

**OPTIONS FOR COMPUTER ENGINEERING MAJOR GUIDED ELECTIVES
(2023-2024)**

Students are required to take 9 hours of major guided electives.

Guided Elective Option	Pre-Requisite Course
EE 4325 Introduction to VLSI Design	CE/EE 3320
EE 4330 Integrated Circuit Technology	CE/EE 3310
EE 4340 Analog Integrated Circuit Analysis and Design	CE/EE 3311
EE 4360 Digital Communications	ENGR 3341 and EE 3302
EE 4361 Introduction to Digital Signal Processing	EE 3302
EE 4365 Introduction to Wireless Communication	EE 3302 and ENGR 3341
EE 4367 Telecommunications Networks	EE 3350 (co-requisite)
EE 4342 Introduction to Robotics	EE 4310 (co-requisite)
EE 4363 Introduction to Power Electronics	EE 2301
EE 4371 Introduction to MEMS	CHEM 1311, CE/EE 3310, and PHYS 2325/2125
CS 4332 Introduction to Programming Video Games	CE/CS/SE 3345
CS 4334 Numerical Analysis	CE/CS 1337 and MATH 2418
CS 4337 Organization of Programming Languages	(CE/CS 2336 or CS 2337), CE/CS 2305 and CE/EE 4304
CS 4347 Database Systems	CE/CS/SE 3345
CS 4352 Human Computer Interactions I	None
CS 4361 Computer Graphics	MATH 2418, (CE/CS/ 2336 or CS 2337) and CE/CS/SE 3345
CS 4365 Artificial Intelligence	CE/CS/SE 3345
CS 4371 Introduction to Big Data Management and Analytics	(CS 2336 or CS 2337) and CS 4347
CS 4375 Introduction to Machine Learning	CS/SE 3341 and CE/CS/SE 3345 or Equivalent
CS 4384 Automata Theory	CS 3305
CS 4389 Data & Applications Security	CS/SE 4347
CS 4390 Computer Networks	CE/CS/SE 3345 or Equivalent
CS 4392 Computer Animation	Math 2418 and CE/CS/SE 3345 or Equivalent
CS 4393 Computer and Network Security	CE/CS/SE 4348 or Equivalent
CS 4398 Digital Forensics	CE/CS/SE 4348 and CE/CS 4390 or Equivalent

CE 4V95 Undergraduate Topics in Computer Engineering may be used only if it is a scheduled special topics class (not independent study).

Independent Study in Computer Engineering (CE 4V97), Undergraduate Research in Computer Engineering (CE 4V98), or Senior Honors in Computer Engineering (CE 4399) may be used for up to 6 of these hours with consent of the department. Please consult your Academic Advisor for more information.