Computer Engineering Program

(Requirements based on Calendar of 2024-25)

The Computer Engineering Program consists of total of 120 credits including the Engineering Core (30.50 Credits) the Computer Engineering Core (69.50 Credits), and Elective Courses chosen from Electrical Engineering Electives (minmum of 17.00 credits). Moreover, students should be a member of C-Edge Program or Coop program and should complete one or three workterms, respectively.

Basic Circuit Analysis Technical Writing and Communication Professional Practice and Responsibility Sustainable Development and Environmental Stewardship Applied Ordinary Differential Equations Applied Advanced Calculus Engineering Management Principles and Economics Probability and Statistics in Engineering Impact of Technology on Society General Education Elective Digital Systems Design 1 Introduction to Discrete Mathematics Programming Methodology I Programming Methodology II Computer Organization and Software Digital Systems Design II	PHYS 205; Co-req ENGR 213; Engineering Writing Test (EWT) or ENCS 272 (Grade of C- or better) MATH 205; Co-req MATH 204; MATH 205; Co-req MATH 204; MATH 204, 205 ENGR 213, 233 ENGR 213, 233; COEN 243 ENCS 282; ENGR 201, 202 from section 71.110 of the Undergraduate Calendar Prerequisite and Co-requisite MATH 204 MATH 204 MATH 204 COEN 243	Comments
Professional Practice and Responsibility Sustainable Development and Environmental Stewardship Applied Ordinary Differential Equations Applied Advanced Calculus Engineering Management Principles and Economics Probability and Statistics in Engineering Numerical Methods in Engineering Impact of Technology on Society General Education Elective Computer Engineering Core Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology II Computer Organization and Software	MATH 205; Co-req MATH 204; MATH 204, 205 ENGR 213, 233 ENGR 213, 233; COEN 243 ENCS 282; ENGR 201, 202 from section 71.110 of the Undergraduate Calendar Prerequisite and Co-requisite MATH 204 MATH 204	Comments
Sustainable Development and Environmental Stewardship Applied Ordinary Differential Equations Applied Advanced Calculus Engineering Management Principles and Economics Probability and Statistics in Engineering Numerical Methods in Engineering Impact of Technology on Society General Education Elective Computer Engineering Core Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology II Computer Organization and Software	MATH 205; Co-req MATH 204; MATH 204, 205 MATH 204, 205 Image: Constraint of the	Comments
Applied Ordinary Differential Equations Applied Advanced Calculus Engineering Management Principles and Economics Probability and Statistics in Engineering Numerical Methods in Engineering Impact of Technology on Society General Education Elective Computer Engineering Core Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology I Programming Methodology II Computer Organization and Software	MATH 205; Co-req MATH 204; MATH 204, 205 MATH 204, 205 Image: Constraint of the	Comments
Applied Advanced Calculus Engineering Management Principles and Economics Probability and Statistics in Engineering Numerical Methods in Engineering Impact of Technology on Society General Education Elective Computer Engineering Core Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology I Programming Methodology II Computer Organization and Software	MATH 204, 205	Comments
Engineering Management Principles and Economics Probability and Statistics in Engineering Numerical Methods in Engineering Impact of Technology on Society General Education Elective Computer Engineering Core Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology I Programming Methodology I Computer Organization and Software	ENGR 213, 233 ENGR 213, 233; COEN 243 ENCS 282; ENGR 201, 202 from section 71.110 of the Undergraduate Calendar Prerequisite and Co-requisite MATH 204 MATH 204 MATH 204	Comments
Probability and Statistics in Engineering Numerical Methods in Engineering Impact of Technology on Society General Education Elective Computer Engineering Core Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology I Programming Methodology II Computer Organization and Software	ENGR 213, 233; COEN 243 ENCS 282; ENGR 201, 202 from section 71.110 of the Undergraduate Calendar Prerequisite and Co-requisite MATH 204 MATH 204 MATH 204	Comments
Numerical Methods in Engineering Impact of Technology on Society General Education Elective Computer Engineering Core Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology I Programming Methodology II Computer Organization and Software	ENGR 213, 233; COEN 243 ENCS 282; ENGR 201, 202 from section 71.110 of the Undergraduate Calendar Prerequisite and Co-requisite MATH 204 MATH 204 MATH 204	Comments
Impact of Technology on Society General Education Elective Computer Engineering Core Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology I Programming Methodology II Computer Organization and Software	ENCS 282; ENGR 201, 202 from section 71.110 of the Undergraduate Calendar Prerequisite and Co-requisite MATH 204 MATH 204 MATH 204	Comments
General Education Elective Computer Engineering Core Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology I Programming Methodology II Computer Organization and Software	from section 71.110 of the Undergraduate Calendar Prerequisite and Co-requisite MATH 204 MATH 204 MATH 204 MATH 204	Comments
Computer Engineering Core Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology I Programming Methodology II Computer Organization and Software	Prerequisite and Co-requisite MATH 204 MATH 204 MATH 204 MATH 204	Comments
Digital Systems Design I Introduction to Discrete Mathematics Programming Methodology I Programming Methodology II Computer Organization and Software	MATH 204	Comments
Introduction to Discrete Mathematics Programming Methodology I Programming Methodology II Computer Organization and Software	MATH 204 MATH 204	
Programming Methodology I Programming Methodology II Computer Organization and Software	MATH 204	
Programming Methodology II Computer Organization and Software		
Computer Organization and Software	COEN 243	
Digital Systems Design II	COEN 212, 243	
	COEN 212, 231	
Digital Electronics I	ELEC 273, COEN 212	
Computer Architecture and Design	COEN 311, 313	
Microprocessor-Based Systems	COEN 311, 313	
Introduction to Real-Time Systems	COEN 346	
Operating Systems	COEN 311; COEN 352	
Data Structures and Algorithms	COEN 231, 244	
Communication Networks and Protocols	COEN 346	
Continuous-Time Signals and Systems	ELEC 273; ENGR 213	
Discrete-Time Signals and Systems	ELEC 242	
Fundamentals of Control Systems	ELEC 242	
Software Process and Practices	COMP 352 or COEN 352; Co-req ENCS 282;	
Introductory Engineering Team Design Project	ENGR 213, 233; ENCS 282; COEN 243	
Computer Engineering Product Design Project	Minimum of 45 credits in BEng (Computer); COEN 311, 352; ENGR 290	
Capstone Computer Engineering Design Project	ENGR 301, 371; COEN 390; SOEN 341; Minimum of 75 credits in Beng in	
	Computer Engineering; C.Edge work term or one co-op work term. If pre-	
	requisites are not satisfied, permission of the Department is required.	
Computer Engineering Electives	Consult section 71.30.2 of the Undergraduate Calendar	Comments
Con	nputer Engineering Product Design Project stone Computer Engineering Design Project	nputer Engineering Product Design Project Minimum of 45 credits in BEng (Computer); COEN 311, 352; ENGR 290 stone Computer Engineering Design Project ENGR 301, 371; COEN 390; SOEN 341; Minimum of 75 credits in Beng in Computer Engineering; C.Edge work term or one co-op work term. If pre- requisites are not satisfied, permission of the Department is required.