Washtenaw Community College Comprehensive Report

HVA 207 Commercial Industry Standards with Competency Exams
Effective Term: Winter 2018

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: Heating, Ventilation and A/C
Discipline: Heating, Ventilation, Air Conditioning and Refrigeration
Course Number: 207
Org Number: 14750
Full Course Title: Commercial Industry Standards with Competency Exams
Transcript Title: Comm Industry Stand w/Comp Exm
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Three Year Review / Assessment Report
Change Information:
Consultation with all departments affected by this course is required.
Outcomes/Assessment
Objectives/Evaluation
Other:
Rationale: Review syllabus
Proposed Start Semester: Winter 2018
Course Description: In this course, students will learn the relevant codes to commercial heating, ventilation, air conditioning and refrigeration systems. Other topics include commercial air conditioning and refrigeration installation requirements, proper operating conditions and servicing requirements. Students will take nationally recognized competency exams.

Course Credit Hours

Variable hours: No
Credits: 3
Lecture Hours: Instructor: 45 **Student:** 45
Lab: Instructor: 15 **Student:** 15
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 60 **Student:** 60
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Level 3

Requisites

Prerequisite
HVA 203 minimum grade "C"
and
Prerequisite
HVA 205 minimum grade "C"

General Education

Request Course Transfer

Proposed For:
Eastern Michigan University
Ferris State University

Student Learning Outcomes

1. Identify the Michigan Mechanical Code and International Fuel Gas Code used when servicing and installing HVAC equipment.
   Assessment 1
   Assessment Tool: Departmental final exam will be used to assess understanding of key concepts
   Assessment Date: Winter 2019
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: A minimum of 70% of students should achieve a score of 70% or higher
   Who will score and analyze the data: Department faculty

2. Identify commercial refrigeration, commercial air conditioning and residential low pressure hydronic heat systems.
   Assessment 1
   Assessment Tool: The ESCO Institute's commercial air conditioning, commercial refrigeration and residential low pressure hydronic heat competency test
   Assessment Date: Winter 2019
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: ESCO electronic scoring
   Standard of success to be used for this assessment: A minimum of 70% of students should achieve a score of 70% or higher
   Who will score and analyze the data: ESCO electronic scoring system

Course Objectives

1. Identify the International Fuel Gas Code and Michigan Mechanical Code's connection to the installation of commercial HVAC equipment.
2. Solve required calculations necessary for safe and legal HVAC equipment installation using the

Michigan Mechanical Code and the International Fuel Gas Code.
3. Solve required calculations for proper fuel line and chimney sizing.
4. Review elements of air conditioning in preparation for ESCO test.
5. Review elements of commercial refrigeration in preparation for ESCO test.
6. Review elements of hydronic heating in preparation for ESCO test.

New Resources for Course

Course Textbooks/Resources

Textbooks

Whitman, B.. *Refrigeration and Air Conditioning Technology*, 7 ed. Delmar, 2013, ISBN: 9781111644475.

Manuals

AGA. International Fuel Gas Code, International code council, 01-01-2012

MMC. Michigan Mechanical Code, Internatinal Code Council, 01-01-2012

Periodicals

Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Michael Kontry	*Faculty Preparer*	*Apr 11, 2017*
Department Chair/Area Director:		
Robert Carter	*Recommend Approval*	*Jun 08, 2017*
Dean:		
Brandon Tucker	*Recommend Approval*	*Jun 21, 2017*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Sep 18, 2017*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Sep 19, 2017*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Sep 24, 2017*