

Fall, 2023

## **BUS110 INTS, Business Mathematics**

*3 credits, 3 hours*

Students will cover (a) a review of basic algebra, ratio & 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:** *Math 30-1/Math 30 Pure or Math 30-2/Math 30 Applied*

### **Instructor**

Name	Dr. Pratibha Shalini
Office Location	S113 A
Phone Number	780-791-8946
Email	<a href="mailto:pratibha.shalini@keyano.ca">pratibha.shalini@keyano.ca</a>

### **Office Hours**

Days	Time	Location
Wednesday	1:00 pm – 3:30 pm	Microsoft Teams
Thursday	9:30 am – 12:00 pm	Microsoft Teams

### **Hours of Instruction & Location**

Days	Time	Location
Tuesday	1:00 pm – 2:20 pm	Zoom
Thursday	1:00 pm – 2:20 pm	Zoom

### **Required Resources**

- **Contemporary Business Mathematics with Canadian Applications**, S.A Hummelbrunner, Kelly Halliday, Ali R. Hassanlou, twelfth edition, (Incl. MyLab Math)  
ISBN: 9780135405871.
- Access to notebook/PC
- Access to Pearson's MyLab Math
- Texas BA II Plus Financial Calculator
- Access to a web camera – Proctoring software will require access during exams/quizzes.

**Course Outcomes**

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

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

**Evaluation**

Component	Weights
Participation	5%
Assignments	25%
Quizzes	30%
Midterm Exam	20%
Final Exam	20%
<b>Total</b>	<b>100%</b>

Note:

1. Participation marks are tied with successful and timely completion of self-tests/practice quizzes available on MyLab as well as class attendance with camera on for over 80% of the module.
2. All assignments must be completed during the allotted period.
3. All quizzes, midterm, and final exam are in-class assessments and cannot be written at a later time/date. Only, if you have a medical note alternate arrangements will be made.

**Course Completion Requirements**

The minimum passing grade for this course is a grade point of 1.0 (50% or D). Higher grades may be required to use the course for transfer credit or to satisfy professional designation criteria. Please refer to the credit calendar for more information.

### Grading System

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

### Proposed Schedule

BUS110 INTS – Business Mathematics		
Date	Tuesday	Thursday
Week 1 Aug 31		Introduction to course, Moodle, MyLab Math <i>Complete MyLab Math orientation*</i>
Week 2 Sept 5 & Sept 7	Chapter 1: <i>Review of Arithmetic</i> <i>Assignment # 1 (Chapter 1 &amp; 2)</i> <i>W:2.5%</i>	Chapter 1: <i>Review of Arithmetic</i>
Week 3 Sept 12 & Sept 14	Chapter 2: <i>Review of Basic Algebra</i>	Chapter 2
Week 4 Sept 19 & Sept 21	Chapter 3: <i>Ratio, Proportion, and Percent</i> <i>Assignment # 2 (Chapter 3)</i> <i>W:2.5%</i>	Chapter 3
Week 5 Sept 26 & Sept 28	<i>Quiz #1 (Ch – 1, 2 &amp; 3)</i> <i>W:5%</i> Chapter 6: <i>Trade Discounts, Cash Discounts, Markup and Markdown</i> <i>Assignment # 3 (Chapter 6)</i> <i>W:2.5%</i>	Chapter 6

Week 6 Oct 3 & Oct 5	Chapter 7: <i>Simple Interest and Applications</i> <i>Assignment # 4 (Chapter 7 &amp; 8*)</i> <i>W:2.5%</i>	Chapter 7 & 8*  * If time permits
Week 7 Oct 10 & Oct 12	Quiz #2 (Ch – 6, 7 & 8*) <i>W: 5%</i> Doubts session	Midterm Exam (Oct 12) <i>W:20%</i> (Ch – 1, 2, 3, 6, 7 & 8*)
Week 8 Oct 17 & Oct 19	Chapter 9: <i>Compound Interest-Future Value and Present Value</i> <i>Assignment # 5 (Chapter 9)</i> <i>W:2.5%</i>	Chapter 9
Week 9 Oct 24 & Oct 26	Chapter 10: <i>Compound Interest - Further Topics</i> <i>Assignment # 6 (Chapter 10)</i> <i>W:2.5%</i>	Chapter 10
Week 10 Oct 31 & Nov 2	Quiz #3 (Ch – 9 & 10) <i>W: 5%</i> Chapter 11: <i>Ordinary Simple Annuities</i> <i>Assignment # 7 (Chapter 11)</i> <i>W:2.5%</i>	Chapter 11
Week 11 Nov 7 & Nov 9	Chapter 12: <i>Ordinary General Annuities</i> <i>Assignment # 8 (Chapter 12 &amp; 13)</i> <i>W:5%</i>	Chapter 12  Chapter 13: <i>Annuity Due</i>
Week 12 Nov 14 & Nov 16	Reading Day – No classes. <i>Complete Self-Test/Practice Exercise*</i>	Chapter 13: <i>Annuity Due</i>
Week 13 Nov 21 & Nov 23	Quiz #4 (Ch – 11, 12 & 13) <i>W: 5%</i> Chapter 14: <i>Amortization (MS Excel)</i> <i>Assignment # 9 (Chapter 14)</i> <i>W: 2.5%</i>	Chapter 14: <i>Amortization (MS Excel)</i>
Week 14 Nov 28 & Nov 30	Chapter 15: <i>Sinking Fund (MS Excel)</i>	Quiz #5 (Ch – 14 & 15) <i>W: 10%</i>
TBA	Final Exam (Ch – 9, 10, 11, 12, 13,14) <i>W:20%</i>	

**Please Note:**

The date and time allotted to each topic are subject to change.

## Performance Requirements and Student Services

### Student Responsibilities

As a student, it is your responsibility to contact the Office of the Registrar to complete the required forms, including the [Withdrawal/Drop Form](#). All forms are available on the [College website](#). Please refer to the important dates listed in the Academic Schedule in the [Keyano College credit calendar](#) and/or on the [College website](#). It is the responsibility of each student to be aware of the guidelines outlined in the [Student and Academic Policies](#).

### Student Attendance

Class attendance is helpful for two reasons: First, class attendance maximizes a student's learning experience. Second, attending class is an excellent way to keep informed of matters relating to the course administration (e.g., the timing of assignments and exams). Ultimately, you are responsible for your learning and performance in this course. It is the responsibility of each student to be prepared for all classes. Absent students are responsible for the material covered in those classes, and students must ensure they are ready for their next class, including completing any missed assignments and notes.

### Course Evaluation

Midterm exams and term work is to be completed at the time/date indicated in your course syllabus. It is the expectation of the College that students make every reasonable effort to complete all course evaluation, including, quizzes, midterms, and exams, as scheduled. In the event of an emergency, rescheduling of exams and/or extensions are only provided at the discretion of the course instructor. Students should contact the instructor as soon as they are able, to notify them of missing an evaluative component. Instructors will use discretion in deciding whether circumstances justify granting a reschedule and/or extension.

Regular term quizzes, midterms, and exams are not eligible for deferral and/or date extension accommodations. Students with accommodations, please refer to Accessibility Services.

Final Exams are subject to deferral processes, please refer to the current [Keyano College Credit Calendar](#).

### Academic Integrity & Misconduct

Academic integrity requires commitment to the values of honesty, trust, fairness, respect, and responsibility. It is expected that students at Keyano College will adhere to these ethical values in all activities related to learning, teaching, research, and service. Any action that contravenes this standard, including misrepresentation, falsification, or deception, undermines the intention and worth of scholarly work and violates the fundamental academic rights of members of our community.

Academic dishonesty takes many forms:

- Plagiarism or the submission of another person's work as their own,
- The use of unauthorized aids in assignments or examinations (cheating),
- Using Artificial Intelligence (AI) to complete coursework (without instructor approval),
- 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,
- Submitting unchanged work for another assignment, and
- Breach of confidentiality.

In all academic work, the ideas and contributions of others must be appropriately acknowledged and work that is presented as original must be, in fact, original. Using an AI-content generator (such as ChatGPT)

to complete coursework without proper attribution or authorization is a form of academic dishonesty. If you are unsure about whether something may be plagiarism or academic dishonesty, please contact your instructor to discuss the issue.

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 & Academic Policies* 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, Academic Integrity, and Non-Academic Misconduct Policies.

To ensure your understanding of plagiarism, you may be required to complete the online [Understanding Plagiarism tutorial](#) and submit the certificate of completion.

### Online Learning

Technology and internet connectivity will impact your online learning experience. You may be required to watch online videos, take online quizzes, or participate in live online classes. Live/virtual courses will be hosted in Microsoft Teams or Zoom. For all course delivery types, you will access your course resources on Keyano's learning management system: Moodle (iLearn). Login in using your [Keyano username and password](#). Keyano College operates in a Windows-based environment and having access to the correct tools for online learning is essential.

### Internet Speed

Minimum download and upload speeds of 10 Mbps. Recommended download speeds of 25 Mbps and upload speeds of 10 Mbps (if you are sharing your internet at home). You can check your internet speed with [Speedtest by Ookla](#).

### Computer System Requirements

Keyano College software are Windows based.

Minimum Requirements and Recommended Upgrades for Windows (preferred system) and Apple devices
These minimum standards are required for a Windows computer/laptop (OS 10 or 11) and a Macintosh (OS 10.14 or above).
<ol style="list-style-type: none"><li>1. Windows 10 Operating System or above</li><li>2. 4GB of RAM. Recommended upgrade to 8GB of RAM.</li><li>3. 10GB+ available hard drive storage space. Note installing Microsoft Office 365 requires 3GB of available hard drive space.<ol style="list-style-type: none"><li>a. Install the Microsoft Office 365 suite (~3GB) *</li></ol></li><li>4. Microphone, webcam, and speakers (All modern laptops have these three accessories built-in. However, a headset or earbuds with a microphone is also recommended.</li><li>5. Windows has built-in anti-virus/malware software. It is essential to install system updates to keep your device secured regularly.</li></ol> <p>*<a href="#">Microsoft Office 365</a> is free to Keyano students.</p>
Tablets, iPads, and Chromebooks are <b>not</b> recommended: they may not be compatible with the testing lockdown browsers and Microsoft Office 365.

### Specific Department Requirements

Business and OA programs require Windows 10 or higher.

Other programs may utilize Windows-based tools as well.

### Computer Software

Students have access to Microsoft Office 365 and Read & Write for free using Keyano credentials.

See [Recommended Technology](#) for more information.

### Recording of Lectures and Intellectual Property

Students may only record a lecture if explicit permission is provided by the instructor or Accessibility Services. Even if students have permission to record a lecture or lecture materials, students may not share, distribute, or publish any of the lectures or course materials; this includes any recordings, slides, instructor notes, etc., on any platform. Thus, no student is allowed to share, distribute, publish, or sell course-related content without permission. It is important to recognize that the Canadian Copyright Act contains provisions for intellectual property. The [Academic Integrity Policy](#) provides additional information on Keyano College's expectations from students as members of the intellectual community.

### ITS Helpdesk

If you have issues with your student account, you can contact the ITS Helpdesk by emailing [its.helpdesk@keyano.ca](mailto:its.helpdesk@keyano.ca) or calling 780-791-4965.

### Specialized Supports

Keyano College is committed to Keyano students and their academic success. There is a variety of student support available at Keyano. All student services are available during Keyano business hours: Monday to Friday, 8:30 a.m. to 4:30 p.m. The College is closed on statutory holidays. If you require support outside of regular business hours, please inform the support service team, and they will do their best to accommodate your needs.

**Accessibility Services** provides accommodations for students living with disabilities. Students with documented disabilities or who suspect a disability can meet with an Access Strategist to discuss their current learning barriers and possible accommodations. Students who have accessed accommodations in the past are encouraged to contact the department to request accommodations for the following semester. Please note that requesting accommodations is a process and requires time to arrange. Contact the department as soon as you know you may require accommodations. For accessibility supports and disability-based funding, please book an appointment by emailing us at: [accessibility.services@keyano.ca](mailto:accessibility.services@keyano.ca).

Accessibility Services also provides individual and group learning strategy instruction for all students and technology training and support to enhance learning. You can meet with an Access Strategist to learn studying and test-taking strategies. In addition, you can schedule an appointment with the Assistive Technology Specialist to explore technology tools for learning. Book an appointment today by emailing: [accessibility.services@keyano.ca](mailto:accessibility.services@keyano.ca)

**Wellness Services** offers a caring, inclusive, and respectful environment where students can access free group and individual support to meet academic and life challenges. Mental Health Coordinators provide a safe and confidential environment for you to seek help with personal concerns. Our Wellness Navigator offers support with basic needs such as housing, financial and nutritional support, and outside referrals when needed. Wellness Services welcomes students to participate in group sessions that address topics including mindfulness and test anxiety throughout the academic year. Individual appointments can be made by emailing [wellness.services@keyano.ca](mailto:wellness.services@keyano.ca).

**Library Services** provides students with research, information, and educational technology supports as they engage in their studies. Library staff are available to help you online and in person throughout the semester. Librarians offer individual and small group consultations booked using the online [Book A Librarian calendar](#). The library also provides virtual research and subject guides to help you with your

studies. Find the guide that supports your course-related research by viewing the complete list of online [Subject Guides](#). To start your research and access citation guides (APA, MLA, Chicago, or IEEE), visit the [Research Help page](#). The library's collections (including print and online materials) are searchable using [OneSearch](#). The library offers a Loanable Technology collection to support students accessing and using technology. For an up-to-date list of technology available for borrowing, visit the library's [Loanable Technology webpage](#). For a detailed list of library resources and services, go to [www.keyano.ca/library](http://www.keyano.ca/library). For all inquiries, please email [askthelibrary@keyano.ca](mailto:askthelibrary@keyano.ca) or [chat with us online](#).

The **Academic Success Centre** at Keyano College (CC-119) provides free academic support services to registered students, such as tutoring, writing support, facilitated study groups, workshops, and study space. Academic Content Specialists are available in Mathematics, Science, Trades, Power Engineering, Upgrading/College Prep, Human Services, English, Humanities, and more. Students are encouraged to visit the Academic Success Centre to discuss study strategies and academic concerns.

Specialists in the Academic Success Centre also work with students to develop academic success plans, time management skills, study strategies, and homework plans. For additional information, please email [Academic.Success@keyano.ca](mailto:Academic.Success@keyano.ca).



## Authorization

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

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[First Name, Last Name], Instructor

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[First Name, Last Name], Chair

Date Authorized

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[First Name, Last Name], Dean

Date Authorized

**Signed copies to be delivered to:**  
Instructor