

MATHEMATICS 2150 A3
Winter Semester 1996-97

TITLE: INTERMEDIATE CALCULUS II

SCHEDULE: Class: Mon Wed Fri 12:00 noon - 12:50 pm J204
Seminar: Thursday 1:30 pm - 2:20 pm J204

INSTRUCTOR: Dr. Subhash Karnik
Office: J206
Extension: 2093

TEXT: i) James Stewart; Calculus (Third Edition)
ii) Student Solution Manual Volume I and II for (i)

MARKING: Final Examination 35%
Mid-term Examination 25%
Quizzes 25%
Review Quizzes 15%

SCHEDULE OF EXAMINATIONS:

Mid-term Examination : During the mid-term exam week starting Tuesday, February 18, 1997. The exact date to be fixed in consultation with the class.

Final Examination : As will be scheduled by Registrar's Office in April 1997.

Quizzes, Mid-term Examination and Final Examination must be written at scheduled times.

MATHEMATICS 2150
INTERMEDIATE CALCULUS II

MATH 2150 Intermediate Calculus II 3 (3-0-1)

PREREQUISITE : Math 2140 or equivalent

DETAILED DESCRIPTION:

Vector-valued functions. Limits, derivatives and integrals. Curvature. Tangential and Normal Components of Acceleration. Kepler's Laws.

Double integrals, areas, volumes, moments and center of mass, double integrals in polar co-ordinates.

Triple integrals, application of triple integrals, triple integrals in cylindrical and spherical co-ordinates, surface area. Vector fields, line integrals, independence of path, Green's Theorem, Surface integrals, The Divergence Theorem, Stokes' Theorem, Transformation of co-ordinates, change of variables in multiple integrals.

Separable and first-order linear differential equations, exact differential equations, homogeneous differential equations, second-order linear differential equations, Non-homogeneous linear differential equations, series solutions of differential equations.