INSTRUCTOR: Chris Christensen

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OFFICE HOURS: MTWRF 8:00 – 9:00, by appointment, and by capture.


PREREQUISITE: A grade of B or better in MAT 119 or placement.

TEXT: Calculus by Rogawski. You may choose any version of the text, including the electronic version. If you plan to take Calculus III, you will want to get the complete text (18 chapters).

CREDIT: Credit is not given for both MAT 129 and MAT 128.

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

TOPICS: We will cover most of the material in chapters 2, 3, 4, 5, and 6.

GRADING:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Two tests worth 150 points each</td>
<td>300</td>
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<tr>
<td>R, June 16</td>
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<td>W, July 6</td>
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<tr>
<td>Comprehensive final exam</td>
<td>200</td>
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<td>Last class period: R, 21 July</td>
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<td>Homework percentage</td>
<td>100</td>
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<td>600</td>
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Work missed during excused absences may be made up without penalty.

A tentative grading scale is: 92-100 is an A, 90-91 is an A-, 88 - 89 is a B+, 82 - 87 is a B, 80 – 81 is a B-, 78 - 79 is a C+, 72 – 77 is a C, 70 - 71 is a C-, 68 - 69 is a D+, 60 – 67 is a D, and below 60 is an F.

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, June 27. 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

Pre-requisite

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

Breadth

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

Communication

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

Connections/applicability

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).

Mathematical thinking

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

Technology

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

Attainment of course learning objectives will be measured by three tests, a comprehensive final exam, and homework.
Foundation of Knowledge Program: The Foundation of Knowledge program guides students to become independent learners, innovative thinkers, and responsible citizens. The program provides a foundation of values, knowledge, and skills that will empower them to discover their personal potential, communicate effectively, work in diverse communities, and solve problems in a global society. Courses in the program invite students to expand the life-long practice of asking questions, seek new points of view, apply principles of reason, adjust ideas in relation to new situations, and take reflective action. MAT 129 Calculus I is a general education course satisfying the mathematics requirement.

General Education Outcomes

Develop evidence-based arguments.

Use information technologies appropriately and effectively in written, spoken, or visual communication information.

Apply scientific and quantitative reasoning through problem solving or experimentation, and effectively communicate results through scientific, analytic and/or quantitative methods.

Secondary Education Students: Additional information concerning Secondary Education Students is available on the Departmental Syllabus.