OET003 – AC CIRCUITS

Credit Hours: 3 Semester Hours
Corequisite or Prerequisite: Trigonometry (TMM003) (Trigonometry requirement may be met by embedded course objectives)
Prerequisite: DC Circuits (OET001)
Related TAGs: Electrical Engineering Technology, Solar Energy, Wind Energy
General Course Description: A detailed study of analog alternating current electric networks, including resistive, reactive, and combinational thereof. This course covers AC fundamentals, the systems that use them, and the basic sources of AC electricity. Analysis techniques include conventional and computerized modeling methodology.
Student Learning Outcomes marked with an asterisk (*) are essential and must be met.
Students will be able to:
1. Demonstrate an understanding of the properties of sinusoidal waves.*
2. Demonstrate an understanding of and application for phasors and use complex numbers to perform addition and subtraction of phasors.*
3. Demonstrate a working knowledge of transformer characteristics and applications.*
4. Analyze the steady-state behavior of RC, RL, and RCL circuits under AC conditions.*
5. Design, analyze, and demonstrate an understanding of basic filter circuits.*
6. Apply superposition, Thevenin's, and Norton's theorems to the analysis of AC circuits.*
7. Demonstrate a basic working knowledge of three-phase and/or poly-phase systems.*
8. Calculate power factor and demonstrate an understanding of the impact of low power factor.*

ELECTRICAL ENGINEERING TECHNOLOGY TAG: DC CIRCUITS TAG COURSE FACULTY PARTICIPANTS

November 2016 – April 2017

Name	**Institution**
Rob Speckert (Review/Revision Panel Lead)	Miami University
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