



DEPARTMENT OF SCIENCE

COURSE OUTLINE – WINTER 2021

MA1130 A3: ELEMENTARY CALCULUS I – 3 (3-2-0) UT 75 HOURS 15 WEEKS

INSTRUCTOR: Dallas Sawtell

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OFFICE:

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OFFICE HOURS:

WINTER 2021 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.
Note: GPRC reserves the right to change the course delivery.

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

Derivatives 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: 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.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: Online assignments	10%
Written assignments	20%
Online quizzes	10%
Midterm Thurs. Feb.25	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_887

COURSE SCHEDULE/TENTATIVE TIMELINE: TBA

GRADING CRITERIA:

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

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. 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:

<https://www.gprc.ab.ca/about/administration/policies>

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.