

# GRANDE PRAIRIE REGIONAL COLLEGE

## MATH 2140 A2 FALL 2008

**Title:** Intermediate Calculus I

**Schedule:** Tues., Thur. 1:00 - 2:20 B201  
Fri 10:00- 10:50 B202

**Instructor:** Dr. Eric Chislett  
Office C409  
Phone 780-539-2003

**Office Hrs:** Tues 2:30 – 3:30  
Wed 1:00 – 2:30  
Thur 10:30 – 11:30  
Fri 9:00 – 10:00

**Textbook:** Multivariable Calculus, 6<sup>th</sup> Edition, James Stewart,  
Brooks/Cole Publishing Company.  
(Chapters 11, 12, 13, and 15 of this book)

**Grading:** Assignments 25% first one attached  
Term Exam #1 25%  
Term Exam #2 25%  
Final Exam 25%

**Assign'ts:** There will be approximately 10 assignments given during the term, one per week. Given out on Tuesdays and are due before class on the following Tuesday.

**Seminars:** The assignments are usually finished during the seminars. But you do not have sufficient time during this one hour period to do all of any assignment.

**Exams:** The Final Exam time is set by the Registrar's office.  
(Term and final exams are closed book exams)

**Notes:**  $\sin(2\theta) = 2 \sin(\theta) \cos(\theta)$   $\cos^2(\theta) = \frac{1}{2}(1 + \cos(2\theta))$   
 $\cos(2\theta) = \cos^2(\theta) - \sin^2(\theta)$   $\sin^2(\theta) = \frac{1}{2}(1 - \cos(2\theta))$

# **GRANDE PRAIRIE REGIONAL COLLEGE**

## **MATH 2140 A2 FALL 2008**

MA 2140 3 (3-1-0) UT 60 Hours

Intermediate Calculus I

Infinite series; plane curves and polar coordinates; vectors and three dimensional analytic geometry; partial derivatives.

Prerequisites: MA 1150 or MA 1010

Transfer: UA, UC, UL, AU, AF, CU, CUC, KUC, Other.

### **Detailed Description:**

1. Review of techniques of integration.
2. Parametric representation of plane curves, arc length.
3. Polar coordinates, area, arc length, conics.
4. Infinite series; tests for convergence, Taylor's formula with remainder, power series.
5. Partial derivatives, directional derivatives, gradient, tangent planes.
6. Maxima and minima. Lagrange multipliers.