

**Eastern WV Community & Technical College
Master Course Record**

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| Course Prefix and Number: WTT 120 |
| Course Title: DC/AC Circuits |
| Recommended Transcript Title: DC/AC Circuits |
| Date Approved/Revised: July 20, 2010; July 14, 2014; December 15, 2014 |
| Credit Hours: 4 Contact hours per week (Based on 15 week term): Lecture: 3 Lab: 3 |
| Prerequisite: Corequisite: Pre/Corequisite: |
| Grading Mode: Letter Grade |
| Catalog Description: This course will introduce students to the skills and technology involved in both DC and AC circuits and their use in the modern electronics field. Students will develop a basic understanding of electronics through lecture, labs and project based activities. Transformer theory and applications will be studied. Resonance theory and practical uses of circuits are discussed. |
| Course Outcomes: <ul style="list-style-type: none"> • Basic understanding of DC electricity • Basic understanding of AC electricity • Understand proper use of hand tools • Understand proper use of electrical measuring equipment including hand held meters and oscilloscopes • Apply mathematical concepts using Kirchhoff's law • Apply mathematical concepts utilizing OHM's Law |
| Implementation Cycle: Fall |
| Role in College Curriculum: (Check all that apply) <input type="checkbox"/> General Education Core (Specify category) <input checked="" type="checkbox"/> Technical Core (Specify Program) <input type="checkbox"/> Restricted Elective (Specify Program) <input type="checkbox"/> General Elective <input type="checkbox"/> Workforce Education <input type="checkbox"/> Other (Please specify) <input type="checkbox"/> Other (Please specify) |
| Course Fee: Yes |
| Instructor's Qualifications: Bachelor's Degree in engineering or related technical field or industry recognized credentials and experience |
| Expanded Course Description: This class will allow students to understand DC and AC circuits on paper, but also to build them in the laboratory. Students will study Ohm's law as it relates to circuits. Kirchhoff's laws will be applied to circuit network analysis. The operation and purpose of transformers will also be covered. Students will build resonant circuits using laboratory materials. Students will study and measure the effects |

of changes in those circuits in the laboratory. Proper use of oscilloscopes, megaohm meters, and circuit analyzers will be discussed.

Prepared by: Ward Malcolm, Dean of Career and Technical Studies 7-14-14
Signature, Title Date

Approved by:
Robert Eagle 7-14-14

Dean, Academic Services

Date