

COURSE NAME: MPM026 Applied Work/Trade Practices

Credit Value: 6
Total Course Hours: 84
Prerequisite Course(s): None
Corequisite Course(s): None

COURSE DESCRIPTION

The topics of this course will focus on skills and knowledge as they pertain to safety, tool recognition and maintenance and appropriate procedures used in a typical Motive Power shop environment. Applied work practice is often considered the foundation for all other courses in the Motive Power program.

LAND ACKNOWLEDGEMENT

Canadore College resides on the traditional territory of the Anishinaabeg and within lands protected by the Robinson Huron Treaty of 1850. This land is occupied by the people of Nipissing First Nation, Treaty #10 in the Robinson Huron Treaty of 1850 since time immemorial.

PLAR INFORMATION

This course is not eligible for Prior Learning Assessment and Recognition.

COURSE LEARNING OUTCOMES

Upon completion of this course, the student will have reliably demonstrated the ability to:

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| <p>1.0 Demonstrate safe shop practices and procedures.</p> <ul style="list-style-type: none">1.1 Identify safe apparel for a repair shop.1.2 Describe safe handling procedures for hazardous materials and WHMIS legislation.1.3 Follow guidelines in the Occupational Health and Safety Act.1.4 Identify types of fire extinguishers and their effective use.1.5 Demonstrate safe work practices in a repair shop setting. <p>2.0 Identify and use hand tools, power tools, and specialty tools common to Motive Power trades.</p> <ul style="list-style-type: none">2.1 Select and use appropriate metal working hand tools to complete basic projects.2.2 Identify and use hand tools common to mechanical repair shops.2.3 Identify and describe the use and maintenance of power tools common to mechanical repair shops.2.4 Identify tools which are specific to certain jobs in mechanical repair shops. <p>3.0 Identify, use, calibrate, and read</p> | <p>measurements from a variety of precision measurement tools common to Motive Power trades.</p> <ul style="list-style-type: none">3.1 Describe precision measuring tools such as micrometers, callipers, telescoping, bore, and small hole gauges, dial indicators and thickness gauges.3.2 Describe the steps required to obtain accurate readings from a variety of Imperial precision measurement tools.3.3 Describe the steps required to obtain accurate readings from a variety of Metric measurement tools.3.4 Utilize precision measurement tools to obtain correct sizes, clearances and run outs of mechanical parts. <p>4.0 Identify and use fasteners, sealants, and thread lockers.</p> <ul style="list-style-type: none">4.1 Identify and describe the uses of threaded fasteners found on motive power equipment.4.2 Identify and describe the uses of non-threaded fasteners found on motive power equipment.4.3 Identify and correctly choose chemical type |
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- sealants for a variety of jobs.
- 4.4 Identify and correctly choose chemical based thread lockers.
- 4.5 Identify and describe static and dynamic seals common to mechanical equipment.
- 4.6 Demonstrate the ability to choose and install thread repair products.
- 5.0 Identify, set-up and safely use hoisting and lifting equipment.
- 5.1 Identify and describe the types of hoisting and lifting equipment found in Motive Power shops.
- 5.2 Explain the construction and operation of hoisting and lifting equipment.
- 5.3 Identify lifting points on equipment to be hoisted.
- 5.4 Describe all safety precautions related to hoisting and lifting.
- 5.5 Demonstrate the ability to lift a variety of equipment using a variety of hoists and jacks.
- 6.0 Define basic fundamentals of friction and antifriction bearings.
- 6.1 Define types of friction.
- 6.2 Describe adverse effects of friction.
- 6.3 Identify the various applications and standards relating to bearings.
- 6.4 Explain the difference between friction (plain) and anti-friction bearings.
- 6.5 Explain bearing pre-load.
- 7.0 Describe the basic function and composition of friction and antifriction bearings.
- 7.1 Describe parts of bearings.
- 7.2 Identify bearing types.
- 7.3 Define types of lubrication used in different types of bearings.
- 7.4 Describe mounting techniques for bearings.
- 8.0 Inspect, service and replace bearings.
- 8.1 Inspect bearings for wear and damage.
- 8.2 Identify causes of bearing failures.
- 8.3 Service bearings, including cleaning, packing and adjusting for pre-load where applicable.
- 8.4 Replace bearings as required.
- 9.0 Describe the function and composition of dynamic and static sealing materials.
- 9.1 Identify types of static and dynamic seals.
- 9.2 Describe the application of different types of seals.
- 9.3 Describe the materials used to manufacture seals.
- 10.0 Inspect, test and replace seals.
- 10.1 Explain testing procedures for static and dynamic seals.
- 10.2 Inspect seals for wear or damage.
- 10.3 Identify causes of seal failures.
- 10.4 Replace static and dynamic seals as required.

GENERAL EDUCATION

This is not a General Education course.

ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES

This course contributes to the following Ministry of Colleges and Universities approved essential employability skills (EES) outcomes:

1. Communicate clearly, concisely, and correctly in the written, spoken, and visual form that fulfils the purpose and meets the needs of the audience.
2. Respond to written, spoken, or visual messages in a manner that ensures effective communication
3. Execute mathematical operations accurately
6. Locate, select, organize, and document information using appropriate technology and information systems.
7. Analyse, evaluate, and apply relevant information from a variety of sources.
8. Show respect for the diverse opinions, values, belief systems, and contributions of others
9. Interact with others in groups or teams in ways that contribute to effective working relationships and the

achievement of goals.

10. Manage the use of time and other resources to complete projects.

11. Take responsibility for one's own actions, decisions, and consequences.

EXTERNAL COURSE ACCREDITATIONS AND CONDITIONS

This course is equivalent to the following apprenticeship program reportable subjects: AST Level 1 S1221 - 1.1, 1.2, 1.3, 1.4, 1.5 CVE Level 1 S1241 - 1.1, 1.2, 1.3, 1.4 SET/MET Level 1 S1431 - all, S1432 - 2.3, 2.4 MT Level 1 S0150 - 5.1, 5.2

COURSE EVALUATION

Homework/Electures 25%/ Tests 20%/ Shop/ Job Sheets 35%/ Final Exam 20%

PROGRAM SPECIFIC GRADING

Per College Grading System

GRADING SYSTEM

A+:	90-100%	B+:	77-79%	C+:	65-69%	D:	50-54%	S - Satisfactory
A:	85-89%	B:	73-76%	C:	60-64%	F:	0-49%	I - Incomplete
A-:	80-84%	B-:	70-72%	D+:	55-59%			F- Repeat Course, included in GPA
								FS- Failure Supplemental
								FR- Repeat course, excluded from GPA

*For a complete chart of grades and descriptions, please see the Grading Policy.

LEARNING RESOURCES

No textbooks have been identified for this course.

Other Resources:

Required: Automotive Technology, Erjavec, Restoule, Playter current edition, Fundamentals of Medium/Heavy Duty Commercial Vehicle Systems by Owen Duffy and Gus Wright ISBN: 9781284041163, ARGO program by Electude. Recommended:

Resources listed on the course outline support the achievement of learning outcomes, and may be used throughout the course to varying degrees depending on the instructor's teaching methodology and the nature of the resource.

Technology requirements - <https://www.canadorecollege.ca/BYOD>

The Harris Learning Library's staff can help you find resources to support your learning - www.eclibrary.ca

LEARNING ACTIVITIES

Lecture/Assignments/ARGO Learning Modules/Homework/Activities/Shop Job Sheets

DELIVERY MODE

This course may be delivered, in whole or in part, in a number of modalities, including in class, online, hybrid, in a synchronous or asynchronous manner or a combination thereof, as per accreditation and/or regulatory standards where appropriate.

RECORDING GUIDELINES

This class may be recorded by faculty of the College. Faculty will inform students when recording of the class commences and ceases. 'Recorded' means that the audio-visual and chat portions of the class will be recorded and then be stored on the College or vendor provider server. They will be made available to students, but only for the express and sole use of those registered in this course. If you have any questions or concerns about this recording, please contact your instructor or the College's privacy officer at privacy.officer@canadorecollege.ca. Full recording guidelines can be found at: <https://cdn.agilitycms.com/canadore-college/academic-centre-of-excellence/Canadore%20Recording%20Guidelines.pdf>

EXPERIENTIAL LEARNING

All full-time programs of study at Canadore College strive to provide students with the opportunity for experiential learning. This course provides students with an experiential learning opportunity through:

Workplace/Lab Simulation (EL)

ACADEMIC POLICIES

Canadore College is committed to the highest standards of academic integrity, and expects students to adhere to these standards as part of the learning process in all environments. The College's Academic Integrity policy seeks to ensure that all students understand their rights and responsibilities in upholding academic integrity and that students receive an accurate and fair assessment of their work. Please review the Academic Integrity policy (A-18) and other academic policies found on our website:

<https://www.canadorecollege.ca/about/policies>.

COLLEGE POLICIES

- Protecting human rights in support of a respectful college community

For college policies please see: <http://www.canadorecollege.ca/about-us/college-policies>.

STUDENT SUCCESS SERVICES - Your Success Matters!

Student Success Services provides student-focused services to facilitate students' success in their studies. Staff provide support by reducing and/or removing educational-related barriers through individualized accommodations and supports to students with disabilities.

Please visit our webpage to learn more: <https://www.canadorecollege.ca/support/student-success-services> or look for our events on social media.

To connect with Student Success Services email studentsuccessnow@canadorecollege.ca or call 705.474.7600 ext 5205.

FIRST PEOPLES' CENTRE:

A culturally safe environment offering CONFIDENTIAL student focused services, drop in or make an appointment to access:

- One on one counselling
- Elder in residence program
- Peer tutoring
- Peer mentorship
- Lunch & learn workshops on study skills, self-care, life skills
- Learning Resource Centre

Drop by our offices at C254 College Drive, E101 Commerce Court or call 705 474 7600 Ext. 5961 College Drive / 5647 Commerce Court.

<https://www.canadorecollege.ca/experience/indigenous-student-experience>

WAIVER OF RESPONSIBILITY

Every attempt is made to ensure the accuracy of this information as of the date of publication. The college reserves the right to modify, change, add, or delete content.

HISTORICAL COURSE OUTLINES

Students use course outlines to support their learning. Students are responsible for retaining course outlines for future use in applications for transfer of credit to other educational institutions.

