



vcc.ca

Course Name:

Math, Physics & Worksafe Requirements for HMT

Effective Date:

May 2019

School/Centre:

Trades, Technology & Design

Department:

Heavy Mechanical Technology Diploma International(4305)

Banner Course Name:

Math, Physics & Worksafe HMT

Subject Code:

HMTD - Heavy Mechanical Technician

Course Number

1110

Year of Study

1st Year Post-secondary

Credits:

1

Course Description:

Wire rope, lift, and support loads. This course introduces students to math and physics for heavy mechanical trades, load supporting and lifting, and servicing winch wire rope.

Course Pre-Requisites (if applicable):

Admission to the Heavy Mechanical Technology program.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

Upon successful completion of this course, students will be able to:

CLO #1	Use mathematics to solve problems involving whole numbers.
CLO #2	Describe key terms and concepts for working with fractions, decimals, ratios, proportions, equations, and formulas.
CLO #3	Solve problems involving common fractions, decimals, and decimal fractions.
CLO #4	Convert between common decimal fractions.
CLO #5	Describe and convert between metric and imperial measurements.
CLO #6	Solve problems using perimeters, areas, volumes, ratios, and proportions.
CLO #7	Describe and use angles and geometric construction.
CLO #8	Describe wire ropes and their applications.
CLO #9	Inspect and service wire ropes used on winches.
CLO #10	Apply the WorkSafe BC Safety Regulations to lifting and blocking applications.
CLO #11	Select, use and maintain lifting and blocking equipment: lift, move, and support loads on a variety of different machines, trucks, and automobiles(including pick-up trucks).

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer lab and hands-on practical work.

Evaluation and Grading

Grading System:

Percentages

Passing grade:

70%

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Other	30	Theory- includes formative assessments, assignments, and a summative assessment.
Other	70	Practical- includes shop tasks, active participation and teamwork, workplace behavior, use of tools and equipment.

Hours by Learning Environment Type

Lecture, Seminar, Online

7.5

Lab, Clinical, Shop, Kitchen, Studio, Simulation

17.5

Practicum

Self Paced / Individual Learning

Course Topics

Course Topics:

1. Whole numbers.
2. Fractions, decimals, ratios, proportions, equations, and formulas.
3. Common fractions, decimals, and decimal fractions.
4. Common decimal fractions.
5. Metric and imperial measurements.
6. Perimeters, areas, volumes, ratios, and proportions.
7. Angles and geometric construction.
8. Wire ropes and their applications.
9. Wire ropes used on winches.
10. WorkSafe BC Safety Regulations to lifting and blocking applications.
11. Lifting and blocking equipment for a variety of different machines, trucks, and automobiles (including pick-up trucks).

Program and course contents and descriptions, offerings and schedules are subject to change without notice.

Resource Material(s):

Resources are items in addition to tuition that the student is responsible for purchasing. Course resource information will be supplied by the department/instructor.

VCC Education and Education Support Policies

There are a number of **Education** and **Education Support** policies that govern your educational experience at VCC, please familiarize yourself with them.

The policies are located on the VCC web site at <https://www.vcc.ca/about/governance--policies/policies>.

To find out how this course transfers, visit the BC Transfer Guide at <https://www.bctransferguide.ca>.

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Downtown campus

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