GRANDE PRAIRIE REGIONAL COLLEGE
DEPARTMENT OF SCIENCE

COURSE: MA1000 Engineering Calculus I Fall 2011

Instructor: Dallas Sawtell **Phone**: 539-2989
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Prerequisite: Pure Math 30, Math 31

Textbooks: Calculus Early Transcendentals by James Stewart

Calendar Description: This course covers functions, transcendental functions, limits, continuity, derivatives, integrals and applications, Taylor expansion.

Credit/Contact Hours: (3,2,0) 4 credits

Delivery Mode:	Lecture A3	M W F	9:30-10:30	J228
	Seminar AS1	T	2:30-4:30	J228
	Seminar AS2	W	2:30-4:30	J228

Seminars: A worksheet will be given out that must be handed in by the end of the seminar for marking.

Objectives: To demonstrate a knowledge of the concepts and principles involved in Calculus

Transfer: See ww.gprc.ab.ca and www.acat.gov.ab.ca
**** Grade of D or D+ may not be acceptable for transfer to other post secondary institutions and will 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%
	Quizzes	15% To be held every other Monday starting Sept. 19. Quizzes cannot be made up if missed.
	Midterm	25% Oct. 26
	Final Exam	50% Finals are held from Dec.12 to Dec.21 inclusive (including Saturdays and evenings). Writing finals early is not permitted.

Grading Criteria:

A+	4.0	95-100%
A	4.0	90-94%
A-	3.7	85-89%
B+	3.3	80-84%
B	3.0	75-79%
B-	2.7	70-74%
C+	2.3	66-69%
C	2.0	62-65%
C-	1.7	58-61%
D+	1.3	55-57%
D	1.0	50-54%
F	0.0	0-49%

Calculators: Use of calculators is not permitted on the quizzes or exams.

Student Responsibilities: Students are responsible for all lecture and seminar material, and readings. Students are expected to practice the material by doing problems at the end of every section covered. 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 doctors note and a phone message or email will be required in both cases.

Plagarism: Refer to www.gprc.ab.ca for details on GPRC's policy regarding plagiarism, cheating and the resultant penalties. These are serious issues and will be dealt with severely.

Schedule:

Ch 2- Limits, precise definition of a limit, continuity, asymptotes, derivatives

Ch3- Derivatives or polynomial and exponential functions, product and quotient rules, chain rule, implicit differentiation, derivatives of logarithmic functions, exponential growth and decay, related rates, linear approximations and differentials, hyperbolic functions

Ch 4- Maximum and Minimum values, the Mean Value Theorem, Rolle's Theorem, concavity, indeterminate forms and L'Hospital's Rule, curves sketching, optimization problems, antiderivatives

Ch 5- Areas, the definite integral, the Fundamental Theorem of Calculus, indefinite integrals, substitution rule

6.1- Areas between curves

11.10- Taylor expansions

14.3 – Parial derivatives