

OET005 – ELECTRONICS

Credit Hours: 3-4 Semester Hours
Prerequisite: DC Circuits (OET001)
Related TAGs: Electrical Engineering Technology, Solar Energy, Wind Energy
General Course Description: This course is an introduction to the theory, operation, and practical applications of solid state devices. Topics include diodes, bipolar junction transistors, amplifiers, frequency response, operational amplifiers, oscillators, power supplies, and voltage regulators. Includes hands-on labs.
Student Learning Outcomes marked with an asterisk (*) are essential and must be met.
Students will be able to:
1. Demonstrate an understanding and working knowledge of semiconductor properties.*
2. Identify common and special purpose diode types and their operations. Utilize diodes and special purpose diodes in an electrical circuit.*
3. Demonstrate an understanding and working knowledge of BJT biasing circuits, positive and negative feedback, circuits stability, and frequency response.*
4. Design and build BJT amplifier circuits, including multi-stage and power amplifier circuits, to meet specifications.*
5. Demonstrate an understanding and working knowledge of oscillators, voltage regulators, and power supplies.*
6. Demonstrate an understanding and working knowledge of Op-Amps. Design and build Op-Amps circuits for various applications.*
7. Demonstrate an understanding and working knowledge of field effect transistors (FETs), JFET and MOSFET circuits and applications.*

**ELECTRICAL ENGINEERING TECHNOLOGY TAG: ELECTRONICS TAG COURSE
FACULTY PARTICIPANTS**

November 2016 – April 2017

Name	Institution
Rob Speckert (Review/Revision Panel Lead)	Miami University
Keith Sanders	Columbus State Community College
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