

# Course Outline

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<b>School:</b>	Business
<b>Department:</b>	Accounting
<b>Course Title:</b>	Math Of Finance Part 1
<b>Course Code:</b>	MATH 118
<b>Course Hours/Credits:</b>	56
<b>Prerequisites:</b>	GS 191, MATH 105
<b>Co-requisites:</b>	N/A
<b>Eligible for Prior Learning, Assessment and Recognition:</b>	Yes
<b>Originated by:</b>	Phil Cox
<b>Creation Date:</b>	Summer 2015
<b>Revised by:</b>	Jose Romero-Lopez
<b>Revision Date:</b>	Summer 2024
<b>Current Semester:</b>	Fall 2025
<b>Approved by:</b>	



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Mary Devine, Associate Dean/Dean  
Business

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Students are expected to review and understand all areas of the course outline. Retain this course outline for future transfer credit applications. A fee may be charged for additional copies. This course outline is available in alternative formats upon request.

## Acknowledgement of Traditional Lands

Centennial is proud to be a part of a rich history of education in this province and in this city. We acknowledge that we are on the treaty lands and territory of the Mississaugas of the Credit First Nation and pay tribute to their legacy and the legacy of all First Peoples of Canada, as we strengthen ties with the communities we serve and build the future through learning and through our graduates. Today the traditional meeting place of Toronto is still home to many Indigenous People from across Turtle Island and we are grateful to have the opportunity to work in the communities that have grown in the treaty lands of the Mississaugas. We acknowledge that we are all treaty people and accept our responsibility to honor all our relations.

## Course Description

This is the first part of a two-part mathematics of finance course offered to students in the School of Business. Through online instruction, students will review order of operations, ratio, proportion, percent and basic algebra.

## External Standard Information (ESI)

N/A

## Program Outcomes

N/A

## Course Learning Outcomes

The student will reliably demonstrate the ability to:

1. Perform basic algebraic operations.
2. Solve simple equations.
3. Rearrange formulae.
4. Solve systems of linear equations.
5. Solve business problems involving linear equations, ratios & proportions, percents and percent increase & decrease.
6. Construct basic graphs from equations as well as raw data.

## Essential Employability Skills (EES)

The student will reliably demonstrate the ability to\*:

3. Execute mathematical operations accurately.
4. Apply a systematic approach to solve problems.
5. Use a variety of thinking skills to anticipate and solve problems.

*\*There are 11 Essential Employability Skills outcomes as per the Ministry Program Standard. Of these 11 outcomes, the following will be assessed in this course.*

## New Essential Skills (NES)

N/A

## Global Citizenship and Equity (GC&E) Outcomes

N/A

## Text and Other Instructional/Learning Materials

The costs of textbooks or other learning material are available through the Centennial College Bookstore <https://www.bkstr.com/centennialprogressstore/shop/textbooks-and-course-materials>.

### Text Book(s):

Contemporary Business Mathematics with Canadian Applications, Thirteenth Edition  
S.A. Hummelbrunner, Kelly Halliday Ali, Hassanlou  
Published by Pearson Prentice Hall  
(Purchasing access to the Pearson MyLabMath platform is required for sections with online delivery mode)

### Online Resource(s):

An access code or online payment is required to register on Pearson MyLabMath.

\*\*The access code includes access to the Tests and course ebook listed above (required for online async sections).

Math 128/118 Workbook (available on Luminare)

Math 128/118 Worksheets (available on Luminare)

### Material(s) Required for Completing this Course:

CALCULATOR: All classroom instruction will be based on the Sharp EL-520 or 531. Recommended but not mandatory.

Please see the weekly topical outline for any Additional Learning Resources required for your section of this course.

## Evaluation Scheme

- Test #1: Signed Numbers, Order of Operations, Integral Exponents and Algebraic Simplification.
- Test #2: Factoring, Calculator Exercises, Solving Linear Equations and Formula Rearrangement.
- Test #3: Calculator Exercises, Solving Linear Equations, Ratio, Proportion, Percent and Word Problems.
- Test #4: Calculator Exercises, Formula Rearrangement, Percent Applications and Word Problems, Solving a System of Linear Equations.
- Test #5: Graphing

Evaluation Name	CLO(s)	EES Outcome(s)	NES Outcome(s)	GCE Outcome(s)	Weight/100
Test #1	1	3, 4			20
Test #2	1, 2, 3	3, 4, 5			25
Test #3	1, 2, 4, 5	3, 4, 5			25
Test #4	1, 2, 4, 5	3, 4, 5			25
Test #5	1, 2, 4, 6	3, 4, 5			5
<b>Total</b>					<b>100%</b>

If students are unable to write a test they should immediately contact their professor or program Associate Dean for advice. In exceptional and well documented circumstances (e.g. unforeseen family problems, serious illness, or death of a close family member), students may be able to write a make-up test.

All submitted work may be reviewed for authenticity and originality utilizing College approved plagiarism prevention software. Students who do not wish to have their work submitted to College approved plagiarism prevention software must, by the end of the second week of class, communicate this in writing to the instructor and make mutually agreeable alternate arrangements.

When writing tests, students must be able to produce official Centennial College photo identification or they may be refused the right to take the test or test results will be void.

Tests or assignments conducted remotely may require the use of online proctoring technology where the student's identification is verified and their activity is monitored and/or recorded, both audibly and visually through remote access to the student's computer and web camera. Students must communicate in writing to the instructor as soon as possible and prior to the test or assignment due date if they require an alternate assessment format to explore mutually agreeable alternatives.

## Student Accommodation

The Centre for Accessible Learning and Counselling Services (CALCS) (<http://centennialcollege.ca/calcs>) provides programs and services which empower students in meeting their wellness goals, accommodation and disability-related needs. Our team of professional psychotherapists, social workers, educators, and staff offer brief, solution-focused psychotherapy, accommodation planning, health and wellness education, group counselling, psycho-educational workshops, adaptive technology, and peer support. Walk in for your first intake session at one of our service locations (Ashtonbee Room L1-04, Morningside Room 190, Progress Room C1-03, The Story Arts Centre Room 285, Downsview Room 105) or contact us at [calcs@centennialcollege.ca](mailto:calcs@centennialcollege.ca), 416-289-5000 ext. 3850 to learn more about accessing CALCS services.

## Use of Dictionaries

- Any dictionary (hard copy or electronic) may be used in regular class work.
- English-Additional Language (e.g. English-Chinese) or Additional Language-English (e.g. Russian-English) dictionaries may be used in regular class work.
- Dictionaries may be used in tests and examinations, or in portions of tests and examinations, as long as they are non-electronic (not capable of storing information) and hard copy (reviewed by the

invigilator to ensure notes are not incorporated that would affect test or examination integrity).

## Program or School Policies

N/A

## Course Policies

- a) Students must put their official photo-ID, the Centennial Student Card, in full view when writing a test (only applicable when students have to write the test in class).
- b) During tests, students may use a scientific calculator. Financial, programmable and/or graphing calculators are prohibited. No other electronic devices will be permitted.
- c) If a student is unable to write a test, it is the student's responsibility to contact their professor by email prior to the test. Failure to email the professor prior to missing a test will (1) result in a mark of zero on the missed test; and (2) forfeit the possibility of the student writing a make-up test.
- d) If the student can provide satisfactory proof that the test has been missed for a justifiable reason, a make-up test will be permitted. The make-up test may be scheduled either during Engagement Week (for Test 1 only), or during the week following the end of the semester. Students may be granted at most one make-up test. A mark of zero will be recorded in cases where no reason acceptable to the professor is provided.
- e) There will be no rewrites of term tests.

Calculator:

All classroom instruction will be based on the Sharp EL-520 or 531.

## College Policies

Students should familiarize themselves with all College Policies that cover academic matters and student conduct.

All students and employees have the right to study and work in an environment that is free from discrimination and harassment and promotes respect and equity. Centennial policies ensure all incidents of harassment, discrimination, bullying and violence will be addressed and responded to accordingly.

### Academic Honesty

Academic honesty is integral to the learning process and a necessary ingredient of academic integrity. Forms of academic dishonesty include cheating, plagiarism, and impersonation, among others. Breaches of academic honesty may result in a failing grade on the assignment or course, suspension, or expulsion from the college. Students are bound to the College's AC100-11 Academic Honesty and Plagiarism policy.

To learn more, please visit the Libraries information page about Academic Integrity <https://libraryguides.centennialcollege.ca/academicintegrity> and review Centennial College's Academic Honesty Module: [https://myappform.centennialcollege.ca/e/centennial/articulate/Centennial\\_College\\_Academic\\_Integrity\\_Module\\_%202/story.html](https://myappform.centennialcollege.ca/e/centennial/articulate/Centennial_College_Academic_Integrity_Module_%202/story.html)

### Use of Lecture/Course Materials

Materials used in Centennial College courses are subject to Intellectual Property and Copyright protection, and as such cannot be used and posted for public dissemination without prior permission from the original creator or copyright holder (e.g., student/professor/the College/or third-party source). This includes class/lecture recordings, course materials, and third-party copyright-protected materials (such as images, book chapters and articles). Copyright protections are automatic once an original work is created, and applies whether or not a copyright statement appears on the material. Students and employees are bound by College policies, including AC100-22 Intellectual Property, and SL100-02 Student Code of Conduct, and any student or employee found to be using or posting course materials or recordings for public dissemination without permission and/or inappropriately is in breach of these policies and may be sanctioned.

### Transfer Credit, PLAR, and Pathways

Students may be eligible for transfer credit, PLAR, or pathway opportunities based on prior learning or experience. Information on eligibility and application processes is available on the College's Pathways to Credit website at <https://www.centennialcollege.ca/admissions/pathways-and-partnerships/pathways-to-credit/>.

For more information on these and other policies, please visit [www.centennialcollege.ca/about-centennial/college-overview/college-policies](http://www.centennialcollege.ca/about-centennial/college-overview/college-policies).

Students enrolled in a joint or collaborative program are subject to the partner institution's academic policies.

## PLAR Process

This course is eligible for Prior Learning Assessment and Recognition (PLAR). PLAR is a process by which course credit may be granted for past learning acquired through work or other life experiences. The PLAR process involves completing an assessment (portfolio, test, assignment, etc.) that reliably demonstrates achievement of the course learning outcomes. Contact the academic school to obtain information on the PLAR process and the required assessment.

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## Topical Outline (subject to change):

## ORIGINAL TOPICAL

Week	Topics	Readings/Materials	Weekly Learning Outcome(s)	Instructional Strategies	Evaluation Name and Weight	Evaluation Date
1	Signed Numbers Order of Operations and review of fractions	I.2(A to D) 1.1, 1.2(A to E)	Simplify numerical expressions with positive and negative numbers.  Simplify arithmetic expressions using order of operations. Find equivalent fractions and decimal form of fractions.	Lecture/Exercises  Professor commentary videos  Exercises from Worksheets and Textbook practice questions.		
2	Integral exponents	2.2 (A to E)	Simplify and evaluate expressions with positive, negative and zero exponents.	Lecture/Exercises  Professor commentary videos  Exercises from Worksheets and Textbook practice questions.		
3	Algebraic Simplification	I.1 2.1(A to C)	Review of operation; commutative, associative and distributive laws; additive and multiplicative identities; algebraic terms.  Simplify algebraic expressions using operations and laws.	Lecture/Exercises  Professor commentary videos  Exercises from Worksheets and Textbook practice questions.		
4	Test Review Test 1	Test Review	Review and Evaluation	Evaluation/Test	Test #1 (20%)	
5	Calculator Competence Common Factoring	1.2F, 2.3, 2.1D I.3	Use an electronic calculator to evaluate expressions containing exponents, complex fractions and brackets.  Factor expressions containing more than one term.	Lecture/Exercises  Professor commentary videos  Exercises from		

Week	Topics	Readings/Materials	Weekly Learning Outcome(s)	Instructional Strategies	Evaluation Name and Weight	Evaluation Date
				Worksheets and Textbook practice questions.		
6	Solving Linear Equations	2.5, 2.6(A to C),2.7	Solve linear equations using the 4 basic operations and algebraic simplification.	Lecture/Exercises Professor commentary videos Exercises from Worksheets and Textbook practice questions.		
7	Formula Rearrangement	2.6D	Rearrange formulae using simplification and the 4 basic operations.	Lecture/Exercises Professor commentary videos Exercises from Worksheets and Textbook practice questions.		
8	Test Review Test 2	Test Review	Review and Evaluation	Evaluation/Test	Test #2 (25%)	
9	Ratio, Proportion and Percent	3.1 3.2(Example C) 3.3	Use ratio and proportion to solve allocation and equivalence problems. Conversion amongst percent, fractions and decimals	Lecture/Exercises Professor commentary videos Exercises from Worksheets and Textbook practice questions.		
10	Percent Problems	3.4 to 3.6	Find rate, base amount, rate of change; finding the base given a change.	Lecture/Exercises Professor commentary videos Exercises from Worksheets and Textbook practice questions.		

Week	Topics	Readings/Materials	Weekly Learning Outcome(s)	Instructional Strategies	Evaluation Name and Weight	Evaluation Date
11	Test Review Test 3	Test Review	Review and Evaluation	Evaluation/Test	Test #3 (25%)	
12	Solving Systems of Equations	4.3 (Section A)	Use algebraic elimination to solve linear systems of 2 equations in 2 unknowns (with whole number, decimal and fractional coefficients).	Professor commentary videos Exercises from Worksheets and Textbook practice questions.		
13	Test Review Test 4	Test Review	Review and Evaluation	Evaluation/Test	Test #4 (25%)	
14	Graphing	4.1 4.2 (A to E)	Use graphing to solve 2 equations with 2 unknowns (with whole number, decimal, and fractional coefficients).  Graph quadratic equations with x values given as an inequality  Review and Evaluation	Lecture/Exercises Professor commentary videos  Exercises from Worksheets and Textbook practice questions.	Test #5 (5%)	