

SEP 06 2000

GRANDE PRAIRIE REGIONAL COLLEGE
MATH 1150 A3 - WINTER 2000

Title : Elementary Calculus II

Schedule : Lecture A3 M W 1:00 p m - 2:20 p m J203
Seminar AS1 M 2:30 p m - 3:50 p m J203
AS2 F 8:30 a m - 9:50 a m J203

Instructor : Dr Subhash Karnik
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Textbook : i) Single Variable Calculus, 3rd Edition, James Stewart
Brooks/Cole Publishing Company
ii) Student Solutions Manual, Volume One
By James Stewart, Daniel Anderson, Daniel Drucker
Brooks/Cole Publishing Company

Course is covered by Chapters 5.2 to 8.6 from i).

Grading : Quizzes/Review Quizzes 15 %
Worksheets in Seminars 10 %
Mid-term Exam 25 %
Final Exam 50 %

Exam Schedule : Mid-term Exam Wednesday, February 16, 2000
1: 00 p m - 2: 20 p m (Tentative)
Final Exam as per Registrar's Schedule to be published in April 2000.

Students must write the Exams at the scheduled times.

MATH 1150 - COURSE DESCRIPTION

MA 1150 Elementary Calculus II

3(3-1.5) Winter

Applications of integration to areas, volumes, work, force, arc lengths. Differentiation and integration of exponential, logarithmic and trigonometric functions. Techniques of integration. Indeterminate forms and improper integrals.

Prerequisites: MA 1130, MA 1140 or MA 1000

Detailed Description : 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.