Computer Engineering
Minor
2022-2023

REQUIRED COURSES - 8 credits[1]

Course Number	Course Title	Credits	Prerequisites	Terms
ECE 102	Digital Circuit Logic	4		F, S
ECE 251 *OR* CS 250 *OR* CS 270	Introduction to Microprocessors and IoT *OR* Computer Systems Foundations *OR* Computer Organization	4	ECE102 with a C or higher *OR* CS162 with a Co or higher or CS163 with a C or higher or CS164 with a C or higher *OR* CS163 with a C or higher or CS164 with a C or higher	F, S

SELECT 15 CREDITS[1] - 12 credits of upper division coursework required (300, 400 or 500 level coursework)

Course Number	Course Title	Credits	Prerequisites	Terms
ECE 204 *OR* ECE 202	Introduction to Electrical Engineering *or* Circuit Theory Applications	3-4	MATH161; PH142[2] *OR* ECE103 with a C or higher; MATH161 with a C or higher	F,S *or* S,SS
ECE 340	Electromagnetics for Computer Engineering	3	ECE202[3] with a C or higher; MATH161 with a C or higher	S
ECE 445	Digital Logic Synthesis	3	ECE102 with a C or higher	S, even years
ECE 450/451	Digital System Design/Lab	4	ECE102 with a C or higher; ECE202 with a C or higher	F
ECE 452	Computer Organization and Architecture	3	ECE251 with a C or higher or CS250 with a C or higher or CS270 with a C or higher	S
ECE 455	Introduction to Robot Programming/Simulation	3	CS152 with a C or higher or CS162 with a C or higher or CS163 with a C or higher or CS164 with a C or higher	F
ECE 495A[4,5]	Independent Study	1-3		F,S,SS
ECE 495B[4,5]	Independent Study: Open Option	1		F,S
ECE 495C[4,5]	Independent Study: Vertically Integrated Projects	1		F,S
ECE 519	Network Centric Systems	3	CS165 with a C or higher; ECE303[6] with a C or higher or ECE 312 with a C or higher or ECE421 with a C or higher or ECE456 with a C or higher or MATH369 with a C or higher	S, even years
ECE/CS 528	Embedded Systems and Machine Learning	4	ECE251 with a C or higher or or CS250 with a C or higher or CS270 with a C or higher	F
ECE 544	Silicon Photonics in Computing Systems	3	PH141; ECE303 with a C or higher or STAT301 with a C or higher or STAT315 with a C or higher	F
ECE 554	Computer Architecture	3	ECE452 or CS470	S, even years
ECE 558	Manycore System Design Using Machine Learning	3	ECE452 with a C or higher	F
ECE/CS 561	Hardware/Software Design of Embedded Systems	4	ECE251 or ECE452 or CS250 or CS270 or CS470	S, odd years
ECE 571/575	VLSI System Design I/Lab	4	ECE451; concurrent registration in ECE575	S

[1] A minimum of 12 credits in the minor must be ECE prefix courses

[2] PH122 may be substituted for PH142

[3] ECE204 may be substituted for ECE202

[4] A total 3 credits of Independent Study may apply toward total degree requirements. This includes credit awarded for ECE495A, ECE495B, ECE495C combined.

[5] Must be in a Computer Engineering related topic and be approved by a Computer Engineering faculty

[6] STAT301 or STAT315 may be substituted for ECE/STAT303