

**BUS 110E Business Mathematics**

*3 credits, 3 hours per week*

Students will cover (a) a review of basic algebra, ratio and proportion, and linear systems; (b) the mathematics of Business Management including the calculation of depreciation, discounts, simple interest and mark-ups; and (c) the mathematics of finance which includes compound interest, future value, present value, annuities, amortization, bond valuation, sinking funds, and discounted cash flows. It is expected that two-thirds of the course will focus on item (c). An emphasis on the use of word problems and small case studies will be stressed to bring the real world usefulness of the material to light.

*Prerequisites and/or co-requisites: Math 30/33 or Math 30-2*

**Instructor**

Instructor Name: Sandra Efu  
Office location: S111D  
Phone number: 780-791-8974  
E-mail: [sandra.efu@keyano.ca](mailto:sandra.efu@keyano.ca)

**Office hours**

Monday 12:00 pm to 1:00 pm  
Tuesday 12:00 pm to 1:00 pm; 6:00 pm to 6:30 pm  
Wednesday 1:00 pm to 2:00 pm; 6:00 pm to 6:30 pm  
Thursday 12:00 pm to 1:00 pm

**Hours of Instruction**

Tuesday: 6:30 pm – 9:30 pm Room: CC283

**Required Resources**

**Business Mathematics in Canada**, F. Ernest Jerome/Worsick, Eighth edition, ISBN 978 125 910 3568.

Access to McGraw-Hill Connect is required for assignments and tests.

Textbook with McGraw-Hill Connect access is available at the Keyano library.

Recommended calculator: TI BA II plus Professional Calculator

**Course Outcomes**

Upon successful completion of the course, the student shall be able to:

- Apply ratios, proportions and percents to solve a variety of business problems
- Determine trade discounts, cash discounts, mark-up and mark-down
- Solve problems involving simple interest and partial payments
- Analyze and solve problems involving the time value of money and compound interest using formulae and financial calculator
- Analyze and solve annuities and their applications to loans, bonds, investments and mortgages using formulae and financial calculator

**Evaluation**

Assignment	Percentage
10 Chapter Readings (take home) and In-class Exercises (beginning of class)	30% (15% for chapter readings and 15% for in-class exercises)
4 Group Exercises (in-class)	20%
Term Paper	10%
Midterm 1	10%
Midterm 2	10%
Final Examination	20%

A grade of C- is required for progression or transfer.

**Note:**

1. For learning to happen in any course, you must take an active role in the process. For this class, you are expected to come to class ‘prepared’ and ‘ready to learn,’ which requires you ‘to read’ and ‘to study’ the assigned reading ‘before’ you come to class. There are 10 chapter readings in total, which accounts for 30% of your overall grade. Being prepared for class enables you to construct a knowledge base on which subsequent learning rests.

2. In-class group exercises cannot be written late, unless in the case of an illness or emergency. One grade will be provided to every group member based on each assignment deliverable.

Group projects can help students develop a host of skills that are increasingly important in the professional world (Caruso & Woolley, 2008; Mannix & Neale, 2005). Working in groups will provide each student the opportunity to develop team skills, improve communication skills and leverage personal experiences to contribute to group assignments.

**Grading System**

Descriptor	Alpha Grade	4.0 Scale	Percent
Excellent	A+	4.0	> 93.9
	A	4.0	87 – 93.9
	A-	3.7	80 – 86.9
Good	B+	3.3	77 – 79.9
	B	3.0	74 – 76.9
	B-	2.7	70 – 73.9
Satisfactory	C+	2.3	67 – 69.9
	C	2.0	64 – 66.9
<b>Progression</b>	C-	1.7	60 – 63.9
Poor	D+	1.3	57 – 59.9
<b>Minimum Pass</b>	D	1.0	50 – 56.9
Failure	F	0.0	< 50

## Proposed Schedule of Topics

DATE	TOPIC	REQUIRED READING	ASSIGNMENTS & QUIZZES
10 Jan	Introduction to Course Review and Applications of Basic Mathematics & Algebra	Course Outline Chapters 1 & 2	Assigned Reading (Chapters 1 & 2) Assigned Reading (Chapter 3)
17 Jan	Ratios and Proportions	Chapter 3	<i>In-class exercise (Chapter 3)</i> Assigned Reading (Chapter 4)
24 Jan	Mathematics of Merchandising	Chapter 4	<i>In-class exercise (Chapter 4)</i> Assigned Reading (Chapter 6)
31 Jan	Simple Interest	Chapters 6	<i>In-class exercise (Chapter 6)</i>
7 Feb	Applications of Simple Interest	Chapter 7	<b>Assignment 1</b> on Chapters 1-7 (in-class) Assigned Reading (Chapter 8)
14 Feb	<b>Midterm Exam 1 (take home)</b>	Chapters 1 – 7	Take home
	Compound Interest: Future Value and Present Value	Chapter 8	<i>In-class exercise (Chapter 8)</i> Assigned Reading (Chapter 9)
21 Feb	Compound Interest: Further Topics and Applications	Chapter 9	<i>In-class exercise (Chapter 9)</i> Assigned Reading (Chapter 10) <b>Assignment 2</b> on Chapters 8 & 9 (take home)
27 Feb – 3 Mar	Reading week – no class		
7 Mar	Ordinary Annuities: Future Value and Present Value	Chapter 10	<i>In-class exercise (Chapter 10)</i> Assigned Reading (Chapter 11)
14 Mar	Ordinary Annuities: Periodic Payment, Number of Payments and Interest Rate	Chapter 11	<b>Assignment 3</b> on Chapters 9, 10 and 11 (in-class)
21 Mar	<b>Midterm Exam 2 (in-class)</b>	Chapters 8 – 11	Assigned Reading (Chapter 12)
28 Mar	Annuities Due	Chapters 12&13	<i>In-class exercise (Chapter 12)</i> Assigned Reading (Chapter 14)
4 April	Loan Amortization: Mortgages	Chapters 14	<i>In-class exercise (Chapter 14)</i>
11 April	Final Exam Review	All chapters covered during the semester	Assignment 4 on Chapters 12, 13 & 14 (in-class)
18 - 24 April	Final Exam Week	All chapters covered during the semester	

**Please Note:**

Date and time allotted to each topic is subject to change.

## Performance Requirements

### Student Responsibilities

It is your responsibility as a student to contact the Office of the Registrar to complete the forms for Withdrawal or Change of Registration, and any other forms. Please refer to the list of important dates as noted in the Academic Schedule in the Keyano College credit calendar.

More specific details are found in the Student Rights and Student Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Student Code of Conduct Policies.

### Student Attendance

Class attendance is useful for two reasons. First, class attendance maximizes a student's learning experience. Second, attending class is a good way to keep informed of matters relating to the administration of the course (e.g., the timing of assignments and exams). Ultimately, you are responsible for your own learning and performance in this course.

It is the responsibility of each student to be prepared for all classes. Students who miss classes are responsible for the material covered in those classes and for ensuring that they are prepared for the next class, including the completion of any assignments and / or notes that may be due.

### Academic Misconduct

Students are considered to be responsible adults and should adhere to principles of intellectual integrity. Intellectual dishonesty may take many forms, such as:

- Plagiarism or the submission of another person's work as one's own
- The use of unauthorized aids in assignments or examinations (cheating)
- Collusion or the unauthorized collaboration with others in preparing work
- The deliberate misrepresentation of qualifications
- The willful distortion of results or data
- Substitution in an examination by another person
- Handing in the same unchanged work as submitted for another assignment
- Breach of confidentiality.

The consequences for academic misconduct range from a verbal reprimand to expulsion from the College. More specific descriptions and details are found in the Student Rights and Student Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Student Code of Conduct Policies.

In order to ensure your understanding of the concept of plagiarism, you must successfully complete the online tutorial found on [ilearn.keyano.ca](http://ilearn.keyano.ca). Then print the certificate, sign it, and show it to each of your instructors. Your course work will not be graded until you show this signed certificate.

## Specialized Supports

### Counselling and Accessibility Services

Counselling Services provides a wide range of specialized counselling services to prospective and registered students, including personal, career and academic counselling.

**SKILL Centre**

The SKILL Centre is a learning space in the Clearwater Campus at Keyano College where students can gather to share ideas, collaborate on projects and get new perspectives on learning from our tutorial staff.

The SKILL Centre, through a variety of delivery methods, provides assistance in skill development to Keyano students. Assistance is provided by instructors, staff and student tutors. Individuals wishing to improve their mathematics, writing, grammar, study, or other skills, can take advantage of this unique service.

**Authorization**

This course outline has been reviewed and approved by the Program Chair.

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Sandra Efu, Instructor

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Nermin Zukic, Chair

Date Authorized

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Vincella Thompson, Dean

Date Authorized

**Signed copies to be delivered to:**

Instructor

Registrar's Office