

**MAT 221 – 051**  
**Spring 2008 – First Session: January 14 – March 7**  
**Calculus IIA (3 credits)**

**INSTRUCTOR:** Chris Christensen  
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**OFFICE HOURS:** M 9:00 – 10:00, T noon – 1:00, W 10:00 – 11:00, R 9:30 – 10:30,  
F 9:00 – 10:00, by appointment, and by capture.

**CLASS TIME:** MWF 8:00 – 8:50 and TR 8:00 – 9:15, ST 249.

**PREREQUISITE:** C or better in MAT 120 or MAT 122.

**TEXT:** *Calculus* by Jon Rogawski.

**CALCULATOR:** **A Texas Instruments TI-92 or TI-89 or Voyage calculator is required for this course.**

**TOPICS:** We will cover most of the material in sections 8.2, 8.3, 8.4, and 9.1 and chapters 12, 13, and 14.

**GRADING:**

Two tests worth 100 points each	200
F, February 8	
W, February 27	
Comprehensive final exam	150
Last class session March 7	
Homework percentage	<u>100</u>
	450

Work missed during excused absences may be made up without penalty.

Test grading scales will be announced when tests are returned.

**ATTENDANCE:** You are responsible for all material assigned or covered in class. Attendance will not be taken.

**WITHDRAWAL:** The deadline for withdrawing from this course with a grade of W is Friday, February 15. Withdrawal after that date is not likely to be permitted.

The instructor reserves the right to alter the syllabus if circumstances dictate.

The work you will do in this course is subject to the Student Honor Code. The Honor Code is a commitment to the highest degree of ethical integrity in academic conduct, a commitment that, individually and collectively, the students of Northern Kentucky University will not lie, cheat, or plagiarize to gain an academic advantage over fellow students or avoid academic requirements.

Course learning objectives:

The student will know the mathematics needed to have a reasonable expectation of success in the mathematics and statistics courses for which Calculus II is a pre-requisite.

The student will be able to solve problems involving vectors and vector operations, parametric curves, polar coordinate systems, and techniques of integration.

The student will be able to write clear explanations of the techniques of calculus including the proper use of standard mathematical notation.

The student will be able to model applications by using calculus.

The student will be able to apply the content from Calculus I to solve problems in Calculus II.

The student will be able to recognize the problem type, select an appropriate solution strategy and apply rules and procedures for solving the problem.

The student will begin to be able to apply theorems in order to solve problems.

The student will be able to use a computer algebra system to graph parametric and polar curves, and implement vector operations.

Attainment of course learning objectives will be measured by two tests, a comprehensive final exam, and homework.