

Freshman Plans

EE, EP, EE & Society 2016-2017

PLEASE NOTE: All courses used to satisfy major requirements must be taken for a LETTER GRADE.

ELECTRICAL ENGINEERING (B.S.)			
	FALL	WINTER	SPRING
Year 1	MATH 20A CHEM 6A ECE 15	MATH 20B PHYS 2A ECE 25	MATH 20C PHYS 2B ECE 35
Year 2	MATH 20D PHYS 2C ECE 45	MATH 20E PHYS 2D ECE 65	MATH 18 ECE 30 ECE 107
Year 3	ECE 100 ECE 101 ECE 103	ECE 102 ECE 109 Elective #1	Depth #1 Depth #2 Elective #2
Year 4	Depth #3 Elective #3 Elective #4	Depth #4 Eng. Design Elective #5	Depth #5 Elective #6 Elective #7

DEPTH SEQUENCES:

Communication Systems: ECE 153, ECE 154A, ECE 154B, ECE 154C, and ECE 158A

Students must select an upper division ECE course to satisfy the 5th Depth course in the following sequences:

Electronics Circuits & Systems: ECE 163, 164, 165, 166

Electronic Devices & Materials: ECE135A, ECE 135B, ECE 136L, ECE 183

Machine Learning & Controls: ECE 171A, ECE 174, ECE 175A, one of ECE 171B, ECE 172A, or ECE175B

Photonics: ECE 181, ECE 182, ECE 183 and either ECE 184 or ECE 185

Signal and Image Processing: ECE 153, ECE 161A, ECE 161B, ECE 161C

Computer System Design: CSE 141, ECE 165 and any two of ECE 118, ECE 158A, ECE 111 or CSE 143

MAJOR REQUIREMENTS

Lower Division Requirements

CHEM 6A (General Chemistry I)

- MATH 20A (Calculus I)
- MATH 20B (Calculus II)
- MATH 20C (Calculus III)
- MATH 20D (Differential Equations)
- MATH 20E (Vector Calculus)
- MATH 18 (Linear Algebra)

- PHYS 2A (Mechanics)
 - PHYS 2B (Electricity and Magnetism)
 - PHYS 2C (Flu,Wav,Thrmdyn,Optics)
 - PHYS 2D (Relativity & Quantum)
- EP Majors only: PHYS 2DL

- ECE 15 (Engineering Computation)
- ECE 25 (Intro to Digital Design)
- ECE 30 (Intro to Computer Eng)
- ECE 35 (Intro to Analog Design)
- ECE 45 (Circuits & Systems)
- ECE 65 (Components & Circuits Lab)

EE & Society Majors only:
2 courses in Social Sciences/Humanities

Upper Division Requirements

- ECE 100 (Linear Electronic Systems)
- ECE 101 (Linear Systems Fundamentals)
- ECE 102 (Intro Active Circuit Design)
- ECE 103 (Fundamentals/Devs & Matrls)
- ECE 107 (Electromagnetism)
- ECE 109 (Eng. Probability & Stats)

DEPTHS:

EE Majors: 5 courses

_____ _____ _____ _____ _____

EP Majors: 7 courses

MATH 110A PHYS 110A PHYS 130A PHYS 130B PHYS 140A

_____ _____

EE & Society Majors: 6 courses

_____ _____ _____ _____ _____ _____

Design Course: ECE 111, 118, 191, or 190

Electives:

EE Majors: 3 Professional _____ _____ _____
and 4 Technical _____ _____ _____ _____

EP Majors: 3 Professional _____ _____ _____
and 2 Technical _____ _____

EE & Society Majors: 4 Technical _____ _____ _____ _____

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ENGINEERING PHYSICS (B.S.)			
	FALL	WINTER	SPRING
Year 1	MATH 20A CHEM 6A ECE 15	MATH 20B PHYS 2A ECE 25	MATH 20C PHYS 2B ECE 35
	MATH 20D PHYS 2C ECE 45	MATH 20E PHYS 2D & 2DL ECE 65	MATH 18 ECE 30 ECE 107
	ECE 100 ECE 101 PHYS 110A	ECE 102 ECE 103 MATH 110A	ECE 109 PHYS 130A Elective #1
Year 4	Depth #1* PHYS 130B PHYS 140A	Depth #2* Elective #2 Elective #3	Eng. Design Elective #4 Elective #5

ELECTRICAL ENGINEERING & SOCIETY (B.A.)			
	FALL	WINTER	SPRING
Year 1	MATH 20A CHEM 6A ECE 15	MATH 20B PHYS 2A ECE 25	MATH 20C PHYS 2B ECE 35
	MATH 20D PHYS 2C ECE 45	MATH 20E PHYS 2D ECE 65 S/H Elective	MATH 18 ECE 30 S/H Elective
	ECE 100 ECE 101 ECE 103	ECE 102 ECE 107 ECE 109	Depth #1 Depth #2 E. Elective
Year 4	Depth #3 Depth #4 E. Elective	Depth #5 Eng. Design E. Elective	Depth #6 E. Elective

Please Note:

PHYS 2DL and PHYS 130A have prerequisites that are not listed above. PHYS 2DL requires 2BL or 2CL. PHYS 130A requires 100B and 110A. PHYS 100B requires PHYS 100A, 105A and MATH 18. The upper division prerequisites can be applied towards elective requirements.

*ECE 123 & 166 or ECE 135A & 135B or ECE 182 & (181 or 183):

The 2 depth courses indicated * are not always offered in fall and winter, consult with the ECE Undergraduate Office for more detailed information or visit our website.