



COURSE OUTLINE

MCH142

Prepared: Cam Pucci Approved: Corey Meunier

Course Code: Title	MCH142: PUMPS, VALVES, PIPING AND COMPRESSORS
Program Number: Name	4039: MECH. ENG. TN-MANUFA
Department:	MECHANICAL TECHNIQUES PS
Semester/Term:	18S
Course Description:	In this course, the student will learn about the different applications, installation, maintenance and types of pumps, valves, piping, compressors and ancillary equipment.
Total Credits:	3
Hours/Week:	3
Total Hours:	48
Vocational Learning Outcomes (VLO's): Please refer to program web page for a complete listing of program outcomes where applicable.	4039 - MECH. ENG. TN-MANUFA #1. Complete all work in compliance with current legislation, standards, regulations and guidelines. #3. Comply with current health and safety legislation, as well as organizational practices and procedures. #4. Apply sustainability best practices in workplaces. #7. Interpret, prepare and modify mechanical engineering drawings and other related technical documents. #8. Contribute to the design and the analysis of mechanical components, processes and systems applying fundamentals of mechanical engineering. #9. Manufacture, assemble, maintain and repair mechanical components according to required specifications.
Essential Employability Skills (EES):	#7. Analyze, evaluate, and apply relevant information from a variety of sources. #9. Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. #10. Manage the use of time and other resources to complete projects.
Course Evaluation:	Passing Grade: 50%, D
Other Course Evaluation & Assessment Requirements:	Make Up Tests if needed. Grade Definition Grade Point Equivalent

A+ 90 - 100% 4.00
A 80 - 89%
B 70 - 79% 3.00
C 60 - 69% 2.00
D 50 - 59% 1.00
F (Fail) 49% and below 0.00

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W Student has withdrawn from the course without academic penalty.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Final Exam	10%
Student Performance	10%
Term Assignments	40%
Term Tests	40%

Books and Required Resources:

Industrial Millwright Manual by Province of British Columbia
Paper Calculator Safety Equipment

Course Outcomes and Learning Objectives:

Course Outcome 1.

Discuss and demonstrate knowledge in various centrifugal type pumps.

Learning Objectives 1.

• Principles of non-positive displacement type pumps
• Various types of centrifugal type pumps & components
• Types of seals used in centrifugal pumps
• Assignments related to centrifugal pumps
• Installation, start-up and safety requirements
• Maintenance requirements for centrifugal pumps

Course Outcome 2.

Discuss and demonstrate knowledge with Positive Displacement type pumps.

Learning Objectives 2.

• Principles of positive displacement type pumps
• Compare positive and non-positive displacement pumps
• Discuss various types of positive displacement pumps
• Perform assignments related to positive displacement pumps
• Installation, start-up and safety requirements
• Maintenance requirements for positive displacement pumps

Course Outcome 3.

Discuss various types of conductors used in the trades. (Piping, tubing, hoses, fittings, ect.)

Learning Objectives 3.

Discuss various types of uses for conductors
Discuss various materials and uses
Discuss sizing, and theory requirements
Discuss fittings and sealants used with conductors
Demonstrate installation techniques with conductors/fittings
Perform assignments related to conductors
Discuss safety requirements related to conductors

Course Outcome 4.

Discuss various types of valves used in today's mechanical field.

Learning Objectives 4.

Discuss theory requirements with various valves
Examine specific uses for various type valves
Examine design qualities
Discuss installation techniques
Discuss specific sealants used with valves
Discuss safety and lockouts for valves

Course Outcome 5.

Discuss various types of compressors used in today

Learning Objectives 5.

Discuss relevant theory related to compressors
Discuss the various types and uses of compressors (reciprocating, rotary, screw, positive, dynamic or kinetic)
Discuss Staging and Acting Compressors
Discuss compressor components and uses
â€¢ Discuss safety and maintenance of compressors
â€¢ Discuss troubleshooting

Date:

Monday, April 23, 2018

Please refer to the course outline addendum on the Learning Management System for further information.