COMPUTER SCIENCE

For students who are NOT required to take FYS

Catalog Term: Fall 2021

120 total credits

Last updated: 5/2021

12 FRESHMAN 15	
FALL	SPRING
ENGL 101 (3) College English I Grade C- or better	ENGL 102 (3) College English II Prereq: ENGL 101 Grade C- or better
MATH 242 (5) Calculus I Prereq: See Course Catalog	MATH 243 (5) Calculus II Prereq: MATH 242 Grade C or better
ECE 194 (4) [CS 194] Introduction to Digital Design Prereq: MATH 111 or equivalent Grade C- or better	PHIL 125 (3) Introductory Logic HU Note b
	CS 211 (4) Intro to Programming Prereq: MATH 111 or equivalent Grade C- or better

14 SOPHOMORE 14	
FALL	SPRING
COMM 111 (3) Public Speaking Grade C-or better	General Education (3) FA/SB Note c
MATH 321/ CS 321 (3) Discrete Structures I Prereq: MATH 242 or equivalent Grade C or better	MATH 322/ CS 322 (3) Discrete Structures II Prereq: MATH 321 Grade C or better
PHYS 313 (4) Physics for Scientist I Cncprereq: MATH 243 Grade C or better	PHYS 314 (4) Physics for Scientist II Prereq: MATH 243 Grade C or better and PHYS 313 Grade C -or better
CS 311 (4) Object-Oriented Programming Prereq: CS 211 Grade C- or better	PHYS 316 (1) University Physics Lab II Cncprereq: PHYS 314
	ECE 238 (3) [CS 238] Assembly Language Programming Prereq: CS 211 Grade C- or better
	Engineering+ Requirement (1 of 3)

16 JUNIOR 15	
FALL	SPRING
IME 254 (3) Engineering Probability & Satistics I Prereq: MATH 243 or MATH 252 Grade C or better	PHIL 354 (3) Ethics and Computers Prereq: Junior standing or Departmental consent Note d
IME 255 (3) Engineering Economy Cncprereq: MATH 242 or 251 Grade C or better	MATH 511 (3) Linear Algebra Prereq: MATH 243 Grade C or better
General Education SB/FA (3) Note c	ECE 394 (3) [CS 394] Introduction to Computer Architecture Prereq: ECE 194 and CS 211 Grades C- or better
CS 400 (4) Data Structures Prereq: CS 311 Grade C- or better	CS 510 (3) Programming Language Concepts Prereq: CS 311 and Math 322 Grades C- or better
CS 410 (3) Progamming Paradigms Prereq: CS 311 Grade C- or better	CS 580 (3) Introduction to Software Engineering Prereq: CS 311 Grade C- or better
Engineering+ Requirement (2 of 3)	Engineering+ Requirement (3 of 3)

17 SENIOR 17	
FALL	SPRING
CS 664 (3) Computer Networks Prereq: CS311 and IME 254 Grades C- or better	CS 656 (3) Introduction to Cybersecurity Prereq: CS664 Grades C- or better
CS 540 (3) Operating Systems Prereq: ECE 238 and CS 311 Grades C- or better	CS 560 (3) Design and Analysis of Algorithms Prereq: CS 400, MATH 322 & IME 254 Grades C- or better
CS 598 (2) [EE 585] Senior Design Project I Prereq: Senior standing, CS 580 Cncprereq: PHIL 354 Grades C- or better in each	CS 599 (2) [EE 595] Senior Design Project II Note e Prereq: CS 598 Grade C- or better
CS 665 (3) Introduction to Database Systems Prereq: CS 311 and Math 322 Grades C- or better	Technical Elective (3) Note a
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NOTES: (a) At least 12 of the 15 Technical Elective hours **must be** from the SoC or ECE. Up to 2 credit hours of Co-op courses can be used as **non-departmental** technical electives. (b) PHIL 125 fulfils HU requirement. (c) One of the General Education courses listed must be from FA, the other from SB; both must be from an approved list of courses. (d) PHIL 354 fulfils HU requirement. (e) CS 599 can only be taken if student received a C- or better in CS 598 in exactly the previous long semester. All prerequisites for SoC/ECE courses must be passed with a **C-** or better.

Legend: General Education: FA = Fine Arts. SB = Social and Behavioral Sciences. HU = Humanities. MS = Mathematics and Natural Sciences.
Prereq = Prerequisite. Cncprereq = Concurrent prerequisite (pre- or co-requisite). SoC = School of Computing. ECE = Electrical and Computer Engineering.