

Plan of Study for Electrical Engineering Concentration

Core Courses: [All courses are 3 Credits, except as indicated in brackets]

- ECE 177 – Intro to Programming for Eng.[4] F & S ECE 101, MAT 126 or permission
- ECE 210 – Electrical Networks I F MAT 127; Coreq. PHY 122
- ECE 214 - Electrical Networks Laboratory S ECE 275
- ECE 314 - Signals & Systems S ECE 177

Following the initial four courses, students can choose at least 11 credits of more advanced classes, focused in a technical area that they find interesting. Examples of these technical areas and courses that can be taken to satisfy the advanced course requirements in each area include:

Microelectronics and Circuits – ECE 342 – Electronics I
ECE 343 – Electronics II
ECE 462 – Basic Semiconductor Devices
ECE 464 - Microelectronics Science and Eng.

Communications and Wireless - ECE 351 – Fields and Waves
ECE 383 – Communication Engineering I
ECE 453 – Microwave Engineering
ECE 484 - Communication Engineering II

Power and Alternative Energy - ECE 324 – Renewable Energy
ECE 323 – Electrical Power Conversion
ECE 427 – Electrical Power Systems

State and Sensors - ECE 351 – Fields and Waves
ECE 342 – Electronics I
ECE 453 – Microwave Engineering
ECE 462 – Basic Semiconductor Devices
ECE 445 - Analysis & Design of Digital ICs

Optional Courses: [All courses are 3 Credits, except as indicated]

- [ECE 316 - Random Signal Analysis](#)
- [ECE 323 - Electric Power Conversion](#)
- [ECE 383 - Communications Engineering](#)
- [ECE 342 - Electronics I](#) Credits: 4
- [ECE 343 - Electronics II](#) Credits: 4
- [ECE 351 - Fields and Waves](#)
- [ECE 427 - Electric Power Systems](#)
- [ECE 453 - Microwave Engineering](#) Credits: 4
- [ECE 462 - Introduction to Basic Semiconductor Devices, Circuits](#)
- [ECE 464 - Microelectronics Science and Engineering](#)
- [ECE 465 - Introduction to Sensors](#)
- [ECE 466 - Sensor Technology and Instrumentation](#) Credits: 4