

Washtenaw Community College Comprehensive Report

UAT 247 ASME B31.1 Code Effective Term: Spring/Summer 2014

Course Cover

Division: Advanced Technologies and Public Service Careers

Department: United Association Department

Discipline: United Association Training

Course Number: 247

Org Number: 28200

Full Course Title: ASME B31.1 Code

Transcript Title: ASME B31.1 Code

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Web Page

Reason for Submission: Three Year Review / Assessment Report

Change Information:

Course description

Credit hours

Total Contact Hours

Outcomes/Assessment

Objectives/Evaluation

Rationale: Course update

Proposed Start Semester: Spring/Summer 2014

Course Description: In this course, students will learn about methods of teaching about ASME B31.1 Power Piping Code. Topics include: B31.1 scope, code history, material selection and use, fabrication rules and their bases, inspection, weld & base metal discontinuities, NDE and testing requirements. Students will examine common problems that develop from not understanding the Code requirements. The development of Quality Control Manuals for Code use, and the application for an ASME Pressure Piping Stamp and its renewal requirements will be covered. Limited to United Association program participants.

Course Credit Hours

Variable hours: No

Credits: 1

Lecture Hours: Instructor: 15 **Student:** 15

Lab: Instructor: 0 **Student:** 0

Clinical: Instructor: 0 **Student:** 0

Other: Instructor: 5 **Student:** 5

Total Contact Hours: Instructor: 20 **Student:** 20

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

Requisites

General Education

Degree Attributes

Below College Level Pre-Reqs

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Demonstrate teaching practicum on the central concepts and skills of ASME B31.1 Code utilizing UA approved materials.

Assessment 1

Assessment Tool: Presentation

Assessment Date: Spring/Summer 2014

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 75% of students will score 75% or above.

Who will score and analyze the data: Departmental faculty

2. Demonstrate methods of teaching on the proper maintenance and repair procedures related to teaching ASME B31.1 Code.

Assessment 1

Assessment Tool: Presentation

Assessment Date: Spring/Summer 2014

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Performance parameters with rubric

Standard of success to be used for this assessment: 75% of students will score 75% or above.

Who will score and analyze the data: Departmental faculty

3. Identify and explain the requirements and renewal of an ASME Pressure Piping (PP) Stamp.

Assessment 1

Assessment Tool: Written Exam

Assessment Date: Spring/Summer 2014

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 and rubric

Standard of success to be used for this assessment: 75% of students will score 75% or above.

Who will score and analyze the data: Departmental faculty

Course Objectives

1. Develop concepts and strategies needed to teach apprentices how to identify the material requirements of B31.1 piping installation.

Matched Outcomes

2. Develop concepts and strategies needed to teach apprentices how to identify the type of NDE necessary on B31.1 installation and the applicable ASME Reference Code rules.

Matched Outcomes

3. Develop concepts and strategies needed to teach apprentices about the history of the B31.1 Code and its importance to the relationship with the other ASME Construction Codes.

Matched Outcomes

4. Develop concepts and strategies needed to teach apprentices how to recognize the design

requirements of B31.1 and their application in field installation.

Matched Outcomes

5. Demonstrate appropriate use and knowledge of course materials.

Matched Outcomes

6. Explain the design requirements of B31.1 and the applications in a field installation.

Matched Outcomes

7. Explain the importance of following a given weld procedure, pre-heat requirements, inter-pass temperature requirements, and post weld heat-treat procedures.

Matched Outcomes

8. Explain the importance of visual welding inspection before, during and after welding.

Matched Outcomes

9. Develop concepts and strategies needed to teach apprentices how to recognize imperfections in the welds and base metals during welding or in-service inspections.

Matched Outcomes

10. Develop concepts and strategies needed to teach apprentices how to identify code-dictated imperfections in welds during visual inspections.

Matched Outcomes

11. Illustrate the basics of creating a jurisdictionally recognized quality control manual for power piping code applications.

Matched Outcomes

12. Evaluate a representative Quality Control Manual for requirements of material selection and documentation.

Matched Outcomes

13. Develop concepts and strategies needed to teach apprentices how to create a mechanical room field drawing following design requirements of B31.1.

Matched Outcomes

New Resources for Course

Course Textbooks/Resources

Textbooks

International Pipe Trades Joint Training Committee. *Gas Installations for United Association Journeyworkers & Apprentices*, ed. International Pipe Trades Joint Training Committee, 2012

Manuals

Periodicals

Software

Equipment/Facilities

Level I classroom

Data projector/computer

Reviewer

Action

Date

Faculty Preparer:

Amanda Scheffler

Faculty Preparer

Jun 27, 2013

Department Chair/Area Director:

Scott Klapper

Recommend Approval

Feb 03, 2014

Dean:

Marilyn Donham

Recommend Approval

Feb 05, 2014

Vice President for Instruction:

Bill Abernethy

Approve

Mar 31, 2014