GRANDE PRAIRIE REGIONAL COLLEGE
MATHEMATICS 1130 B2 (Fall 2008) – COURSE OUTLINE

Title :   **Elementary Calculus I**

Schedule : Lecture B2   W   F   1:00 p m - 2:20 p m   J 203
              Seminar BS1   T   2:30 p m - 4:20 p m   J 203
                  BS2   R   2:30 p m - 4:20 p m   J 203

Instructor : **Dr Subhash Karnik**
                Office J206
                Phone 539 - 2093
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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 - Wednesday October 22, 2008 (Tentative)
                                1:00 p m - 2:20 p m

Final Exam as per Registrar's Schedule to be published in December 08.

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.**