

MATHEMATICS 2140 A2
Fall Semester 1995-96

TITLE: INTERMEDIATE CALCULUS I

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 Monday, October 16, 1995. The exact date to be fixed in consultation with the class.

Final Examination : As will be scheduled by Registrar's Office in December 1995.

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

12/96

MATHEMATICS 2140
INTERMEDIATE CALCULUS I

MATH 2140 Intermediate Calculus I 3 (3-0-1)

Prerequisite: Math 1150 or equivalent. This course may not be taken for credit if credit has already been obtained in Math 209 or Math 217.

Detailed Description :

Infinite sequences. Convergence and divergence of infinite series. Positive term series. Alternating series. Absolute convergence. Power series. Taylor and Maclaurin series.

Plane curves. Tangent lines to curves. Polar coordinate systems. Polar equations of conics. Areas in polar coordinates. Lengths of curves. Surfaces of revolution.

Vectors in two and three dimensions. Vector product. Lines in space. Planes. Cylinders and surfaces of revolution. Quadric surfaces. Cylindrical and spherical co-ordinates.

Functions of several variables. Limits and continuity. Partial derivatives. Increments and differentials. The chain rule. Directional derivatives. Tangent planes and normal lines to surfaces. Extrema of functions of several variables. Lagrange multipliers.