GRANDE PRAIRIE REGIONAL COLLEGE
MATH 1150 A3 - WINTER 2005

Title   Elementary Calculus II

Schedule   Lecture A3   W F   1:00 p m - 2:20 p m   J203
               Seminar AS1   M   1:00 p m - 2:20 p m   J204
                       AS2   R   2:30 p m - 3:50 p m   J204

Instructor   Dr Subhash Karnik
                 Office J206
                 Phone 539 - 2093
                 e-mail : karnik@gprc.ab.ca

Textbook   i) Single Variable Calculus, 5th Edition,
               James Stewart - Brooks/Cole Publishing Company
               ii) Student Solutions Manual, Volume One
               for the above book (optional)

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

Exam Schedule

Mid-term Exam   Friday February 18, 2005
                    1: 00 p m - 2: 20 p m (Tentative)

Final Exam as per Registrar's Schedule to be published in April 2005.

Students must write the Exams at the scheduled times.

Turn over . . .

MATH 1150 - COURSE DESCRIPTION

MA 1150   3 (3 – 1.5 – 0)   UT 67 Hours

Elementary Calculus II

MA 1130 (or MA 1140 or MA 1000) is a pre-requisite for this course.

(Credit will be granted for only one of MA 1150 or MA 1010.)

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

Athabasca	MATH 266(3)	Augustana UC	MAT 112(3)
Canadian UC	MATH 162(3)	Concordia UC	MAT 115(3)
King's UC	MATH 205(3)	U of A	MATH 115(3)
U of C	MATH 253(3)	U of L	MATH 2560(3)

The following topics are covered in this course :

<u>Detailed Description</u> : Applications of integration such as areas, volumes by disks, washers, cylindrical shells and slices, length of plane curves, area of surface of revolution, work, fluid pressure and force.

Logarithmic and exponential functions, derivatives and integrals of logarithmic and exponential functions, graphs involving exponentials and logarithms, inverse functions, hyperbolic functions, derivatives and integrals involving hyperbolic functions. First order differential equations and applications.

Inverse trigonometric functions, derivatives and integrals involving inverse trigonometric functions, inverse hyperbolic functions, derivatives and integrals involving inverse hyperbolic functions.

Techniques of integration such as integration by parts, integrating powers of sine and cosine, integrating powers of secant and tangent, trigonometric substitutions, integrating rational functions (partial fractions), Numerical integration (Trapezoidal Rule and Simpson's Rule).

Improper integrals. L'Hopital's Rule for indeterminate forms. Various types of indeterminate forms.