BUS 110, 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: Math 30-1/Math 30 Pure or Math 30-2/Math 30 Applied

Instructor

Name	Dr Pratibha Shalini
Office Number	S113 A
Phone Number	780-791-8946
Email	pratibha.shalini@keyano.ca

Office Hours (Virtual, until further notice)

Days	Time	Location
Monday	10:00 am – 12:00 pm	Microsoft Teams
Tuesday	12:00 pm – 2:00 pm	Microsoft Teams
Friday	12:00 pm – 1:00 pm	Microsoft Teams

Hours of Instruction

Days	Time	Location
Monday	1:00 pm – 2:20 pm	CC 273
Thursday	1:00 pm – 2:20 pm	CC 273

Required Resources

Textbook: Contemporary Business Mathematics with Canadian Applications, S.A Hummelbrunner, Kelly Halliday, Ali R. Hassanlou, 12th edition, (Incl. MyLab Math) ISBN: 9780135405871.

Other supplies

- Access to notebook/PC
- Access to Pearson's MyLab Math
- Non-programmable calculator financial calculator, Texas BA II Plus
- Access to a web camera – Proctorio, the proctoring software will require access during exams/quizzes

Course Learning Outcomes (CLO)

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-up and mark-down
- Apply ratios, proportions and percentage to solve a variety of business problems
- 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

Component	Weights
Quizzes and/or Assignments	30%
Term Exam(s)	40%
Excel Project	10%
Final Exam	20%
Total	**100%**

Note:

1. There will be few group assignments in this course. 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. For collaborative exercises, one grade will be provided to every group member based on the exercise deliverables.
2. All assignments must be completed during the allotted period.
3. All quizzes, term exams and the final exam will be written individually by each student. These are are in-class assessments and cannot be written at a later time/date. If you have a medical note alternate arrangements will be made.

Course Completetion Requirements

The minimum passing grade for this course is 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 calender for more information.

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
	C-	1.7	60 – 63.9
Poor	D+	1.3	57 – 59.9
Minimum Pass	D	1.0	50 – 56.9
Failure	F	0.0	< 50

Proposed Schedule

BUS110 – Business Mathematics		
Tentative Schedule		
Date	Monday	Thursday
Week 1 Jan 6		Class 0: Introduction
Week 2 Jan 10 & Jan 13	Class 1: Chapter 1 Review of Arithmetic	Class 2: Chapter 1
Week 3 Jan 17 & Jan 20	Class 3: **Quiz 1 – 5% (Ch-1)** Chapter 2: Review of Basic Algebra	Class 4: Chapter 2
Week 4 Jan 24 & Jan 27	Class 5: **Quiz 2 – 5% (Ch-2)** Chapter 3 - Ratio, Proportion and Percent	Class 6: Chapter 3
Week 5 Jan 31 & Feb 3	Class 7: Chapter 6 Trade Discounts, Cash Discounts, Markup and Markdown	Class 8: Chapter 6 **Assignment 1 – 5%** (Ch 3 and 6)
Week 6	Class 9: Chapter 7	Class 10: Chapter 7 & 8

Feb 7 & Feb 10	Simple Interest and Applications	
Week 7 Feb 14 & Feb 17	**Term Exam 1 (20%)** (**Ch- 1,2,3,6,7 & 8**)	Class 11: Chapter 9
Week 8 Feb 21 & Feb 24	Holiday	Reading Week
Week 9 Feb 28 & Mar 3	Class 12: Chapter 10 Compound Interest - Further Topics	Class 13: Introduction to BAII Financial Calculator Ch-9 & 10 **Assignment 2 – 5% (Ch9 &10)**
Week 10 Mar 7 & Mar 10	Class 14: Chapter 11 Ordinary Simple Annuities	Class 15: Chapter 11
Week 11 Mar 14 & Mar 17	Class 16: Chapter 12 Ordinary General Annuities	Class 17: Chapter 12 **Assignment 3 – 10% (Ch11 &12)**
Week 12 Mar 21 & Mar 24	Class 18: Chapter 13 Annuity Due	Class 19: Chapter 13
Week 13 Mar 28 & Mar 31	**Term Exam 2 (20%)** (**Ch 9, 10, 11, 12 & 13**)	Class 20: Chapter 14 Amortization (MS Excel)
Week 14 Apr 4 & Apr 7	Class 21: Chapter 14 Amortization (MS Excel)	Class 22: Chapter 15 Sinking Fund (MS Excel)
Week 15 Apr 11 & Apr 14	**In class - Excel Project (10%)**	Revision
TBA	**Final Exam (20%)** (Ch – 6, 7, 8, 9, 10, 11, 12 & 13)	

Please Note:

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

Performance Requirements and Student Services

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](). The Keyano College credit calendar also has information about Student Rights and Code of Conduct. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and 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 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; and
- 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 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 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. Then print the certificate, sign it, and show it to each of your instructors. Your course work may not be graded until you show this signed certificate.

Specialized Supports

The Student Services Department is committed to Keyano students and their academic success. There are a variety of student supports available at Keyano. Due to the continuing situation with the Covid-19 pandemic, the offered support services will be implemented through a model to respond to the restrictions in force at the time. In-person and virtual services will be offered. All Alberta Health Services guidelines will be followed for in-person appointments—wear a mask, maintain two meters of physical distance, use hand sanitizer, and stay home if you are unwell.

All student services are available during Keyano business hours: Monday to Friday, 8h30-16h30. The College is closed for statutory holidays. If you require support outside of regular business hours, please inform the support service team, and we will do our best to accommodate your needs.

Accessibility Services: provides accommodations for students with disabilities. Students with documented disabilities, or who suspect a disability, can meet with a Learning Strategist to discuss their current learning barriers and possible accommodations. Students who have accessed accommodations in the past are encouraged to contact us to request them for the semester. Please note that requesting accommodations is a process and requires time to arrange. Contact us as soon as you know you may require accommodations. For accessibility supports and to book an appointment, please contact accessibility.services@keyano.ca.

Accessibility Services also provides individual and group learning strategy instruction for all students, as well as technology training and supports to enhance learning. Meet with a Learning Strategist to learn studying and test-taking strategies for online classes. Schedule an appointment with the Assistive Technology Specialist to explore technology tools for learning. Book an appointment today by emailing 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 offer a safe and confidential environment to seek help with personal concerns. Students may access services virtually and in-person.

Wellness Services welcomes students to participate in any of the group sessions offered throughout the academic year addressing topics including mindfulness and test anxiety.

Individual appointments can be made by emailing wellness.services@keyano.ca.

Library Services: provides students with research and information supports as they engage in their studies. Library staff are available to support you both online and in-person throughout the semester. For a detailed list of library supports and services, go to www.keyano.ca/library. For all inquiries, please email askthelibrary@keyano.ca or chat with us online.

Begin your research with the Library's FIND page. Search for information and sources for your assignments using the OneSearch, the Library's Catalogue, or by searching in a specific database selected from the A-Z Database List.

Individual support with us is available. For support with citations, research and other information needs, appointments can be booked using the online Book A Librarian Calendar. For support with Moodle, educational tools for assignments, Microsoft Office, Zoom, Teams and more, book an appointment using the online Educational Technology Support Calendar.

Research and subject guides are helpful resources when beginning your research, assignment, using new educational technology, or addressing other information needs. To view a subject or course-specific guide, check out the complete listing of online Subject Guides.

To access additional research resources, including Citation Guides (APA, MLA, Chicago, or IEEE), go to the Research Help Library page.

The Loanable Technology collection is available to support students in their learning pursuits, whether online, in person or both. Items available for borrowing include mobile projectors, webcams, noise-cancelling headphones, Chromebooks, and laptops. For an up-to-date list of technology available for borrowing as well as support available, go to the Library's Loanable Technology webpage.

Academic Success Centre: The Academic Success Centre is a learning space in the Clearwater Campus (CC-119) at Keyano College. Students can gather to share ideas, collaborate on projects, get new perspectives on learning from our Academic Content Specialists, or use the Centre's educational resources. The Academic Success Centre provides academic support services to students registered in credit programs at Keyano College in the form of individual tutoring, writing support groups, facilitated study groups, workshops, and study space. Services are **free** to Keyano students.

Academic Content Specialists are available in the areas of Math, Science, Human Services, and English/Humanities. This covers all courses offered at Keyano. The Academic Success Coach can also be found in the Academic Success Centre.

For the most up to date information on how to book a session, please view the Keyano Academic Success Centre homepage.

> **Academic Integrity:** The goal of the Academic Success Centre is to foster a student's ability to learn effectively and independently. Students registered at Keyano College are welcome to drop by the Centre to visit with any of our Academic Content Specialists to discuss their academic concerns.
>
> **Availability:** Monday to Friday: 8:30 a.m. – 4:30 p.m. Flexible times may be available upon request. Virtual and in-person sessions, please email to get in contact with our Academic Content Specialists. For the most up to date information on how to book a session, please view the Academic Success Centre homepage.

Academic Success Coach: offers you support and access to resources for your academic success to help you to find the Keys to your Success. The Academic Success Coach will work with you to develop an academic success plan, develop your study and time management skills, and connect you with the right resources here at Keyano. Academic.success@keyano.ca is the best way to access resources during blended service delivery. The Academic Success Coach is located in the Skill Centre in CC-119 at the Clearwater Campus.

E-Learning
Technology and internet will impact your online learning experience. It's important that you can watch an online video and other course materials, take online quizzes and participate in a

live class with your instructor and other students. Live/virtual classes 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 the correct tools for online learning is important. Here's a list of recommended system requirements.
Internet Speed
Minimum Internet speeds of 10 Mbps.
Recommended Internet speeds of 25 Mbps (especially if you are sharing your internet at home).
Check your internet speed with Fast.com.

System requirements:

Microsoft Windows	Apple
Minimum Requirements: A Windows 10 **computer/laptop** · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). Microsoft Office software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software	**Minimum Requirements:** A Macintosh (V10.14 and above) **computer/laptop** · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). Microsoft Office software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software.
Recommended Requirements · 8GB of RAM · A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download	**Recommended Requirements** · 8GB of RAM · A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using

Chromebooks are **not** recommended as they are not compatible with testing lockdown browsers.

A Microsoft Surface or iPad or iPad Pro may be possible alternatives in some program areas.

Specific Department Requirements:
Business and OA programs require Windows 10.
Other programs may utilize Windows based tools as well.

Computer Software
Students will be able to get access to Microsoft Office 365 for free using Keyano credentials by clicking here.

Recording of Lectures and Intellectual Property
Students may only record a lecture if explicit permission is provided by the instructor or by 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 (instructor, or students) 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 are having issues with your student account, you can contact the ITS Helpdesk by emailing its.helpdesk@keyano.ca or calling 780-791-4965.