DEPARTMENT OF SCIENCE

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

INSTRUCTOR:	Dallas Sawtell	**PHONE:**	539-2989
OFFICE:	C412	**E-MAIL:**	dsawtell@gprc.ab.ca

OFFICE HOURS:

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 a free open source textbook found at www.lyryx.com . You do not need to register. Go to the website and click on subjects, Math and Statistics and go to the bottom of that page. We will mainly use 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 resourse is Calculus Early Transcendentals by David Guichard or Differential Calculus and Integral Calculus textbooks and problem books at http://www.math.ubc.ca/~CLP/index.html

DELIVERY MODE(S): Lecture

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)

2.1-2.4	Limits and continuity
3.1-3.6, 3.8, 3.9	Derviatives of Polynomials, Exponentials, Logarithms, Trigonometric Functions, the Product and Quotient Rule, Chain Rule, Implicit Differentiation
4.1-4.7, 4.10	Related Rates and Linear Approximation, Differentials, Maximum and Minimums, Mean Value Theorem, Rolle's Theorem, Increase, Decrease, Concavity, Graphing, Optimization Problems, antiderivatives
5.1-5.6	Areas and Distances, The Definite and Indefinite Integral, The Fundamental Theorem of Calculus, Substitution Rule
6.1	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

** 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

EVALUATIONS: Worksheets   10%   In the seminars
Quizzes   15%   Every other Thursday, starting Jan.16
Midterm   25%   Thursday Feb. 27
Final Exam   50%   April 15-25 inclusive including weekends and evenings

No calculators or formula sheets are allowed on quizzes, midterms or the final exam
It is the student's responsibility to be available to write the final exam at the scheduled time. Writing early is not permitted.

COURSE SCHEDULE/TENTATIVE TIMELINE: See learning outcomes

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 worksheets will be accepted. 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 75%). 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.

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.