MET 160 Electrical Applications for MET

Course Description: A course on electrical fundamentals for Mechanical Engineering Technology students. Topics include: voltage; AC and DC current; power; parallel and series circuits; and using voltmeters, ammeters, and ohmmeters.

Prerequisites(s): MAT 121 or MAT 125 **Corequisite(s):** No corequisite

Lecture Hours: 2	Lab Hours: 2	Credit Hours: 3
Lab Fee: 60	Supplemental Fee: 0	Purpose:
☐ Transfer Assurance Guide Course (TAG)	☐ Transfer Module Course (TM)	
Course Format: Lec/Lab	Grading: A/B/C/F/I	
Delivery Method: □ Web	□ Hybrid	☒ Classroom
Semesters Offered: ☒ Fall	☒ Spring	□ Summer

Course Primary Text:

Title: Electricity, Fluid Power, and Mechanical Systems for Industrial Maintenance	Edition: n/a
Author(s): Thomas Kissell	
Publisher: Prentice Hall	

Supplemental Materials:

None

Course Outcomes:

1	The student will be able to apply knowledge, techniques, skills and modern tools of the discipline to narrowly defined engineering technology activities.
2	The student will have the ability to conduct standard tests and measurements, and to conduct, analyze and interpret experiments.
3	The student will have an ability to function effectively as a team member of a technical team
4	The student will have the ability to identify, analyze, and solve narrowly defined engineering technology problems
5	The student has the ability to apply written, oral, and graphical communication in both technical and non-technical environments; an ability to identify and use appropriate technical literature

Course Topics:

Week 1	Lab Safety; Fundamentals of DC Electricity; Ohm's Law
Week 2	Introduction to Lab Equipment; Lockout/Tag out
Week 3	Series Circuits
Week 4	Resistor Color Codes
Week 5	Parallel Circuits
Week 6	Series-parallel Circuits
Week 7	Magnetic Theory
Week 8	Fundamentals of AC Electricity
Week 9	AC Electricity
Week 10	Transformers – Single Phase
Week 11	Transformers – Three Phase
Week 12	DC Motors
Week 13	Relays, Contactors, Solenoids and Motor Starters
Week 14	AC Motors Single-Phase
Week 15	AC Motors Three-Phase

Methods of Evaluation/Assessment

□ Formative: □ Summative

List assessment activities (e.g. quizzes, discussions, essays, research papers, debates, oral presentations, exams):

Quizzes
Labs
Exams
Homework

Course Keeper: Abbey Yee Date Completed: 9/5/13