

# ELECTRICAL ENGINEERING

Department of Electrical and Computer Engineering



General Education (19 sh)		sh
ALL	RHET:1030 Rhetoric	4
F/S	Diversity & Inclusion	3
ALL	Be Creative	3
ALL	Approved Gen Ed Course	3
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Math & Basic Science Core (24 sh)		sh
F/S	MATH:1550 Math I: Single Variable Calculus (P: ALEKS score $\geq$ 75 or MPT Level 3 score $\geq$ 9)	4
ALL	MATH 1560 Math II: Multivariable Calculus (P: MATH:1550)	4
ALL	MATH:2550 Math III: Matrix Algebra (P: MATH:1550)	2
ALL	MATH:2560 Math IV: Differential Equations (P: MATH:1560, MATH:2550)	3
F/S	STAT:2020 Probability & Statistics For Engr & Phys Sci (P: MATH:1560)	3
ALL	CHEM:1110 Principles of Chemistry I (P: ALEKS score $\geq$ 55 or MPT Level 3 score $\geq$ 9)	4
ALL	PHYS:1611 Introductory Physics I / Lab (C: MATH:1550)	4

Engineering Core (7 sh)		sh
F	ENGR:1000 Engineering Success for First-Year Students (First semester standing)	1
F	ENGR:1100 Intro to Engineering Problem Solving	3
F/S	ENGR:1300 Intro to Engineering Computing (C: MATH:1550)	3

EE Requirements (48 sh)		sh
F/S	MATH:3550 Math V: Vector Calculus (P: MATH:1560 & MATH:2550; C: MATH:2560)	3
F/S	PHYS:1612 Introductory Physics II / Lab (P: PHYS:1611; C: MATH:1560)	4
S	PHYS:2704 Physics IV (P: PHYS:1612 & MATH:1550)	3
ALL	ENGR:2120 Electrical Circuits (P: MATH:2560)	3
F/S	ENGR:2730 Computers in Engineering (P: ENGR:1300)	3
F/S	ECE:2400 Linear Systems I (P: ENGR:2120 & MATH:2560)	3
F/S	ECE:2410 Principles of Electronic Instrumentation (P: PHYS:1612, ENGR:2120, & MATH:2560)	4
F	ECE:3320 Intro to Digital Design (sophomore status)	3
F	ECE:3400 Linear Systems II (P: ECE:2400)	3
F	ECE:3410 Electronic Circuits (P: ECE:2400 & ECE:2410)	4
F/S	ECE:3360 Embedded Systems (P: ENGR:2730 & ECE:3320; C: ECE:2410)	3
S	ECE:3500 Communication Systems (P: ECE:2400)	3
S	ECE:3600 Control Systems (P: ECE:2400)	3
F	ECE:3700 Electromagnetic Theory (P: MATH:3550 & PHYS:1612)	3
S	ECE:3720 Semiconductor Devices (P: PHYS:2704 & ECE:3410)	3

EE Capstone Design Courses (6 sh)		sh
F/S	ECE:4880 Principles of ECE Design (senior status; P: ECE2410, & ENGR:2730)	3
F/S	ECE:4890 ECE Design (senior status, P: ECE:4880 and 3 of: ECE:3330, ECE:3350, ECE:3360, ECE:3400, ECE:3410, ECE:3500, ECE:3600, CS:3330)	3

EE Departmental Seminars (1 sh)		sh
F	ECE:3000 Professional Seminar (junior status)	1

Focus Area (23 sh)		sh
Electives (refer to individual Focus Area requirements)		
ALL	Elective: Focus Area - Breadth	3
ALL	Elective: Focus Area - Depth	3
ALL	Elective: Focus Area - Technical	3
ALL	Elective: Focus Area - Technical	3
ALL	Elective: Focus Area - 5000 level ECE	3
ALL	Elective: Focus Area - 5000 level ECE	3
ALL	Elective: Focus Area, Minor, Certificate, etc. (minimum 2sh)	2
ALL	Elective: Focus Area, Minor, Certificate, etc.	3
<b>Total Semester Hours Required:</b>		<b>128</b>

Focus Areas:
Applied Physics
Big Data/Data Mining/Machine Learning
Business
Communication Systems
Computer Hardware
Control Systems
Electrical Breadth
Electronic Circuits
Entrepreneurship
Individualized
Integrated Circuits
Photonic Circuits
Power Systems
Pre-Law
Pre-Medicine
Semiconductor Devices
Signal & Image Processing