laboratory II (L)

3

Complete 3 courses:

9

Upper Division Technical Elective

Upper Division Humanities, Arts and Design (HU) OR
Upper Division Social-Behavioral Sciences (SB)

3

Term hours subtotal: 15

Hide Course List(s)/Track Group(s)

Technical Electives

EEE 404: Real-Time DSP Systems

EEE 407: Digital Signal Processing

EEE 425: Digital Systems and Circuits

EEE 433: Analog Integrated Circuits

EEE 434: Quantum Mechanics for
Engineers

EEE 435: Fundamentals of CMOS and
MEMS

EEE 436: Fundamentals of Solid-State
Devices

EEE 437: Optoelectronics

EEE 439: Semiconductor Facilities and
Cleanroom Practices

EEE 443: Antennas for Wireless
Communications

EEE 445: Microwaves

EEE 448: Fiber Optics

EEE 455: Communication Systems

EEE 459: Communication Networks

EEE 460: Nuclear Power Engineering

EEE 463: Electrical Power Plants

EEE 465: Photovoltaic Energy Conversion

Area Pathway Course

EEE 304: Signals and Systems II

EEE 333: Hardware Design Languages
and Programmable Logic

EEE 335: Analog and Digital Circuits

EEE 341: Engineering Electromagnetics

EEE 352: Properties of Electronic
Materials

EEE 360: Energy Systems and Power
Electronics

EEE 470: Electric Power Devices

EEE 471: Power System Analysis

EEE 472: Power Electronics and Power Management

EEE 473: Electrical Machinery

EEE 480: Feedback Systems

EEE 481: Computer-Controlled Systems

Notes:

Accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org/>.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Arts and Design (HU)
- Social-Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed next to courses on the major map were valid for the 2016 - 2017 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.