

DEPARTMENT OF BUSINESS AND OFFICE ADMINISTRATION

COURSE OUTLINE – Spring 2024

BA1050 (EC): Business Mathematics – 3 (6-0-1.5) 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: Mandy Pollock

OFFICE: C406

OFFICE HOURS: By appointment

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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

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 (approx. \$17.50 US) per semester for the proctoring software.

DELIVERY MODE(S):

Self-Study Online – This type of course will be offered online. There are no set class times and students attend remotely and asynchronously.

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.transferralberta.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 (SB) Lessons	5%
Connect Quizzes (8@ 2.5% each)	20%
Midterm Exam	35%
Final Exam (cumulative)	40%

SB Lessons

- Each section covered in the text (for example, section 8.1), will have an associated SB lesson that the students must complete. These lessons are interactive and completion of all lessons within the stipulated pre-set due dates will have a total weighting of 5% of the student’s final grade.
- Completion marks on lessons are always recorded on the dashboard and visible to students. To obtain the completion marks for the online lessons, the student must complete the lesson before the expiration of the pre-set due date.
- Interactive scenes in the Lessons (within the pre-set due date) are locked for students to attempt correctly. Students will need to work through them and answer questions correctly to unlock them. Once a lesson is unlocked, they can freely go back and forth for practice.

CONNECT Quizzes

- There will 8 quizzes dispersed throughout the semester (see schedule for dates). The student will be allowed 2 attempts at each quiz. Each quiz will be worth 2.5% of the student’s final grade, regardless of the length of the quiz, for a total of 20% (8 x 2.5%) 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

- All exams (Mid-Term Exam & Final Exam) will be written closed book.
- All exams (Mid-Term Exam & Final Exam) must be written using proctoring software.
- 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.
- The exams must be completed before the expiration of the pre-set due date, or the student will receive a mark of zero for any missed exams (see schedule for dates).
- Once the exams have started, you must complete the entire exam within the allotted time limit. Logging off or losing the internet connection during the exam will result in a grade based only on the proportion of the exam that has been completed. The student must have a reliable internet connection when attempting an exam.
- There will only be one attempt on each exam.

- The student will receive the mark 1 hour after the due date. No answers or solutions will be provided.

Final Exam

- The final exam for BA1050 is tentatively set for June 24th.
- 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 administered online (Proctoring software will be used).
- ***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.

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
May 6	Chapter 7	Quiz Ch. 7
May 13	Chapter 8	Quiz Ch. 8
May 20	Chapter 9	Quiz Ch. 9
May 27	Chapter 10 & Chapter 11	Quiz Ch. 10 & Ch. 11
June 3-4	Midterm Exam – 35%	Chapters 7-10
June 3	Chapter 12	Quiz Ch. 12
June 10	Chapter 13	Quiz Ch. 13
June 17	Chapter 15 & Chapter 16	Quiz Ch. 15 & 16
June 24-28	Final Exam – 40%	Cumulative

It is your responsibility to review the deadlines in the detailed schedule as well as in Connect. **The final exam for BA1050 is tentatively set for June 24th.**

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.

STUDENT RESPONSIBILITIES:

Student Conduct

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

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:

Note: The exams for this course must be taken online with the use of CONNECT Lockdown Browser and CONNECT Monitor exam proctoring software. Students must download Lockdown Browser and CONNECT Monitor will automatically start with [quizzes/examinations] through CONNECT. The proctoring software is a requirement to uphold academic integrity and is necessary to meet accreditation requirements.