Syllabus for M 171.02, Fall 2012

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Class meetings: 9:10 -10:00 (MTWF), Math 311
Office hours: Tuesday 1:00 - 2:00; Thursday 11:00 - 12:00 Friday 4:00 - 5:00 or by appointment.

We will cover Sections 1.1 - 6.5.

**Course Objectives**
This course covers the basics of differential and integral calculus. More specifically, at the end of this course students should:

- understand the concepts of limit and continuity.
- understand the concept of derivative (limit definition, geometric interpretation via tangent lines, interpretation as a rate of change).
- be able to compute derivatives (including derivatives of functions defined implicitly).
- understand the relationship between the derivative and the graph of a function.
- be able to translate a practical problem into a mathematical problem that can be solved using calculus.
- understand the definition and the basic properties of the definite integral.

**Assessment**
There will be four components:

Weekly written homework, online homework and Quizzes: 30%
Three exams: 45%
Cumulative final exam: 25%
You must also pass the *Differentiation Skills Test* (see below).

**Homework**
Each Wednesday at the beginning of class, all homework problems assigned the previous week are due. Your two lowest homework scores will be dropped. **Late homework will not be accepted.**

**Quizzes**
Each Friday there will be a 15 minute quiz. Quiz problems will always be taken from the homework that is due the following week. There will be no quiz during the week of an exam. Your lowest quiz score will be dropped, and hence make-up quizzes will not be given. Quizzes will be taken at the end of class.

**Exams**
In-class exams will be given on **Friday, September 21**, **Friday, October 19**, and **Friday, November 30**. *Differentiation Skills Test*
This test will be given for the first time in class on **Friday, October 12**. A score of 80% is required to pass the test. You can take the test as many times as necessary, though **you must pass this test by December 7 to pass the course.**

**Final Grades**

Final grades will be assigned as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>s ≥ 93%</td>
<td></td>
</tr>
<tr>
<td>A−</td>
<td>90 ≤ s &lt; 93</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>87 ≤ s &lt; 90</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>83 ≤ s &lt; 87</td>
<td></td>
</tr>
<tr>
<td>B−</td>
<td>80 ≤ s &lt; 83</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>75 ≤ s &lt; 80</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>70 ≤ s &lt; 75</td>
<td></td>
</tr>
<tr>
<td>C−</td>
<td>65 ≤ s &lt; 70</td>
<td></td>
</tr>
<tr>
<td>D+</td>
<td>62 ≤ s &lt; 65</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>58 ≤ s &lt; 62</td>
<td></td>
</tr>
<tr>
<td>D−</td>
<td>55 ≤ s &lt; 58</td>
<td></td>
</tr>
</tbody>
</table>

**Calculators**

Calculators are of course a useful tool for mathematics, making computations less tedious and aiding in exploration and the development of sound mathematical intuition. For this reason, it is recommended that you own a graphing calculator and you are encouraged to bring it to class and use it however you like on homework assignments. On the other hand, many students rely too heavily on calculators. This often hinders the development of certain reasoning, estimation, and mental mathematics skills. Furthermore, at this point in your mathematics education, it is essential that you develop your ability to clearly write solutions to problems, confident that the reasoning you have used is sound. Always checking an answer on a calculator erodes the sense of confidence one gains from the knowledge that one understands the underlying ideas and that the reasoning behind a solution is correct. For these reasons, calculators will NOT be allowed on quizzes and exams.

**Students with Disabilities**

Students with disabilities are welcome to discuss accommodations with me.

**Academic Misconduct**

All students need to be familiar with the Student Conduct Code. You can find it in the “A to Z Index” on UM’s home page.

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at [http://www.umt.edu/SA/VPSA/index.cfm/page/1321](http://www.umt.edu/SA/VPSA/index.cfm/page/1321).

**Important Dates**

- August 27: Classes begin.
- September 3: Labor Day Holiday. No school.
- September 17 (4:30pm): Last day to add/drop by Cyberbear. Last day to select Audit.
- September 21: Exam 1.
- October 19: Exam 2.
- October 29 (Monday): Last day to add/drop or to change grade option (Must use paper forms.)
- November 6: Election Day Holiday. No school.
- November 12: Veteran Day Holiday. No school.
- November 21 - November 23: Thanksgiving Holiday. No school.
- November 30: Exam 3.
- December 7(4:30pm): Last day for petitions to drop/grade change. Petitions to drop must be signed by the dean of student’s major.
- Final Exam: December 12, 6 to 8 PM.