

**MAT 122 – 001**  
**Spring 2008**  
**Calculus IB (3 credits)**

**INSTRUCTOR:** Chris Christensen  
Office phone: 572-6672 Office: ST 353  
E-mail: christensen@nku.edu  
Website: <http://www.nku.edu/~christensen/>

**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 11:00 – 11:50, ST 251.

**PREREQUISITE:** C or better in MAT 121.

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

**CALCULATOR:** **A Texas Instruments TI-92 or TI- 89 calculator will be provided for your use during this course.**

**TOPICS:** We will cover most of the material in chapters 5, 6, and 7.

**GRADING:**

Three tests worth 100 points each	300
W, February 20	
W, March 26	
F, April 25	
Comprehensive final exam	200
Monday, May 5, 10:00 – 12:10	
Homework percentage	<u>100</u>
	600

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 Monday, March 31. Withdrawal after that date is not likely to be permitted.

Mid-Term grades for freshmen will be entered March 3 – March 18. They will be available until March 31.

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 IB is a prerequisite.

The student will be able to solve problems involving limits, derivatives, definite integrals and indefinite integrals.

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 know and be able to use the connections that exist between the course topics (for example the connections between: limits and the derivative; the derivative and the integral, the definite integral and area; the value of the derivative at a point, the slope of the tangent line to the graph at that point, and rate of change)

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 be able to use a CAS to graph functions (on a rectangular coordinate system), find derivatives, find definite and indefinite integrals, find the limit of a function.

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