

DEPARTMENT OF BUSINESS AND OFFICE ADMINISTRATION

COURSE OUTLINE – Spring 2023

BA1050 (EC): Business Mathematics – 3 (3-0-1) 60 Hours for 8 Weeks

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

INSTRUCTOR: Amy Rawluk, CPA

OFFICE: C413

OFFICE HOURS: By appointment only – please email me.

PHONE: 780-539-2873

E-MAIL: ARawluk@nwpolytech.ca

CALENDAR DESCRIPTION: This course emphasizes a range of mathematical calculations used in business. Students will be introduced to simple interest, compound interest, annuities, amortization and sinking funds. Practical applications will be emphasized in the course.

PREREQUISITE(S): Math 20-1 or 20-2 with 60% or Math 30-1 or Math 30-2 with 50%.

REQUIRED TEXT/RESOURCE MATERIALS: Business Mathematics in Canada, Tenth Edition (2020). McGraw-Hill Ryerson. Jerome and Worswick.

All students must have access to Connect. You must have an access code in order to gain access to the online resources. McGraw-Hill Connect™ is a web-based assignment and assessment platform that gives students the means to better connect with their coursework, and with the important concepts that they will need to know for success now and in the future. If you have purchased a used book, you will have to purchase an access code separately. Instructions to do this are available in the Registration Module.

Sharp EL - 738 Calculator

Course Management System:

NWP uses the myClass (D2L) online course management system. To access myClass, visit <https://myClass.gprc.ab.ca/>

McGraw-Hill Connect Proctorio:

- Tests and exams must be taken online using the Proctorio remote proctoring software where video and audio are recorded from the student's webcam and microphone.
- Students must download and utilize Proctorio for the duration of course. The proctoring software is necessary to uphold academic integrity and meet accreditation requirements.
- **There will be an additional fee (\$15 US) per semester for the proctoring software.**

It is important to note that the software recordings are automated systems and are designed to be less intrusive and costly than in-person proctors. Proctorio is used to record video and audio only while you are signed in during your tests and final exam. **The exam administrators may review the recordings after the tests and exams are submitted and only if it was flagged due to suspicious activity.** Please note that all suspicious activity will be reviewed with the Department Chair.

The collection and use of your personal information are in accordance with the Freedom of Information and Protection of Privacy (FOIP) Act S. 33 (c) which states that *“No personal information may be collected by or for a public body unless that information relates directly to and is necessary for an operating program or activity of the public body.”* In addition, S. 39 (4) states, *“A public body may use personal information only to the extent necessary to enable the public body to carry out its purpose in a reasonable manner.”*

Software and Network Requirements:

It is the students' responsibility to ensure that computing devices meet the minimum requirements listed below. Please note that students may experience issues using Chromebooks with some applications. If you have questions regarding these requirements, technological support is available through helpdesk@nwpolytech.ca.

DELIVERY MODE(S):

Asynchronous (online) – This type of course will be delivered online through NWP's learning management system. There are no set class times and students attend remotely and asynchronously.

COURSE OBJECTIVES: The primary objective of this course is to increase the student's knowledge and skill in the solution of practical financial and mathematical problems encountered in the business community.

LEARNING OUTCOMES:

Simple Interest

- The student will be able to explain the concept of simple interest.
- The student will be able to calculate the amount of interest, principal, time, interest rate, and maturity value of investments and loans.
- The student will be able to calculate equivalent payments that replace another payment or a series of payments.

- The student will be able to explain the use of simple interest in business applications such as demand loans, promissory notes, treasury bills, commercial papers, and discounting.

Compound Interest

- The student will be able to explain the concept of compound interest and how it differs from simple interest.
- The student will be able to calculate the future value and present value of investments and loans in compound interest applications using both algebraic and financial calculator methods.
- The student will be able to calculate equivalent payments that replace another payment or a set of payments.
- The student will be able to calculate the effective and equivalent interest rates for nominal interest rates.

Annuities

- The student will be able to identify annuities based on a payment date and compounding period.
- The student will be able to calculate the future value and present value of ordinary simple annuities.
- The student will be able to calculate the future value and present value of ordinary general annuities.
- The student will be able to calculate the future value and present value of simple annuities due and general annuities due.
- The student will be able to calculate the amount of the periodic payments (PMT), the number of payments (n), term (t), periodic interest rate (i), and nominal interest rate (j) of an annuity.
- The student will be able to calculate the present value, number of payments, term, and periodic payment of a deferred annuity.
- The student will be able to explain the concept of amortization of loans.
- The student will be able to calculate the interest portion, principal portion, and principal balance after any payment.
- The student will be able to explain and will understand bond terminology.
- The student will be able to calculate the purchase price of a bond on an interest payment date.
- The student will be able to calculate the purchase price of a bond between interest payment dates.

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page <http://www.transferalberta.ca>.

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

EVALUATIONS:

Connect Quizzes (9@ 3% each)	27%
Midterm Exam	23%
Annuities Exam	15%
Final Exam (cumulative)	35%

CONNECT Quizzes

- There will be 9 quizzes dispersed throughout the semester (see schedule for dates). The student will be allowed 2 attempts at each quiz. Each quiz will be worth 3% of the student's final grade, regardless of the length of the quiz, for a total of 27% (9 x 3%) of the student's final grade.
- The highest grade on any lab attempt is recorded on the dashboard.
- All quizzes must be completed before the expiration of the pre-set due date or the student will receive a mark of zero (0) for any missed labs.
- Once the quiz has been started, you must complete the entire quiz within the 60-minute time limit. Logging off or losing the internet connection during the quiz will result in a grade based only on the proportion of the exam that has been completed. It is imperative that the student has a reliable internet connection when attempting an exam.
- The student will be given a maximum of two attempts at each chapter quiz.

Exams

- Two exams will be given throughout the semester (See schedule for dates). They include:

Midterm Exam	23%
Annuities Exam	15%

Final Exam

- 2 hours will be given for the final exam to be written.
- The final exam will be cumulative and will account for 35% of the final grade.
- The final exam will be scheduled by the Registrar's Office during exam week(s). Do not plan any activities during this time.
- Approved calculators and approved translation devices are the only electronic devices allowed during the final examination. No programmable calculators will be allowed. Textbooks or notes will not be allowed in the examination area. Cell phone calculators may not be used in examinations.
- In order to receive credit for BA 1050, you must achieve a course composite grade of at least D (50%). You are strongly encouraged to complete all assignments and exams—you will receive a zero (0) for any missed assignment or exam.

Lesson, Lab, Exam and Classroom Policies

- Lessons, quizzes and exams will be written as scheduled.
- Rewrites/rescheduled exams will not be given. If there is an excusable absence, the weighting of the missed exam will be added to the final exam weighting. If the absence is not excusable, a grade of 0% will be given.
- In order to get the most out of class regular attendance and active participation is encouraged.
- The student is responsible for any missed content due to missing a class (excused or unexcused).
- Photographing and/or recording course content is strictly prohibited.

GRADING CRITERIA: (The following criteria may be changed to suite the particular course/instructor)

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100	C+	2.3	67-69
A	4.0	85-89	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week Beginning	Chapters Covered	Additional Information
May 1 (Monday)	Chapter 7	<i>Quiz Ch. 7</i>
May 8	Chapter 8	<i>Quiz Ch. 8</i>
May 15	Chapter 9	<i>Quiz Ch. 9</i>
May 22	Chapter 10	<i>Quiz Ch. 10</i>
May 26 – 29	Midterm Exam – 23%	Chapters 7-10
May 29	Chapters 11 & 12	<i>Quiz Ch.11</i>
June 3	Chapters 12 & 13	<i>Quiz Ch. 12</i> <i>Quiz Ch. 13</i>
June 10-13	Annuities Exam – 15%	Chapters 11-13
June 14	Chapter 15	<i>Quiz Ch. 15</i>
June 20	Chapter 16	<i>Quiz Ch. 16</i>
June 27 - 30	Final Exam – 35%	Cumulative

An additional detailed schedule will be provided myClass. It is your responsibility to review the deadlines in the detailed schedule as well as in Connect. **Final examinations may be scheduled by the registrar's office. Do not plan any activities during examination week.**

The above schedule may be revised at the discretion of the instructor based on class requirements.

Please note that answers to the odd-numbered questions are in the back of the textbook. Full solutions to the odd-numbered questions are available in your online resources. Answers to the even-numbered questions will not be provided.

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the Northwestern Polytechnic Calendar at <https://www.nwpolytech.ca/programs/calendar/> or the Student Rights and Responsibilities policy which can be found at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

**Note: all Academic and Administrative policies are available on the same page.

Note: The midterm examination(s) and final examination for this course must be taken online with the use of Proctorio which is the Connect Lockdown Browser exam proctoring software. Students must download Proctorio and the monitor will automatically start with [quizzes/examinations] through myClass. The proctoring software is a requirement to uphold academic integrity and is necessary to meet accreditation requirements. **There will be a one-time \$15US charge in relation to the use of Proctorio.**

Proctorio requires Windows or Mac desktop, laptop, or iPad platforms. Chromebooks, smartphones, and other tablets are not supported. If you do not have access to a Windows or Mac desktop, laptop, or iPad, you can book a College PC via the NWP App -> On-campus Reservations.

It is important to note that the software recordings are automated systems and are designed to be less intrusive than in-person proctors. The software is only running while you are signed in during your exam. The exam administrators only review the recordings after the exam is submitted and only if it was flagged due to suspicious activity.

The collection and use of your personal information is in accordance with the Freedom of Information and Protection of Privacy (FOIP) Act S. 33 (c) which states that “*No personal information may be collected by or for a public body unless that information relates directly to and is necessary for an operating program or activity of the public body.*” In addition, S. 39 (4) states, “*A public body may use personal information only to the extent necessary to enable the public body to carry out its purpose in a reasonable manner.*”

If you are unable to complete your examinations using the proctoring software, you may request alternative accommodations to the online testing by contacting your instructor and the NWP Testing Centre by telephone at 780-539-2212 to arrange to write your exam. Students must book their exams no less than 2-weeks in advance of the test date and students are choosing to write the exams in the NWP Testing Centre are responsible for the \$30 sitting fee.