

Senior Checklist

Department of Electrical and Computer Engineering
B.S. in Electrical and Computer Engineering
Students entering Fall 2019 - present

Last Name	First Name	ID Number	Date
Engineering Core			
Course	Lec. Grade	Lab Grade	Units
ENGR 1			2
COEN 10			5
COEN 11			5
COEN 12			5
COEN 177			5
Total			22
Electrical Engineering Core			
Course	Lec. Grade	Lab Grade	Units
ELEN 20			2
ELEN 21			5
ELEN 50			5
ELEN 100			5
ELEN 115			5
ELEN 120			5
ELEN 121			5
ELEN 122			5
ELEN 133			5
ELEN 142			5
Total			47
Technical Electives			
<i>Three electives: At least one elective must be selected from group D (Note 2)</i>			
Course	C	P	I
Total			
Professional Development			
<i>SEE LIST ON BACK SIDE OF FORM (Note 3)</i>			
Option			Units
Total			
Design Project			
Course	Lec. Grade	Lab Grade	Units
ELEN 192			2
ELEN 194			2
ELEN 195			2
ELEN 196			1
Total			7
Additional Electives			
Course		Grade	Units
Courses for credit for MSEE degree			
Course		Grade	Units
Humanities and Social Sciences			
Subject	Course	Grade	Units
CTW 1			
CTW 2			
English 181			
C&I 1			
C&I 2			
C&I 3			
Social Science			
Diversity			
Ethics			
RTC 1			
RTC 2			
RTC 3			
Exp. Learning Social Justice			
Total (min. 41)			
Mathematics and Science			
Subject	Lec. Grade	Lab Grade	Units
Math 11			4
Math 12			4
Math 13			4
Math 14			4
Math 51			4
Math 53			4
CSCI 163A			4
AMTH 106 (or MATH 22)			4
AMTH 108 (or MATH 122)			4
PHYS 31			5
PHYS 32			5
PHYS 33			5
<i>Select one of the following and write option below (Note 1)</i> CHEM 11 or 12, BIOL 1A, PHYS 34, 113 or 121, MATH 105 or 123			
			5
Total			56
Pathway Courses			
Pathway Title:			
	Course 1	Course 2	Course 3
Courses:			
TOTAL UNITS			
Engineering Core			
ELEN Core			
Technical Electives			
Professional Development			
Design Project			
Additional Electives			
Humanities & Social Science			
Mathematics & Science			
Total (min. 190)			
List any approved substitutes for requirements			
Course		Grade	Units
Advisor's Signature			
Department Chair's Signature			

Note 1: Math Science Elective may be one of the following:
CHEM 11 or 12, BIOL 1A, PHYS 34, 113 or 121, MATH 105 or 123

Note 2: Three undergraduate ELEN 100-level elective courses: At least one elective must be selected from group D – “Digital and Embedded Systems”. With advisor approval at most one may be selected from COEN courses.

Digital and Embedded Systems (D)	
123	Mechatronics
124	Introduction to Hardware Security and Trust
127	Advanced Logic Design
153	Digital Integrated Circuit Design
161	Information Theory and Quantum Computing

RF and Communications (C)	
104	Electromagnetics I
105	Electromagnetics II
141	Communication Systems
144	Microwave Circuit Analysis and Design

Power Systems (P)	
164	Introduction to Power Electronics
183	Power Systems Analysis
184	Power System Stability and Control

IC Design (I)	
116	Analog Integrated Circuit Design
151	Semiconductor Devices
152	Semiconductor Devices and Technology
153*	Digital Integrated Circuit Design
156	Introduction to Nanotechnology

Systems (S)	
110	Linear Systems
118	Fundamentals of Computer Aided Circuit Simulation
130	Control Systems
134	Applications of Signal Processing
160	Chaos Theory, Metamathematics and the Limits of Knowledge
161*	Information Theory and Quantum Computing
167	Medical Imaging Systems

* Denotes a waiver needed.

Note 3: Professional Development

- Four or more units in study abroad program that does not duplicate other coursework.
- Two units in ENGR 110.
- Preparation for graduate study in electrical engineering with completion of two or more additional units of upper-division or graduate-level courses.
- Completion of an approved minor or second major in any field of engineering or science.
- Two units of Peer education experience.
- Two units of undergraduate research, ELEN 199
- Cooperative education experience with enrollment in ELEN 188 and ELEN 189.
- Completion of 10 or more units in the combined bachelor of science and master of science program

Note 4: Optional Elective or BS/MS Option

These slots are available for courses to be used for the 5 year BS/MS program or for free electives.