GRANDE PRAIRIE REGIONAL COLLEGE
DEPARTMENT OF SCIENCE

MATHEMATICS 1150 A3
WINTER SEMESTER 1994

MA1150 Elementary Calculus II
3(3-1.5) UT(3) WINTER

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: MA1130, MA1140 or MA1000

SCHEDULE:	Class A3,	Mon., Wed., Fri. 9:00 - 10:00	J204
	Seminar AS1,	Tues. 9:30 - 11:00	J204
	Seminar AS2,	Thur. 9:30 - 11:00	J204

INSTRUCTOR: Dr. Eric Chislett
Room C 409
Phone 539-2003

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

COMPOSITION OF THE COURSE GRADE:

Final Exam	36%
Term Test - 1	17%
Term Test - 2	17%
Quizzes	20%
Assignments	10%

Notes:
One assignment per week, due Fridays.

One quizz per week. Mondays, about 15 mins.

1st. mid-term exam. Fri. Feb. 18

2nd. mid-term exam. Fri. Mar. 25

MATHEMATICS 1150

Detailed Description

Definite and indefinite integrals. The first and second Fundamental Theorems of Calculus. The Mean Value Theorem of Integral Calculus. Application 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 functions and their derivatives. Integration by parts, partial fractions, substitution. Improper integrals, indeterminate forms and L'Hopital's rule.

This course content is covered in chapters five through ten of Anton's text. Parts of some chapters are omitted.

WINTER TERM 1994, SCHEDULE

	Topic	Chapter	Sections	Weeks	Dates
A.	Integration	5	5.2 5.6,5.7,5.8	1	Jan. 5 - 7
B1.	Applications (Areas, Volumes, Arc Length)	6	6.1 - 6.4	2	Jan 10 - 21
C.	Logarithmic and Exponential Functions	7	all	2	Jan 24-Feb4
D.	Inverse Trigonometric and Hyperbolic Functions	8	8.1, 8.2	2	Feb. 4 - 11
E.	Techniques of Integration	9	9.1 - 9.8	3	Feb14-Mar18
F.	Improper Integrals and L'Hopital's Rule	10	all	1	Mar 21 - 25
B2.	Applications (Surface area, Rectilinear Motion, Work, Presssure, Force)	6	6.5 - 6.8	2	Mar 28-Apr6
	Review			1	Apr 11 - 14
	Total			14	