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

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