

DEPARTMENT OF BUSINESS AND OFFICE ADMINISTRATION

COURSE OUTLINE – Winter 2024

BA1050 (EC): Business Mathematics – 3 (3-0-1) 60 Hours for 15 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.

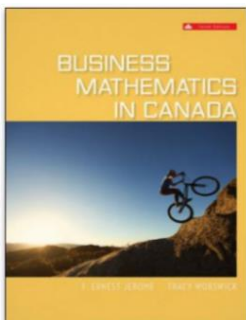
INSTRUCTOR:	Lori Bombier	PHONE:	780-539-2711
OFFICE:	C406	E-MAIL:	lbombier@nwpolytech.ca
OFFICE HOURS:	N/A		

*All email correspondence must be sent from your NWP student email account and professionally formatted (i.e., subject line filled in, proper greeting, spelling, grammar check, etc...). Emails that do not follow the above requirements will not be responded to.

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)/COREQUISITE: Math 20-1 or 20-2 with 60% or Math 30-1 or Math 30-2

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



All students must have online access to the online lessons and online quizzes. You must have an access code to gain access to the online resources. It is the student's choice if they purchase a textbook with an access code or an e-textbook with an access code. If you have purchased a used book, you will have to purchase an access code separately. **There will be an additional fee (\$17.50 US) per semester for the proctoring software.**

Sharp EL – 738XT Calculator

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.transferalberta.alberta.ca>.

**** A 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 (9 @ 2% each)	18%
Mid-Term Exam	25%
Annuities Exam	17%
Final Exam (cumulative)	<u>35%</u>
	100%

- ✓ You are strongly encouraged to complete all assignments and exams—you will receive a zero (0) for any missed assignment or exam. The weighting of each assessment activity is indicated in the chart above.

• **All exams (Mid-Term Exam, Annuities Exam, Final Exam) will be written closed book.**

• **To receive credit for BA 1050, you must achieve 50 percent on the final examination, and a course composite grade of at least D (50%).**

- All exams (Mid-Term Exam, Annuities Exam, Final Exam) must be written using proctoring software.
- Please be advised that there will be an additional fee (\$17.50 US) per semester for the 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.
- You are strongly encouraged to complete all assignments and exams—you will receive a zero (0) for any missed assignment or exam. The weighting of each assessment activity is indicated in the chart above.

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 7% 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 9 quizzes dispersed throughout the semester (see CONNECT for dates). The student will be allowed 2 attempts at each quiz. Each quiz will be worth 2% of the student's final grade, regardless of the length of the quiz, for a total of 18% (9 x 2%) of the student's final grade.
- The quizzes will be marked immediately, and the student will receive their grade immediately.
- 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. The student must have a reliable internet connection when attempting an exam.
- The student will be given a maximum of two attempts at each chapter quiz.
- CONNECT quizzes and other online resources will be available for study attempts. ***All CONNECT resources will be hidden and unavailable from students during exam writing dates (See course schedule)***

Exams

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

Mid-Term Exam	(Feb. 29 or Mar. 1)	25%
Annuities Exam	(Mar. 28 or 29)	17%

- **The two exams will be administered online (Proctoring software will be used).**
- **Please be advised that there will be an additional fee (\$17.50 US) per semester for the proctoring software.**
- ***All CONNECT resources will be hidden and unavailable from students during exam writing dates (See course schedule)***
- 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.
- Approved calculators and approved translation devices are the only electronic devices allowed during any 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.
- **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 (High Importance) – April 17 or 18

- **2 hours** will be given for the final exam to be written.
- **To receive credit for BA 1050, you must achieve 50 percent on the final examination, and a course composite grade of at least D (50%). There will only be one attempt on the exam.**
- **The final exam will be administered online (Proctoring software will be used).**
- ***All CONNECT resources will be hidden and unavailable from students during exam writing dates (See course schedule)***
- **Please be advised that there will be an additional fee (\$17.50 US) per semester for the proctoring software.**
- The final exam will be cumulative and will account for 35% of the final grade.
- Approved calculators and approved translation devices are the only electronic devices allowed during any 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.
- It is imperative that the student has a reliable internet connection when attempting an 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:

Date	Content	*Lessons/Sections	Quizzes	Exams
Jan. 8 – 14	Chapter 7	7.1, 7.2, 7.3		
Jan. 15 - 21		7.4, 7.5, 7.6	Ch. 7 Quiz	
Jan. 22 - 28	Chapter 8	8.1, 8.2, 8.3		
Jan 29 – Feb. 4		8.4, 8.5	Ch. 8 Quiz	
Feb. 5 – 11	Chapter 9	9.1 – 9.4		
Feb. 12 - 18		9.5 & 9.6	Ch. 9 Quiz	
Feb. 19 - 25	Chapter 10	10.1, 10.2, 10.3		
Feb. 26 – 27		10.4	Ch. 10 Quiz	
Feb. 29 or Mar. 1				Mid-Term Exam
Mar. 4 - 10	Chapter 11	11.1 – 11.4	Ch. 11 Quiz	
Mar. 11 – 17	Chapter 12	12.1, 12.2, 12.3	Ch. 12 Quiz	
Mar. 18 – 24	Chapter 13	13.1, 13.2, 13.3		
Mar. 25 – 26			Ch. 13 Quiz	
Mar. 28 or 29				Annuities Exam
April 1 – 7	Chapter 15	15.1, 15.2, 15.3	Ch. 15 Quiz	
April 8 – 14	Chapter 16	16.1, 16.2, 16.3	Ch. 16 Quiz	
April 17 or 18				FINAL EXAM

STUDENT RESPONSIBILITIES:

- Assignments, quizzes, and exams will be written as scheduled. **No rewrites/rescheduled exams will 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.
- **Two days will be given to write proctored exams. See the dates on the detailed course schedule.**
- Any exam, quiz, or assignment grade that a student may wish to contest must be done within 5 business days after the exam/quiz/assignment has been marked. Any exams/quizzes/assignments contested after this time frame will not be given consideration.

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.

If you are unable to complete your exams using the proctoring software, you may request a college computer for the online testing by contacting the GPRC Testing Centre by telephone at 780-539-2212 to arrange to write your exam.