

**IM 102. INDUSTRIAL MAINTENANCE 2.**

**Credit Hours: 3 Hrs.**

**Scheduled hours per week**

Lecture: 2

Lab: 2

Other: Varies as needed due to blended nature of presentation

**Catalog Course Description:** Provides an introduction to bearings, steam systems, distillation towers, heaters, coolers, and furnaces. Laboratory exercises are designed to provide hands-on practice of concepts.

**Pre-requisites:** IM 101

**Co-requisites:** IM 101. IM 103

**Course Learning Outcomes:**

Through classroom lecture, discussion, laboratory studies and experimentation, students will learn the required skills and knowledge to pass National Center for Construction Education and Research (NCCER) Module Tests and prepare for NCCER Certification Exams.

**Topics to be studied:**

- a) Bearings
- b) Boilers
- c) Distillation
- d) Heaters and coolers
- e) Furnaces

<b>Relationship of Course to Program or Discipline Learning Outcomes:</b>	
Basic understanding of safety, hand and power tools.	X
Ability to read construction and blueprint drawings.	
Ability to safely handle materials.	
Understanding of fasteners, rigging and lubrication.	
Ability to repair gaskets, seals, pumps and valves.	
Ability to test pneumatic and hydrostatic system.	
Ability to install bearings, couplings, chains and belts.	X
Ability to set baseplates and align equipment.	
Ability to perform preventative/predictive maintenance.	
Ability to work with compressors and pneumatic systems.	
Ability to use laser alignment equipment.	
Advanced hydraulic system understanding.	
Advanced hydraulic system troubleshooting and repair.	

<b>Relationship of Course to General Education Learning Outcomes:</b>	
<b>Composition and Rhetoric</b> Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	
<b>Science &amp; Technology</b> Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	X
<b>Mathematics &amp; Quantitative Skills</b> Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	X
<b>Society, Diversity, &amp; Connections</b> Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
<b>Human Inquiry &amp; the Past</b> Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	
<b>The Arts &amp; Creativity</b> Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
<b>5/3/2016</b>	

**Special requirements of the course:**

- a) Reports
- b) Surveys
- c) Other

**Additional information:**

**Prepared by:** Craig Giffin

**Date:** 10/20/2017