MATHEMATICS 2140 A2
FALL SEMESTER 1992-93

TITLE: INTERMEDIATE CALCULUS I

SCHEDULE: Class: Mon, Wed, Fri   12:00 noon -12:50pm

                Seminar: Thursday   3:00 pm - 3:50 pm

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

TEXT: i) James Stewart : Calculus with Analytic Geometry

                ii) Student's solution manual to accompany (i)

MARKING: Final   35%
                Term test 1   20%
                Term test 2   20%
                Quizzes   15%
                Assignments   10%

MATHEMATICS 2140
INTERMEDIATE CALCULUS I

12/96

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

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

<u>Detailed Description</u> :

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 co-
ordinate systems. Polar equations of conics. Areas in polar co-
ordinates. 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.