

**OPTIONS FOR COMPUTER ENGINEERING MAJOR GUIDED ELECTIVES
(2021-2022)**

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

| Guided Elective Option | Pre-Requisite Course |
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| 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 3301 |
| 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 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.