OPTIONS FOR COMPUTER SCIENCE MAJOR GUIDED ELECTIVES (2023-2024)

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

Guided Elective Option	Pre-Requisite Course
CS 4301 Special Topics in Computer Science	CE/CS/SE 3345
CS 4314 Intelligent Systems Analysis	(MATH 2414 or MATH 2419) and (CS 3341 or SE 3341) and MATH 2418 or Instructor consent required.
CS 4315 Intelligent Systems Design	CGS 4314 or CS 4314 or Instructor consent required
CS 4334 Numerical Analysis	(MATH 2370 or CE/CS 1337) and MATH 2418 and (MATH 2451 or MATH 3351)
CS 4336 Advanced JAVA	CE/CS 2336 or CS 2337 or Equivalent
CS 4352 Introduction to Human-Computer Interaction	NONE
CS 4361 Computer Graphics	MATH 2418 and (CE/CS 2336 or CS 2337), and CE/CS/SE 3345 or Equivalent
CS 4365 Artificial Intelligence	CE/CS/SE 3345 or Equivalent
CS 4375 Introduction to Machine Learning	CS/SE 3341 and CE/CS/SE 3345 or Equivalent
CS/SE 4376 Object Oriented Programming Systems	CE/CS 2336 or CS 2337 with a C or better or Equivalent
CS 4386 Compiler Design	CE/CS/SE 3345 or Equivalent
CS 4389 Data & Applications Security	CS/SE 4347
CS 4390 Computer Networks	CE/CS/SE 3345 or Equivalent
CS 4391 Intro to Computer Vision	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 and CE/CS 4390 or Equivalent
CS 4394 Implementation of Modern Operating Systems	CE/CS/SE 4348 or Equivalent Programming experience
CS 4395 Human Language Technologies	CS/SE 3341 and CE/CS/SE 3345 or Equivalent
CS 4396 Networking Laboratory	CS 4390 or Equivalent
CS 4397 Embedded Computer Systems	CE/CS/SE 4348 or Equivalent
CS 4398 Digital Forensics	CE/CS/SE 4348 and CE/CS 4390 or Equivalent
CS 4V95 Undergraduate Topics in Computer Science	CE/CS/SE 3345 and Instructor Consent Required
EE 4325 Introduction to VLSI Design	CS 4341
SE 4351 Requirements Engineering	SE 3306 and CE/CS/SE 3354 or Instructor Consent Required
SE 4352 Software Architecture and Design	SE 3306 and CE/CS/SE 3354 or Instructor Consent Required
SE 4367 Software Testing, Verification, Validation and Quality Assurance	SE 3306 and CE/CS/SE 3354 or Instructor Consent Required
SE 4381 Software Project Planning and Management	CE/CS/SE 3354

Students may also use CS 4V98 Undergraduate Research in Computer Science or CS 4399 Senior Honors in Computer Science. Students must consult an Academic Advisor before registering in these options.