GRANDE PRAIRIE REGIONAL COLLEGE
MATHEMATICS 1130 A3 (Winter 2008) – COURSE OUTLINE

Title : Elementary Calculus I

Schedule : Lecture A3 T R 8:30 a m - 9:50 a m J 203
Seminar AS1 M 2:30 p m - 4:20 p m J 204

Instructor : Dr Subhash Karnik
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Textbook : i) Calculus - 8th Edition (Single Variable),
Howard Anton, Irl Bivens, Stephen Davis
- John Wiley & Sons, Inc (ISBN 0 - 471 - 48274 - 9)
ii) (Optional) - Student Solutions Manual by Neil Wigley for Calculus (8th Edition) by Anton, Bivens and Davis
- John Wiley & Sons, Inc (ISBN 0 - 471 - 67210 - 6)

Course is covered by Chapters 1 to 6.1 from i).

Grading :

Quizzes	**15 %**
Seminar Assignments	**10 %**
Mid-term Exam	**25 %**
Final Exam	**50 %**

Exam Schedule :

Mid-term Exam - Thursday February 14, 2008 (Tentative)
8:30 a m - 9:50 a m

Final Exam as per Registrar's Schedule to be published in April 2008.

Students must write the quizzes and exams at the scheduled times.

Turn over . . .

Course Description

MA 1130 3 (3 - 2 - 0) UT 75 Hours

Pure Math 30 is a pre-requisite for this course.

(Credit will be granted for only one of MA 1130, MA 1140 or MA 1000.)

From Alberta Transfer Guide :
In the Province of Alberta this course is transferable as follows :

Athabasca	**MATH 265(3)**	**Augustana UC**	**MAT 110(3)**
Canadian UC	**MATH 1xx(3)**	**Concordia UC**	**MAT 113(3)**
King's UC	**MATH 200(3)**	**U of A**	**MATH 113(3)**
U of C	**MATH 251(3)**	**U of L**	**MATH 1560(3)**

The following topics are covered in this course :

i) Functions and their graphs

ii) Limit of a function, Calculating Limits using the Limit Laws, Limits of Trigonometric Functions

iii) Continuity

iv) Derivatives, Differentiation Formulas, Derivatives of Trigonometric Functions, Chain Rule, Implicit Differentiation, Higher Derivatives, Related Rates, Differentials, Local Linear Approximations

v) Maximum and Minimum Values, Mean Value Theorem, Increasing and Decreasing Functions, First Derivative Test, Concavity and Points of Inflection, Second Derivative Test, Limits at Infinity, Horizontal and Vertical Asymptotes, Curve Sketching, Applied Maximum and Minimum Problems, Anti-derivatives

vi) Sigma Notation, Area, Definite Integral, Fundamental Theorem of Calculus, Substitution Rule, Areas between Curves.