

COMPUTER ENGINEERING - Catalog Year 2026

Total Credits = 120-126

Freshman Year, Fall Semester

Course Code	Description	Cr	Grade
EGR 101	Intro. to Eng. Design & Innov. (A4)	2	
MTH 141 +	Calculus I (A1, B3)	4	
CHM 101	General Chemistry Lec I (A1)	3	
CHM 102	General Chemistry I Lab	1	
ECN 201	Principles of Microeconomics (A2)	3	
	General Education Outcome(s) ¹	3	

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Freshman Year, Spring Semester

Course Code	Description	Cr	Grade
EGR 106	Matlab for Engineering Applications (A4)	2	
MTH 142 +	Calculus II (A1, B3)	4	
PHY 203	Elementary Physics I (A1)	3	
PHY 273	Elementary Physics Lab I (A1)	1	
EGR 241	Python for Engineering Applications	4	
	General Education Outcome(s) ¹	3	

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Sophomore Year, Fall Semester

Course Code	Description	Cr	Grade
ELE 201	Digital Circuits Design	3	
ELE 202	Digital Circuits Design Lab	1	
ELE 208	Intro to Computer Systems	3	
ELE 209	Intro to Computer Systems Lab	1	
MTH 244	Differential Equations	3	
PHY 204	Elementary Physics II (A1)	3	
PHY 274	Elementary Physics Lab II (A1)	1	

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Sophomore Year, Spring Semester

Course Code	Description	Cr	Grade
CSC 211	Computer Programming	4	
ELE 212 +	Linear Circuit Theory	4	
ELE 215	Linear Circuits Lab	1	
MTH 215 +	Linear Algebra	3	
	General Education Outcome(s) ¹	3	

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Junior Year, Fall Semester

Course Code	Description	Cr	Grade
CSC 212 +	Data Structures and Abstractions	4	
ELE 313 +	Linear Systems	3	
ELE 338 +	Electronics I	3	
ELE 339	Electronics I Lab	1	
ISE 311	Probability and Statistics for Engineers	3	
MTH/CSC 447	Discrete Mathematical Structures	3	

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Junior Year, Spring Semester

Course Code	Description	Cr	Grade
ELE 301	Digital Design with FPGAs	3	
ELE 302	Digital Design with FPGAs Lab	1	
ELE 305	Intro to Computer Architecture	3	
EGR 441	Introduction to AI/ML for Engineering Applications	4	
	Technical Writing ²	3	

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Senior Year, Fall Semester

Course Code	Description	Cr	Grade
ELE 400	Intro to Professional Practice	1	
ELE 405	Digital Computer Design	3	
ELE 406	Digital Computer Design Lab	1	
ELE 437	Introduction to Computer Networks	3	
ELE 480 +	Capstone Design I [capstone] (D1)	3	
	Professional Elective ³	3-4	

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Senior Year, Spring Semester

Course Code	Description	Cr	Grade
ELE 408	Embedded System Design	3	
ELE 409	Embedded System Design Lab	1	
ELE 481 +	Capstone Design II [capstone]	3	
	Professional Elective ³	3-4	
	General Education Outcome(s) ¹	3	
	General Education Outcome(s) ¹	3	

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Notes:

+ Course pre-requisites include grade requirements in previous coursework, see catalog or eCampus course description for details.

1) General Education Outcomes (A1-D1): if all outcomes are satisfied in fewer spaces than provided, you must take a course(s) of your choice (Free Elective) to ensure you have earned at least 120 credits as required to earn a BS degree. A complete detailing of these requirements are listed in the college's curriculum requirements section of this catalog.

2) Technical Writing Requirement: One (1) course from WRT 104, 106, 332, 334.

3) Professional Elective Requirements: Two (2) courses from the following: BME/ELE 461; BME 464/465; CSC 402, 412, 415, 436; CSF 432, 434; any ELE 400-level course not required by the CPE major; any EGR 400-level course.

EGR101 is intended for and required of all first-year engineering students. Course substitution is considered only on an exception basis for transfer students with 24 or more earned credits, or for students with unique circumstances, and requires prior approval of the Assistant Dean for Undergraduate Affairs.