

BARSTOW COMMUNITY COLLEGE COURSE OUTLINE –**IMMT 75****Dept & Nbr:** IMMT 75**Abbrev Title:** Introduction to steam systems.**Full Title:** Introduction to steam systems.**Old Number:****Title 5 Category:** Associate Degree Applicable.**Certificate Applicable:**

Units	Course Hrs per Week	Nbr of Weeks	Course Hrs Total
Max: 2.0	Lecture 1.50	18	Lecture 27.0
Min: 2.0	Lab .50		Lab 27.0
	Contact DHR 0.0		Contact DHR 0.0
	Contact Total 3.0		Contact Total 54.0
	Non-contact DHR 0.0		Non-contact DHR 0.0

Delivery method: Lecture and Online.**Selected Topic:** No**Grading:** Option (A-F) (P/NP)**Concurrent Course:** None.**Repeat Code:** May be taken two times with a grade of less than "C".**Basic Skills** 0: This is not a basic skills class.**CATALOG DESCRIPTION:**

Designed to give the student the fundamental skills necessary to work with various types of steam systems commonly found on the jobsite.

PREREQUISITES: None.**COREQUISITES:** None.**RECOMMENDED PREPARATION:** None.**CONTENT:**

- A. Terms and concepts used to describe steam and steam systems.
- B. Low pressure steam systems.
- C. High pressure steam systems.

COURSE OBJECTIVES:**Upon successful completion of this course the student will be able to:**

1. Explain the terms and concepts used to describe steam and steam systems.
2. Describe the basic steam heating cycle.
3. Recognize the components of a basic steam heating system, including steam traps, and describe their function(s).
4. Describe the safeguards associated with the operation of a low-pressure steam system.
5. Explain how a blow down system works.
6. Demonstrate how to install, troubleshoot, and maintain selected steam traps.
7. Describe how basic one-pipe and two-pipe steam heating systems work.
8. Describe the components and operation of a high-pressure steam system.

COURSE-LEVEL STUDENT LEARNING OUTCOMES:

1. **Identify types of steam traps and components of installations including piping distribution system used with steam systems.**

Assessment Method(s): Performance Evaluation.

- Communication.
- Critical Thinking.
- Global Awareness.
- Personal/Professional Development.

2. **Diagnose specific problems on faulty steam traps, and demonstrate safety procedures and proper corrective actions.**

Assessment Method(s): Performance Evaluation.

- Communication.
- Critical Thinking.
- Global Awareness.
- Personal/Professional Development.

3. **Identify the components of a high-pressure steam system and its auxiliaries.**

Assessment Method(s): Performance Evaluation.

- Communication.
- Critical Thinking.
- Global Awareness.
- Personal/Professional Development.

B. Critical Thinking Tasks/Assignments:

Critical thinking assignments include (but are not limited to) the following:

1. Identify options for using various types of steam systems used by industrial Maintenance Mechanics.
2. Solve problems related to various situations.

Other outside class assignments include (but are not limited to) the following:

C. Measurement of Student Learning Outcomes:

1. Substantial writing assignments, including:

- Written homework
- The course primarily involves skill demonstrations or problem solving.

2. Computational or non-computational problem-solving demonstration, including:

- Exam(s)
- Quizzes
- Homework problems

3. Skill demonstration, including:

- Class performance(s)

4. Objective examinations, including:

- Multiple choice
- Completion

5. Other

- Attendance/Participation
- Observation

REQUIRED READING, WRITING AND OTHER OUTSIDE-OF-CLASS ASSIGNMENTS:

Over an 18-week presentation of the course three hours of study are required for each unit of credit. Two hours of independent work done out of class are required for each hour of lecture. Outside of the regular class time the students in this class will be doing the following:

- Study
- Answer questions
- Skill Practice
- Required reading
- Problem solving activity or exercise
- Written work

BASIS FOR GRADES:

Writing Assignments	20%
Problem-Solving	20%
Skill Demonstrations	20%
Objective Examinations	20%
Attendance & Participation	20%
Other.....	%
TOTAL	100%

TEXTS/MATERIALS

Contren, Industrial Maintenance Mechanic Level1, Prentice-Hall 2007

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Area Department: B & W

=====Instructional Office Use Only - Signatures and Codes=====

Instructional Vice President Approval: Steven Eaton, AAVP

Curriculum Committee Approval Date: 11May12

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