



DEPARTMENT OF BUSINESS AND OFFICE ADMINISTRATION

COURSE OUTLINE – Spring 2026

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: Trent Waughtal, MBA
E-Mail: TWaughtal@nwpolytech.ca
OFFICE HOURS: By appointment only – please email me

CALENDAR DESCRIPTION:

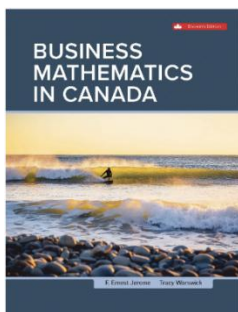
This course emphasizes a range of mathematical calculations used in business. Students will be introduced to simple interest, compound interest, annuities, amortization and sinking funds. Practical applications will be emphasized in the course.

PREREQUISITES:

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, 11th Edition (2023). 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.

All students must have a Sharp EL - 738 Calculator.

Students are responsible for all fees associated with ProctorU, a live proctoring service for online exams. Fees are paid when you schedule your exams through ProctorU.

Pricing per exam is as follows (subject to change):

60 minutes or less - \$16 USD

61-120 minutes - \$25 USD

121 - 180 minutes - \$31 USD

For device software and network requirements, please see NWP's minimum device requirements at [doc.php\(nwpolytech.ca\)](http://doc.php(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.

This is a paced self-study course and is delivered entirely online using MyClass (D2L) and Connect. You will be evaluated several times throughout the course so that you can assess how you are doing as you work through the material. The SmartBooks, quizzes, and exams have specific due dates to help you finish the course on time. However, you may complete and submit these evaluations before their due dates.

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.alberta.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:

Smart Book Lessons	10%
Quizzes (9 @ 2% each)	18%

Midterm Exam (Ch. 7-10)	32%
Final Exam (cumulative)	40%

In order to receive credit for BA 1050, you must achieve 50% on the final examination and 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.

GRADING CRITERIA:

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	95-100	C+	2.3	67-69
A	4.0	85-94	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
SmartBooks	All Chapters	<i>All SmartBooks will have a coinciding deadline with the corresponding quiz</i>
May 4 (Monday)	Chapter 7	<i>Quiz Ch. 7 Due May 10</i>
May 11	Chapter 8	<i>Quiz Ch. 8 Due May 17</i>
May 18	Chapter 9 & 10	<i>Quiz Ch. 9 Due May 24 Quiz Ch. 10 Due May 24</i>
May 28	Midterm Exam – 32% (2 Hours)	Chapters 7-10
June 1	Chapters 11 & 12	<i>Quiz Ch. 11 Due June 7 Quiz Ch. 12 Due June 7</i>
June 8	Chapters 13 & 15	<i>Quiz Ch. 13 Due June 14 Quiz Ch. 15 Due June 14</i>
June 15	Chapter 16	<i>Quiz Ch. 16 Due June 21</i>
June 26	Final Exam – 40% (2 Hours)	Cumulative

- ✓ An additional detailed schedule will be provided in myClass. It is your responsibility to review the deadlines in the detailed schedule as well as in Connect. The midterm and final exam for this course is scheduled for May 28 and June 26 respectively – do not plan any activities during this time.
- ✓ *The above schedule may be revised at the discretion of the instructor based on class requirements.*

STUDENT RESPONSIBILITIES:

Student Conduct

As a student, it is your responsibility to read, understand, and comply with the college's academic policies, which are reviewed regularly, updated and posted on the polytechnic website. If you have any questions regarding these policies, please contact Student Services.

Time Management

The expectation for this course is that students read/review the text material according to the class schedule. Adopting and adhering to effective learning habits in this course will likely take up a great deal of time so plan your schedule accordingly. It is difficult to catch up once a student falls behind in the readings and exercises.

Email correspondence to your instructor must be sent from your NWP student email account. Emails should be professionally formatted and include a subject, correct spelling and grammar, and a reference to course material and/or textbook pages, etc.

STATEMENT ON ACADEMIC MISCONDUCT:

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy available at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

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

ADDITIONAL INFORMATION:

Quizzes

- There will be 9 quizzes dispersed throughout the semester. Students will be allowed two attempts at each quiz.
- The quizzes will be marked immediately, and the student will receive their grade immediately.
- The highest grade on any quiz 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.

Final Exam

- Two (2) hours will be given for the final exam to be written.
- The final exam will be cumulative and will account for 40% of the final grade.
- The final exam is scheduled for June 30, 2026. **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 50% on the final examination and 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.

Other

- 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.
- 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.

- Photographing and/or recording course content is strictly prohibited.

USING PROCTORU:

This course uses ProctorU Live for online exams. To utilize this service, you are required to complete the following steps:

- Create a ProctorU account by clicking the ProctorU link in the course.
- Download and install the Guardian Web Browser, Google Chrome, and the ProctorU extension.
- Schedule each exam at least 3 days (72 hours) in advance. If you miss this deadline, you cannot take the exam.
- Pay for the proctoring service. The fees are exclusively your responsibility and in no event shall be the responsibility of Northwestern Polytechnic.

For more detailed instructions [click here](#), and for video instructions [click here](#).

Before each exam, you must complete a room scan with your web camera, during which you will show your surroundings to a live proctor.

The invigilator will ask to view (but not collect or store) your student identification to verify your identity and will remotely access your computer to unlock the exam.

When monitoring your actions via video streaming, the invigilator may possibly record your actions if they suspect academic integrity behavioural issues. You will be verbally notified if/when recording begins.

The collection of and access to the personal information listed above is permitted under subsection 33(c) of the *Freedom of Information and Protection of Privacy Act*, RSA 2000, c F-25, which states, "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, subsection 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."

Records Retention: Any video records of you created by ProctorU will be kept by ProctorU for a maximum of 7 days in order to make a decision about any possible academic integrity infraction, after which time it shall be permanently deleted. All other personal information collected and stored by ProctorU within your profile account will be permanently deleted if the account has not been used after one year.

Consent to Store Personal Information Outside Canada

ProctorU is an American company. An agreement is in place between ProctorU and Northwestern Polytechnic by which ProctorU will take reasonable steps to protect your personal information from unauthorized access and disclosure. Information about how ProctorU protects your privacy can be found in their [Privacy Policy](#).

By using the ProctorU service via Northwestern Polytechnic, you consent to the storage of and access to your personal information outside of Canada.

This consent is in effect from the day you register with ProctorU and expires one year after completion of your exam.

Additional privacy and liability information regarding the use of ProctorU is available on the NWP website.