GRANDE PRAIRIE REGIONAL COLLEGE
DEPARTMENT OF SCIENCE
MATHEMATICS 1010 A3
WINTER 2010

Title: Calculus II

Prerequisite: Math 1000

Schedule: Lecture A3   M   W   F   09:00-09:50   J202
                 Seminar AS1   F   10:00-10:50   J202
                 Seminar AS2

Instructor: Thomas Kaip
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Textbooks: James Stewart; Calculus Early Transcendental 6th Ed.

Grading: Assignments   10%
                 Quizzes   15%
                 Midterm   25%
                 Final Exam   50%

Content: Techniques of integration. Applications of integration to planar areas and lengths, volumes and masses. Introduction to differential equations: laplace transforms, separable, linear, direction fields, Euler's method, applications. Infinite series, power series, Taylor expansions with remainder terms. Polar coordinates. Rectangular, spherical and cylindrical coordinates in 3-dimensional space. Parametric curves in the plane and space: graphing, arc length, curvature; normal binormal, tangent plane in 3-dimensional space. Volumes and surface areas of rotation.

Quizzes: Quizzes will be normally held in the latter 30 minutes of the seminar period.

Calculators: Calculators **WILL NOT** be allowed in quizzes and exams.