CAL POLY
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B.S. in ELECTRICAL ENGINEERING
Suggested 4-Year Academic Flowchart

2020-2021 Catalog

Updated 3/12/2020

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Introduction to Electrical Engineering & Lab **EE 111 (1) & EE 151 (1)**	*Fundamentals of Computer Science* **CSC/CPE 101 (4)** *	**Choose One:** *Electric Circuit Analysis I & Lab* **EE 113 (3) & EE 143 (1)** (MATH 142. Recom: EE 111, 151, PHYS 133)	*Electric Circuit Analysis II & Lab* **EE 211 (3) & EE 241 (1)** (EE 112 or EE 113; EE 151; MATH 244† or PHYS 133†)	*Electric Circuit Analysis III & Lab* **EE 212 (3) & EE 242 (1)** (MATH 244, EE 211, 241)	*Energy Conversion Electromagnetics & Lab* **EE 255 (3) & EE 295 (1)** (EE 212 & 242; or EE 201 & 251)	*Semiconductor Device Electronics & Lab* **EE 306 (3) & EE 346 (1)** (CHEM 124; EE 212 & 242; EE 143 or IME 156 or IME 458; PHYS 211; Recom: ENGL 134)	*Digital Electronics & Integrated Circuits & Lab* **EE 307 (3) & EE 347 (1)** (CPE/EE 133; EE 306; 346; CPE/EE 233†)	*Analog Electronics & Integrated Circuits & Lab* **EE 308 (3) & EE 348 (1)** (EE 302 & 342; 307 & 347)	*Electronic Design & Lab* **EE 409 (3) & EE 449 (1)** (EE 308 & 348; CPE/EE 328 & 368, or CPE 327 & 367; CPE/EE 329 or 336 or CPE 316)	**Technical Elective (4)[2]** ***	**Technical Elective (3)[2]** ***
Calculus I **MATH 141 (4)** * [B4]	*Calculus II* **MATH 142 (4)** (MATH 141 w/min C-) [B4]	*Calculus III* **MATH 143 (4)** (MATH 142 w/min C-) [Area B Elective]	*Digital Design* **CPE/EE 133 (4)** (EE 111 & 151; CPE/CSC 10	*Computer Design & Assembly Language Programming* **CPE/EE 233 (4)** (CPE/EE 133)	*Continuous-Time Signals & Systems* **EE 228 (4)** (BMED 355; or EE 212 & 242; Recom: MATH 241)	*Discrete Time Signals & Systems & Lab* **EE 328 (3) & EE 368 (1)** (BMED 355 or EE 228)	*Classical Control Systems & Lab* **EE 302 (3) & EE 342 (1)** (EE 228; Recom: EE 368)	**Choose one:** *Microcontroller-Based Systems Design* **EE/CPE 329 (4)*** **OR** *Microprocessor System Design* **EE 336 (4)***	*Senior Project Preparation* **EE 460 (2)[1]** (EE 314; 335; EE 409† & 449†)	**Choose One Series[1]:** *Senior Project I & II* **EE 461 (2)** (EE 409; 449; 460) **EE 462 (2)** (EE 461) **OR** *Senior Project II & Design Lab I* **EE 463 (2)** (EE 409; 449; 460) **EE 464 (2)** (EE 409, 449, 460)	
General Chemistry for Physical Science & Engineering I **CHEM 124 (4)** * [B1 & B3]	*General Physics IA* **PHYS 141 (4)** (MATH 141 w/min C-; MATH 142† or 182†) [Area B Elective]	*General Physics III* **PHYS 133 (4)** (PHYS 131, HNRS 131, or PHYS 141; MATH 142; Recom: MATH 241)	*General Physics II* **PHYS 132 (4)** (PHYS 131, HNRS 131, or PHYS 141)	**Take concurrently:** *Life Science for Engin.* **BIO 213 (2)** **&** *Bioengineering Fundamentals* **BMED 213 (2)** (MATH 142 Recom: CHEM 124) [B2]	**Choose EE or GE Options[3]:** *Electromag. Fields & Trans. & Lab* **EE 335 (4) & EE 375 (1)[3]** (EE 212, 242; MATH 241) **GE (4)** ** **OR** *Electromagnetic Waves* **EE 402 (4)** (EE 335) **GE (4)** **			**Choose EE or GE Options[3]:** *Electromag. Fields & Trans. & Lab* **EE 335 (4) & EE 375 (1)[3]** (EE 212, 242; MATH 241) **GE (4)** ** **OR** *Electromagnetic Waves* **EE 402 (4)** (EE 335) **GE (4)** **	**Approved Engineering Support Electives (3)[2]** ***	**Approved Engineering Support Electives (3)[2]** ***
			Linear Analysis I **MATH 244 (4)** (MATH 143)	*Calculus IV* **MATH 241 (4)** (MATH 143)	*Modern Physics I* **PHYS 211 (4)** (PHYS 132; 133; MATH 241. Recom: MATH 242 or 244)	*Probability and Random Processes for Engineers* **STAT 350 (4)** (MATH 241; EE 228) [Upper-Division B]	*Introduction to Communication Systems* **EE 314 (3)** (STAT 350)		**Technical Elective (4)[2]** ***	**GE (4)** **	**GE (4)** **
Expository Writing **ENGL 133 or 134 (4)**** [A2] Can be taken anytime during Freshman Year							**GE (4)** **	**GE (4)** **	**Approved Engineering Support Electives (3)[3]** ***	**GE (4)** **	**GE (4)** **
Oral Communication **COMS 101 or 102 (4)**** [A1] Can be taken anytime during Freshman Year						**Graduation Writing Requirement GWR*** (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)					
	Technical Writing for Engineers **ENGL 149 (4)** [A3] (Completion of GE A2 with a C- or better, Recommended: Completion of GE A1) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years										
14	16	16	16	16	16-17	16	15	16-17	17	17	16

TOTAL: 192

Notes:

MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET

* Refer to current catalog for prerequisites.

** One course from each of the following GE areas must be completed: A1, A2, C1, C2, Lower-Division C Elective, Upper-Division C, D1, D2, Area D Elective, E. Upper-Division C should be taken only after Junior standing is reached (90 units).

*** Refer to current catalog for course selection.

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR).

USCP requirement can be satisfied by some (but not all) courses within GE categories: C1, Upper-Division C, D1, D2, Upper-Division D, or E.

MAJOR COURSES SHOULD BE TAKEN IN QUARTERS DESIGNATED ON THIS EE FLOWCHART

† Course can be taken previously or concurrently.

[1] ENGR 459, ENGR 460 and ENGR 461 (6) may substitute for the series EE 460, EE 461 and EE 462 (6) or the series EE 460, EE 463 and EE 464 (6).

[2] See catalog for course options. Consultation with advisor is recommended prior to selecting technical electives or approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals. No course credits may be used simultaneously to satisfy both engineering support and technical elective requirements.

[3] EE 335/375 and EE 402 may be taken spring/fall of soph/junior or junior/senior years.

[4] Transfer students take EE 112 (2) & IME 156(2) or EE 112 (2) & EE 143 (1) & one additional unit of Approved Support Elective.

Legend:

Course Title
Course # (Units)
(Prerequisite)
[GE Area]

Major (87)
Support (65)
General Ed. (40)