FLEMING

Course Outline

Course Title:	Trade Calculations I		
Course Number:	MATH130	**Approval Date:**	2022/9/3
Course Hours:	45 hours	**Academic Year:**	2022
Academic School:	School of General Arts & Sciences		
Faculty:	Soobia Siddiqui - soobia.siddiqui@flemingcollege.ca Erin Kirk - erin.kirk@flemingcollege.ca Heather Cuthbert - Heather.Cuthbert@flemingcollege.ca Rebecca Christensen - Rebecca.Christensen@flemingcollege.ca		
Program Co-ordinator or Equivalent:	Theresa Finlay - tracy.finlay@flemingcollege.ca		
Dean (or Chair):	Angela Pind - angela.pind@flemingcollege.ca Nat Leach - Nat.Leach@flemingcollege.ca		
Academic Planning and Operations Department:	Felicia Pavey - Felicia.Pavey@flemingcollege.ca		

Course Description

This course will enable students to apply specific trade related mathematical concepts and acquire foundational skills important in the fields of Construction, Welding, Plumbing, Heating, Refrigeration, and Air Conditioning. It is designed to complement and reinforce learning within other trades courses and program areas.

Prerequisites: None.

Corequisites: None.

Course Delivery Type

Face to face.

All course hours are delivered in person at the delivery location specified on the academic timetable.

Learning Outcomes

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

1. Perform accurate calculations with whole numbers, fractions and decimals with and without the aid of a calculator.
2. Accurately perform calculations with exponents, roots and scientific notation.
3. Use the basics of algebra to manipulate and solve applied equations.
4. Apply metric and imperial units of measure and their conversions to various applied situations.
5. Accurately calculate the Area, Perimeter or Volume for basic shapes and solids.
6. Solve right angled triangles using the Pythagorean Theorem. Apply this knowledge to various applicable problems.
7. Use ratios and proportions to solve appropriate applied problems.
8. Use the trigonometric functions to solve various applied problems in right triangle trigonometry.
9. Accurately perform percent calculations.

The learning outcomes are the same regardless of delivery model, however the learning sequence and assessment tools are slightly different in order to best support learners in each of the delivery formats.

Based on delivery model, see semester details for assessment requirements and plan. Learning sequence and specific due dates will be communicated to you by your faculty member.

Learning Resources

Required Resources

1. Scientific **Calculator** (the Sharp EL-531X is recommended). Graphing calculators are not supported or needed for this course. Cellphones and other smart devices are not permitted during assessments.
2. **Textbook:** No textbook is required for this course. Additional open-source (free) resources will be posted to the course page.
3. It is helpful, but not necessary, for you to have a **printer**. Printers are also available on-campus.
4. You may need a way to save some of your work to submit it electronically. Some options for this include completing work electronically (e.g. with a stylus in a word document) and saving as a pdf or taking a picture/scan with a mobile device. Support for this will be provided as needed.
5. Access the **Course Homepage** on D2L via student portal at www.flemingcollege.ca and into My Courses - Trade Calculations I MATH130 . ***It is expected that learners access the course page at least 3 times a week.***

Assessment Summary

Assessment Task	Percentage
Quizzes	10%
Assignments	20%
Tests	70%

Student Success: Policies and Procedures

Mutually, faculty and learners will support and adhere to college Academic Regulations, and Student Rights and Responsibilities. The following policies and guidelines have been developed to support the learning process.

Please click on the link for information about:

- Academic Integrity (2-201A) (https://department.flemingcollege.ca/hr/attachment/7750/download)
- Accessibility for Persons with Disabilities (3-341) (https://department.flemingcollege.ca/hr/attachment/5619/download)
- Grading and Academic Standing (2-201C) (https://department.flemingcollege.ca/hr/attachment/7752/download)
- Guidelines for Professional Practice: Students and Faculty (https://flemingcollege.ca/PDF/guidelines-for-professional-practice-students-faculty.pdf)
- Student Rights and Responsibilities (5-506) (https://department.flemingcollege.ca/hr/attachment/269/download)

If you will need academic accommodations (for example if you have a learning disability, mental health condition such as anxiety or depression or if you had an IEP in high school), please contact the Accessible Education Services (AES) department (https://department.flemingcollege.ca/aes/) to meet with a counsellor.

Alternate accessible formats of learning resources and materials will be provided, on request.

Program Standards

The **Ministry of Colleges and Universities** oversees the development and the review of standards for programs of instruction. The **Ministry of Labour Training and Skills Development** oversees the development and the review of standards for programs of instruction for Apprenticeship training in the province of Ontario. Each college is required to ensure that its programs and program delivery are consistent with these standards, and must assist students to achieve these essential outcomes.

This course contributes to Program Standards as defined by the Ministry of Colleges and Universities (MCU). Program standards apply to all similar programs of instruction offered by colleges across the province. Each program standard for a postsecondary program includes the following elements:

- **Vocational standards** (the vocationally specific learning outcomes which apply to the program of instruction in question);
- **Essential employability skills** (the essential employability skills learning outcomes which apply to all programs of instruction); and
- **General education requirement** (the requirement for general education in postsecondary programs of instruction that contribute to the development of citizens who are conscious of the diversity, complexity and

richness of the human experience; and, the society in which they live and work).

Collectively, these elements outline the essential skills and knowledge that a student must reliably demonstrate in order to graduate from the program. For further information on the standards for your program, follow the MCU link (www.tcu.gov.on.ca/pepg/audiences/colleges/progstan/).

Detail Plan

Term:	2023 Winter
Faculty:	Victoria Maystruk - victoria.maystruk@flemingcollege.ca
Program Co-ordinator or Equivalent:	Theresa Finlay - tracy.finlay@flemingcollege.ca
Dean (or Chair):	Angela Pind - angela.pind@flemingcollege.ca Nat Leach - Nat.Leach@flemingcollege.ca
Academic Planning and Operations Department:	Felicia Pavey - Felicia.Pavey@flemingcollege.ca

Learning Plan

Wks/Hrs Units	Topics, Resources, Learning, Activities	Learning Outcomes	Assessment
Module 1 Approx 15 Course Hours	Module 1: Whole Numbers, Fractions, Decimals, Measurement Applications	1, 4	Topic Worksheets x 3 Topic Quizzes x 3 Module 1 Test
Module 2 Approx 15 Course Hours	Module 2: Algebra and Exponent Laws, Perimeter and Area, Surface Area and Volume	1, 2, 3, 4, 5	Topic Worksheets x 3 Topic Quizzes x 3 Module 2 Test
Module 3 Approx 15 Course Hours	Module 3: Ratio and Proportion, Percent, Trigonometry	3, 6, 7, 8, 9	Topic Worksheets x 3 Topic Quizzes x 3 Module 3 Test

Assessment Requirements

Assessment Task	Date/Weeks	Course Learning Outcome	Percentage
Worksheets Best 8 of 9 @ 2.5% each	See due dates on D2L	1-9	20%
Topic Quizzes Best 8 of 9 @ 1.25% each	See due dates on D2L	1-9	10%
Module 1 Test @ 20% Module 2 Test @ 25% Module 3 Test @ 25% (Details about test dates and format will be posted to D2L.)	See dates on D2L	1-9	70%

** Learning Outcome 2 should read: Accurately perform calculations with exponents and roots.

Exemption Contact

Information about the Transfer Credit process can be accessed through your myCampus Portal under the Registrar's Office and Resources Tabs or by contacting the Transfer Credit Coordinator (transfercredit@flemingcollege.ca) in the Registrar's Office.

Prior Learning and Assessment and Recognition (PLAR)

PLAR uses tools to help learners reflect on, identify, articulate, and demonstrate past learning which has been acquired through study, work and other life experiences and which is not recognized through formal transfer of credit mechanisms. PLAR options include authentic assessment activities designed by faculty that may include challenge exams, portfolio presentations, interviews, and written assignments. Learners may also be encouraged and supported to design an individual documentation package that would meet the learning requirements of the course. Any student who wishes to have any prior learning acquired through life and work experience assessed, so as to translate it into a college credit, may initiate the process by applying through the Registrar's office. For more information please click on the following link: http://flemingcollege.ca/admissions/prior-learning-assessment-and-recognition

Course Specific Policies and Procedures

It is the responsibility of the student to retain this course outline for future reference. Course outlines may be required to support applications for advanced standing and credit transfer to other educational institutions, portfolio development, PLAR and accreditation with professional associations.

Synchronous sessions may be recorded. As a result, your image, voice, name, personal views and opinions, and course work may be collected under legal authority of section 2 of the Ontario Colleges of Applied Arts and Technology Act, 2002. This information will be used for the purpose of supporting student learning. Any questions about this collection can be directed to the Privacy and Policy Officer at freedomofinformation@flemingcollege.ca or by mail to 599 Brealey Drive, Peterborough, ON K9J 7B1.

Course materials and news items are posted on the Brightspace (D2L) course page. It is expected that students are **checking the course page and their Fleming College email a minimum of three times per week**.

A printed course pack is available for purchase through the bookstore for Winter 2023.

Your professor may also contact you using your Fleming College email account. When emailing your professor, please use your Fleming College email account. Messages sent from other email addresses may not be received.

The following are the mathematics department's expectations regarding student academic responsibilities. These expectations were compiled in consultation with mathematics faculty and appear in all mathematics course outlines.

- **Due Dates/Missed Assessments**: Refer to the Class Absence Operating Policy 2-205.
- Unapproved missed tests, quizzes, assignments or other assessments will be given a grade of ZERO. Students are required to follow course norms for submission requirements; alternate forms of submission will not be accepted.
- **Academic Integrity**: The principle of academic honesty requires that all work submitted for evaluation and course credit be the original, unassisted work of the student. Cheating, including sharing resources or information about quizzes/tests, copying, purchasing or collaborating on work, except for group projects arranged and approved by the faculty member, or otherwise submitting work that is not the student's own violates this principle and will result in initiation of the College's Academic Integrity Policy (Operating Procedure #2-201A). Full details of the policy, procedure, violation types and forms can be found at: https://department.flemingcollege.ca/academic-integrity/.
- **Final Grades**: Final grades in this course are assigned based on the level of academic achievement which corresponds to the assessment components as cited in this course outline. Faculty members will not offer additional evaluation activities beyond those cited in this course outline.
- The teaching staff reserves the right to modify the course sequence to better meet the needs of the student group and to facilitate student learning.
- Your success in this course will be directly related to your study and practice of course material.
- **Calculators**: Students must have an appropriate calculator for their course. Students are responsible for knowing how to use their calculator independently on assessments.
- **Tutoring and Academic Skills**: Tutoring and Academic Skills is available online/through distance education. Students may arrange for a math tutor and/or attend a drop-in help sessions.