

DEPARTMENT OF SCIENCE

COURSE OUTLINE – FALL 2020 MA1130 A3/B3: ELEMENTARY CALCULUS I – 3 (3-2-0) UT 75 HOURS 15 WEEKS

INSTRUCTOR: Dallas Sawtell **PHONE:** Click here to enter text.

OFFICE: Click here to **E-MAIL:** dsawtell@gprc.ab.ca

enter text.

OFFICE HOURS:

FALL 2020 DELIVERY: Remote Delivery. This course is delivered remotely. There are no face-to-face or onsite requirements. Students must have a computer with a webcam and reliable internet connection. Technological support is available through helpdesk@gprc.ab.ca.

CALENDAR DESCRIPTION: This course will include a review of analytic geometry; functions, limits, continuity; differentiation of elementary functions; applications to maxima, minima and rates; introduction to integration; Fundamental Theorem; numerical integration; and areas and other applications of the definite integral to areas.

PREREQUISITE(S): Math 30-1 or equivalent

REQUIRED TEXTS/RESOURCE MATERIALS: We will use two free open source textbooks found at www.lyryx.com. One is: Calculus - Early Transcendentals, Comprehensive Lyryx Version(original text by D. Guichard) the other is the Open Stax ALLY book titled Calculus Volume 1. The authors are G. Strang and E, "Jed" Herman. Click on the book and then download PDF. You can use the online version or print out what you need. Another resource is: Differential Calculus and Integral Calculus textbooks and problem books at http://www.math.ubc.ca/~CLP/index.html

COURSE OBJECTIVES: This course is designed to provide students with an understanding of first year Calculus

LEARNING OUTCOMES: A successful student will be able to adequately demonstrate an understanding of the concepts stated below (among others)

Limits and continuity

Derviatives of Polynomials, Exponentials, Logarithms, Trigonometric Functions, the Product and Quotient Rule, Chain Rule, Implicit Differentiation

Related Rates and Linear Approximation, Differentials, Maximum and Minimums, Mean Value Theorem, Rolle's Theorem, Increase, Decrease, Concavity, Graphing, Optimization Problems, antiderivatives

Areas and Distances, The Definite and Indefinite Integral, The Fundamental Theorem of Calculus, Substitution Rule

Area Between Curves

TRANSFERABILITY: See www.gprc.ab.ca and consult the Alberta Transfer Guide for more information. http://www.transferalberta.ca or http://alis.alberta.ca/ps/tsp/ta/tbi/onlinesearch.html?SearchMode=S&step=2

EVALUATIONS: Online assignments

10% 20%

Written assignments 20%
Online quizzes 10%

Midterm Monday, Nov. 2 30% written and oral Final Exam 30% written and oral

It is the student's responsibility to be available to write the final exam at the scheduled time. Writing early is not permitted.

For online quizzes and assignments you need to register on Lyryx. There is a fee of \$39.95

Student Registration Instructions: http://login.lyryx.com/unprotected-servlets/FDOC.html?c=LALG1_866

COURSE SCHEDULE/TENTATIVE TIMELINE: TBA

GRADING CRITERIA:

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

STUDENT RESPONSIBILITIES: Students are responsible for all lecture material, seminars and readings. Students are expected to practice the material by doing problems from the textbook. No late assignments or tests will be accepted. Assignments and quizzes cannot be made up if missed. If the midterm is missed due to illness the weight will be put on the final (ie. the final will be worth 60%). If the final is missed due to illness it will be deferred (see calendar for information). A doctor's note and a phone message or email will be required in all cases.

^{**} Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions and may not meet the prerequisite requirements for other math courses. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability

Cellphone use is not permitted in the classroom. This includes texting. Please turn off and put away your cellphone during class. You may be asked to leave the classroom if using a cellphone. No recording of any kind is allowed in the class, seminar or during consultation with the instructor. Refer to the College Policy on Student Rights and Responsibilities at:

www.gprc.ab.ca/d/STUDENTRESPONSIBILITIES

STATEMENT ON PLAGIARISM AND CHEATING: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 http://www.gprc.ab.ca/about/administration/policies/

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