
II. Course Information
Course Title: Applied Calculus
Course Abbreviation and Number: MTH 2240
Course Credit Hours: 4
Course Cross Listing(s) Abbreviation and Number:
Check ("x") all applicable:
General Education Course__X__ Writing Intensive Course______ Service Learning Course_____
Laboratory Course______ Ohio TAG (Transfer Assurance Guide) Course ______
Ohio Transfer Module Course__X__ Others (specify)_____

III. Course Registration
Prerequisites: WSU MP Level 5 or 6 or 7 or MTH 1280 or MTH 1340
Corequisites: none
Restrictions: none
Other: none

IV. Student Learning Outcomes
1) Identify the various elements of a mathematical or statistical model.
2) Determine the values of specific components of a mathematical/statistical model or relationships among various components.
3) Apply a mathematical/statistical model to a real-world problem.
4) Interpret and draw conclusions from graphical, tabular, and other numerical or statistical representations of data.
5) Summarize and justify analyses of mathematical/statistical models for problems, expressing solutions using an appropriate combination of words, symbols, tables or graphs.

V. Suggested Course Materials (subject to change): Calculus for the Life Sciences by Bittinger, Brand, and Quintanilla

VI. Suggested Method of Instruction: Lecture

VII. Suggested Evaluation and Policy: Tests, quizzes, homework, in-class group assignments

VIII. Suggested Grading Policy: A comprehensive final should count about 30% of the final grade. The other percentages are left to the discretion of each instructor.

IX. Suggested Assignments and Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Review of functions</td>
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<tr>
<td>2</td>
<td>Limits and continuity</td>
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<tr>
<td>3</td>
<td>Average rates of change, the limit definition of derivative</td>
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<tr>
<td>4</td>
<td>Differentiation techniques</td>
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<tr>
<td>5</td>
<td>More differentiation techniques</td>
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<tr>
<td>6</td>
<td>The chain rule, higher order derivatives</td>
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<tr>
<td>7</td>
<td>Using the first and second derivatives to find max and min values</td>
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</tbody>
</table>
8     Curve sketching
9     Max - min problems
10    Exponential and logarithmic functions
11    Differentiation of exponential and logarithmic functions
12    Growth and decay
13    Integration
14    The fundamental theorem of calculus

X. Other Information: none

This is a sample course syllabus guideline. Course materials, method of instruction, evaluation and policy, grading policy, assignments, and other course matters can differ by specific course sections and individual professors. Additional information can be obtained by contacting the appropriate college and department.