ELECTRICAL ENGINEERING MINOR

Prerequisite Courses (11 hours)

Course	Title	Credits
MATH 141	Calculus I	4
MATH 142	Calculus II	4
MATH 242	Elementary Differential Equations	3
Total Credit Hours		**11**

Minor Requirements (18 Hours)

The minor in Electrical Engineering requires the completion of at least 18 credit hours consisting of four core courses and two approved elective courses that make a coherent sequence, composed as follows:

Course	Title	Credits
Required Core Courses		
ELCT 102	Electrical Science	3
or ELCT 220	Electrical Engineering for Non-Majors	
ELCT 221	Circuits	3
ELCT 222	Signals and Systems	3
ELCT 371	Electronics	3
Required Intermediate Course		
Select any ELCT course at the 300-level		3
Required Advanced Course		
Select any 500-level ELCT course [1]		3
Total Credit Hours		**18**

[1] Note that 500-level courses generally have a prerequisite at the 300-level, so the Intermediate and Advanced courses should be chosen consistently. Some 500-level courses may have two prerequisites at the 300-level, which could then require taking an additional three hours.

Recommended or Examples of Sequences

The following sequences of Intermediate and Advanced courses are suggested as examples. Many other sequences are possible. A student's particular sequence should be chosen in consultation with an EE faculty advisor.

For Interest in Manufacturing Industries

Course	Title	Credits
ELCT 331	Control Systems	3
ELCT 430	Industrial Controls	3
Total Credit Hours		**6**

For Interest in Renewable Energy Industries

Course	Title	Credits
ELCT 363	Introduction to Microelectronics	3
ELCT 510	Photovoltaic Materials and Devices	3
Total Credit Hours		**6**

For Interest in Electric Power or Electric Utility Industries

Course	Title	Credits
ELCT 331	Control Systems	3
ELCT 451	Power Systems Design and Analysis	3
Total Credit Hours		**6**

For Interest in Power Electronics, Power Conversion, Electrical Propulsion, and Actuation for Automobiles, Aircraft, Robotics

Course	Title	Credits
ELCT 331	Control Systems	3
ELCT 572	Power Electronics	3
Total Credit Hours		**6**

For Interest in Wireless Data Communications and Microwave Electronics

Course	Title	Credits
ELCT 361	Electromagnetics	3
ELCT 564	RF Circuit Design for Wireless Communications	3
Total Credit Hours		**6**

For Interest in Semiconductor Devices or Optoelectronics Devices or Sensors

Course	Title	Credits
ELCT 363	Introduction to Microelectronics	3
ELCT 563	Semiconductor Devices for Power, Communications and Lighting	3
Total Credit Hours		**6**