DEPARTMENT OF BUSINESS AND OFFICE ADMINISTRATION

COURSE OUTLINE – FALL 2020 EC

BA1050 BUSINESS MATHEMATICS AND STATISTICS – 3 (3-0-1) 60 HRS, 15 WKS

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Office Hours: TBA

<mark>*You must send all email correspondence from your GPRC student email account and it must be professionally formatted</mark> (i.e. subject line filled in, proper greeting, spelling and 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, sinking funds, statistical methods and probability theory. 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). McGraw-Hill Ryerson. Jerome and Worswick.

<mark>All students must have access to Connect.</mark> 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.

<mark>Sharp EL - 738 Calculator</mark>

DELIVERY MODE(S): Self-Study

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:

- Athabasca University: MATH 244 (3)
- Canadian University College: Option 1xx (3)
- DeVry Institute of Technology - Calgary: MATH 1TR (3)
- King's University College, The: BUSI 2xx (3)

*Warning: Although we strive to make the transferability information in this document up-to-date and accurate, **the student has the final responsibility for ensuring the transferability of this course to Alberta Colleges and Universities**. Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at Alberta Transfer Guide main page http://www.transferalberta.ca or, if you do not want to navigate through few links, at http://alis.alberta.ca/ps/tsp/ta/tbi/onlinesearch.html?SearchMode=S&step=2

** 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	7%
CONNECT Quizzes (9 @ 2% each)	18%
Mid-Term Exam	25%
Annuities Exam	15%
Final Exam (cumulative)	35%
	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.

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 recorded on the dashboard and visible at all times for students. **In order 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 schedule 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 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 quizzes.**
- 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:

Mid-Term Exam	25%
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.

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.
- Any exam or assignment grade that that a student may wish to contest must be done so within 5 business days after the exam/assignment has been graded. Any exams/assignments contested after this time frame will not be given consideration.

GRADING CRITERIA:

Please note that Universities will not accept your course for transfer credit **IF** your grade is **less than C-**. This means **DO NOT GET LESS THAN "C-" IF YOU ARE PLANNING TO TRANSFER TO UNIVERSITY.**

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

Date	Content	*Lessons/Sections	Assigned Practice Questions Odd #'s	Quizzes	Exams
Sept. 7th – 13th	Chapter 7	7.1, 7.2, 7.3			
Sept. 14th – 20th		7.4, 7.5, 7.6		Ch. 7 Quiz	
Sept. 21st – 27th	Chapter 8	8.1, 8.2, 8.3			
Sept. 28th – Oct. 4th		8.4, 8.5		Ch. 8 Quiz	
Oct. 5th – 11th	Chapter 9	9.1 – 9.4			
Oct. 12th – 18th		9.5 & 9.6		Ch. 9 Quiz	
Oct. 19th – 25th	Chapter 10	10.1, 10.2, 10.3			
Oct. 26th – Nov.1st		10.4		Ch. 10 Quiz	Mid-Term Exam
Nov. 2nd - 8th	Chapter 11	11.1 – 11.4		Ch. 11 Quiz	
Nov. 9th – 15th	Chapter 12	12.1, 12.2, 12.3		Ch. 12 Quiz	
Nov. 16th – 22nd	Chapter 13	13.1, 13.2, 13.3			
Nov. 23rd – 29th				Ch. 13 Quiz	Annuities Exam
Nov. 30th – Dec.6th	Chapter 15	15.1, 15.2, 15.3		Ch. 15 Quiz	
Dec. 7th – 13th	Chapter 16	16.1, 16.2, 16.3		Ch. 16 Quiz	
Dec. 14th – 18th					FINAL EXAM

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 our college website. If you have any questions regarding these policies, please contact Student Services.

Attendance

Regular attendance is crucial for student success. As noted in the Rights and Responsibilities, faculty members may prescribe attendance requirements for specific courses and in addition, programs may have mandatory attendance requirements.

Students receiving training allowances or other forms of financial assistance are expected to be aware of and comply with the conditions of their sponsorship, which generally require regular attendance. The College is obliged to provide attendance requirements directly to the sponsoring agency to ensure continued financial assistance.

Attendance is mandatory for apprentices. Unauthorized absences may result in termination of training and training allowances.

Academic Grievance

If you feel the actions of an academic staff member are affecting your academic standing, you are encouraged to seek advice and follow the procedures detailed in the Student Academic Grievance Policy. All discussions regarding your concerns are bound by a code of professional ethics that demands confidentiality unless you specifically give permission in writing for the information
to be shared.

Normally, you will be encouraged to approach the instructor to share your concern. If satisfaction is not achieved as a result of the discussion with the instructor, you are encouraged to carry the concern to the Chair of the Department. The Chair will normally meet with you and the instructor to facilitate a timely resolution to the issue. You may request the presence of an advocate at this stage or at any other stage in the grievance process.

If your concerns are not resolved by these informal processes, the Chair of the Department will ask you to prepare a written statement of the grievance which clearly indicates the outcome you expect and the appropriate Academic Dean shall try to negotiate the resolution. This step normally moves your concern into the formal grievance processes. At this stage you will want to ensure that you have a complete copy of the Student Academic Grievance Policy.

Students have the right to fair and equitable procedures for resolving matters affecting academic standing. The Student Academic Grievance Policy is available on the College website at www.gprc.ab.ca.

Copyright

Students must obey the Canadian Copyright Act. If you require specific information about copyright, please consult the Library Digital Production Technician or the Library Reference person on duty. GPRC's policy and guidelines for academic use of copyright-protected works may be found on the Library website.

Academic Dishonesty

The College expects intellectual honesty from its students. Intellectual honesty demands that the contribution of others be acknowledged. To do less is to cheat. Intellectual dishonesty undermines the quality of academic activity and accordingly, the College has adopted appropriate penalties for student misconduct with respect to plagiarism and cheating. Penalties are levied according to the degree of the infraction. If you are unsure whether a particular course of action might constitute plagiarism, you are advised to consult with the instructor.

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 College Admission Guide at http://www.gprc.ab.ca/programs/calendar/ or the College Policy on Student Misconduct: Plagiarism and Cheating at www.gprc.ab.ca/about/administration/policies/**

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

Cheating

Cheating on tests or examinations includes, but is not limited to, the following:

- dishonest or attempted dishonest conduct such as **speaking to other students or communicating with them under any circumstances whatsoever**
- bringing into the examination room a textbook, notebook, memorandum, other written material or mechanical or electronic device not authorized by the examiner or instructor
- writing an examination, or part of it, outside the confines of the examination room without permission to do so
- consulting any person or materials outside the confines of the examination room without permission to do so
- leaving answer papers exposed to view, or any attempts to read other students' examination papers
- tampering or attempts to tamper with examination scripts, class work, grades and/or class records; the acquisition, attempted acquisition, possession, and/or distribution of examination materials or information not authorized by the instructor
- Impersonation of another student in an examination or other class assignment.
- **Absolutely no examination materials may be removed from the examination room**. All papers, answer forms and examination question sheets must be returned to the instructor. If students leave the examination room for any reason unacceptable to the instructor, they must hand in all examination materials and it will be assumed that the examination is completed.

If students voluntarily and consciously aid another student in the commission of one of these offenses they are also guilty of misconduct. Any attempt to commit academic misconduct will bear the same consequences as if the act occurred. A student who assists another student in an act or attempted act of misconduct will also be considered to have committed an offense.

Plagiarism

Plagiarism means submitting work (words, ideas, images, or data) in a course as if it were their own work done expressly for that particular course when, in fact, it is not. Most commonly, plagiarism exists when:

- the work submitted or presented was done, in whole or in part, by an individual other than the student (this includes having another person impersonate the student or otherwise substitute the work of another for their own in an assignment, examination, or test)
- Parts of a student's work are taken from another source without reference to the original author. This includes ideas, words, and images appearing in print, digital, graphical, internet, audio and video formats
- students submit or present the work in one course which has also been submitted in another course (although it may be completely original with the student) without the prior agreement of the instructor
- Clinical or laboratory reports are falsified or fabricated.

While it is recognized that academic work often involves reference to ideas, data and conclusions of others, intellectual honesty requires that such references be explicitly and clearly noted.

Instructors may choose to use online plagiarism detection services. When students submit a paper, it is understood that they are consenting to such a procedure and that they cannot claim any copyright violation should such paper be uploaded to an online plagiarism detection database.