

1990-91

GRANDE PRAIRIE REGIONAL COLLEGE  
DEPARTMENT OF SCIENCE  
COURSE OUTLINE

MATHEMATICS 204 A3  
WINTER SEMESTER 1990-91

TITLE: Elementary Calculus II

SCHEDULE: Monday, Wednesday, Friday 9:00 am - 9:50 am  
Tuesday, Thursday 9:30 am - 10:50 am

INSTRUCTOR: Dr. Subbash Karnik  
Office: J 206  
Extension 2093

TEXT: i) Howard Anton; Calculus with Analytical  
Geometry (Third Edition/Brief Edition)  
ii) Albert Herr; Student's Solutions Manual to  
accompany (i)

MARKING: Final 39%  
1st Mid-term 20%  
2nd Mid-term 20%  
Quizzes & Assignments 21%

## MATHEMATICS 204

MA 204 Elementary Calculus II  
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Applications of integration to areas, volumes, work, arc lengths. Differentiation and integration of exponential, logarithmic and trigonometric functions. Techniques of integration. Indeterminate forms and improper integrals.

Prerequisite: MA 202, MA 203 or MA 212

### Detailed Description

Applications of integration such as areas, volumes using the slab method, volumes of revolutions, the shell method, arc length, area of a surface of revolution, work, mass, moments, center of mass. The functions  $\ln x$ ,  $e^x$ , other bases, logarithmic differentiation and integration, inverse trigonometric function, their derivatives, hyperbolic functions-derivatives and integrals. Integration by parts, partial fractions, substitution, improper integrals, Taylor series.