

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE: Basic Plumbing Practical

CODE NO. : PLM651

SEMESTER:

PROGRAM: Basic Plumbing Apprenticeship (620)

AUTHOR: Brian Mick

DATE: August 2004

PREVIOUS OUTLINE

New

DATED:

APPROVED:

DEAN

DATE

TOTAL CREDITS: 6

PREREQUISITE(S): N/A

HOURS/WEEK: 6

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I. COURSE DESCRIPTION:

This course is based on the guidelines set out by the Ministry of Training, Colleges and Universities and will provide the apprentices with a basic knowledge of machines and equipment which are used in the piping industry while applying and reinforcing theoretical classroom knowledge.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Use personal protective equipment.
Potential Elements of the Performance:
 - select proper safety work boots, eye protection, clothing and gloves

2. Use hand and power tools.
Potential Elements of the Performance:
 - safe and correct use of the following :
hammers, chisels, tubing cutters, wrap-a-rounds, files, soldering equipment, threading equipment and oxygen/ acetylene equipment.
 - safe and correct use of the following:
power threaders, roll groover, bending machines, drills, saws, butt fusion equipment(thermoplastics), hot air welding (thermoplastics) pressfit tool.

3. Use a variety of piping materials.
Potential Elements of the Performance:
 - identify and select as required:
copper tube, malleable iron, steel pipe, steel tube, cast iron fittings and thermoplastics

4. Follow written or oral instructions required to perform calculations necessary to complete assigned practical tasks.
Potential Elements of the Performance:
 - read and understand sketches provided
 - use required formulas to calculate overall measurements
 - read and apply charts to obtain the correct pipe lengths
 - layout pipe for cutting with:
 - oxygen/acetylene torch
 - pipe cutters
 - tubing cutters
 - layout pipe and tubing for bending

5. Use a variety of methods required to join pipe and fittings in order to complete a specified practical assignment.

Potential Elements of the Performance:

- Join piping together by one or all of the following:

- threading
- fusion welding
- flared fittings
- compression fittings
- soft solder
- hard solder
- rolled groove

III. TOPICS:

1. Protect Self and Others
2. **Safe** and **Proper** use of hand tools, power tools, oxygen / acetylene cutting and welding equipment.
3. Pipe and fitting materials such as, but not limited to copper, steel, cast iron and thermoplastics.
4. Calculations required for offsets, fitting allowance, thread engagement, fitting fabrication, pipe and tube bending.
5. Pipe threading, roll grooving, soldering (hard and soft) fusion welding, pipe and tube bending.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Basic Plumbing Workbook

Calculator

IPT hand book for piping

Participation in PLM651 requires the use of safety boots at all times, safety glasses when needed, gloves and coveralls (no polyester materials). These items are not supplied by Sault College.

V. EVALUATION PROCESS/GRADING SYSTEM:

Specific practical assignment	75%
Attendance	15%
Shop safety	10%

The following semester grades will be assigned to students:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

VI. SPECIAL NOTES:

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 703 so that support services can be arranged for you.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.