Math 112: Calculus I
Winter 2006

Instructor: Forcade 316 TMCB, forcader@math.byu.edu
Office Hours: 9-9:50 MWF, 11-11:30 MWF, 2-3 MTuWTh
Classroom and Time: MWF 10-10:50 TMCB 112
Errata for the text: http://www.math.byu.edu/~lynng/

The Course: This is a 4-hour course meeting 5 times per week in regular sections.

Course Objectives: Mastery of the “core topics” of Math 112, consisting of the material in the first six chapters of the text. Desired student outcomes (learning objectives) are listed at the beginning of each section of the text.

Pretest: Successful completion of Math 112 requires a solid background in both College Algebra and Trigonometry. Students are required to take a pretest on these topics. The pretest and a pretest review are available online at http://mathcourses.byu.edu. Select “Pretests and Placement Exams” and log in with your Route Y ID and password and select the Math 112 Pretest to take the exam. The pretest must be taken by January 20, 2006. You are allowed 2 chances to pass. If your score is below 75% then you do not have the necessary skills to succeed in Calculus. Talk to your instructor about your options, and what you can do to better prepare yourself. The pretest will be counted as part of your course grade. (Instructors should include pretest score as a small fraction of the grade for homework assignments, quizzes or tests.

Preparation Time: Adequately prepared students should expect to spend a minimum of 12 hours per week for Math 112 in addition to time spent in class. A minimal time commitment is likely to lead to an average grade B-/C+ or lower. Much more time may be required to achieve excellence.

Assignments: Assignments will generally be collected in each regular class. (Instructors may adjust this.) Late homework will not be accepted. The lowest four homework scores will not be figured into your final grade. This accommodates for minor illnesses or others disruptions to your regular schedule that might prevent you from turning an assignment in on time. (Instructors may adjust late homework policy.) Solutions should be clearly labeled and in order. The style of your written solutions should be very much like that of a text book example; solutions should contain enough explanation so that one of your classmates would be able to easily understand what you have done. Generally, it is inadequate to merely write down a final answer. You are strongly encouraged to study together and work together on homework assignments. However, you each must submit your own assignment. Everything you turn in should be in your own words and you should thoroughly understand everything you write down. The homework grader will only grade selected exercises. Therefore it is important for you to solve each one.
Grading: There will be three mid-terms, counting 20% each, and daily homework counting 15% of your grade (roughly). The final will then count 25% of your grade, but all of this is modified by the policy at the end of the following paragraph.

Common Final Exam and Grades: A common final exam is given to all students in all sections of Math 112. This assists the Mathematics Department to fairly assess students’ knowledge of calculus and to assign grades fairly. The ranking of each student relative to all students in all sections will be computed based on the final exam scores. Using this information the Calculus Committee will compute an average grade for each section. *It is department policy that the average grade for each section should match its average grade on the common final exam.*

The common final will be given to *ALL* students at a specific date and time (currently tentatively scheduled on **Friday, April 21, 2006 from 3pm to 6pm.**) and location to be announced in class in April. These will be *different* from the BYU wide Final Exam schedule posted on the BYU web site. If you have a conflicting final exam, please consult with your instructor in April for an alternate time. The common final will *NOT* be given in the Testing Center or your regular classroom. *Except under extreme circumstance or with mathematics department’s permission, you are not allowed to take the final outside the scheduled times.* No calculators, books, or notes will be permitted during the final exam. A substantial number of problems on the final exam will be similar to homework problems. Previous final exams can be found at the site [http://www.math.byu.edu/Exams/](http://www.math.byu.edu/Exams/).

1. Preventing Sexual Harassment

   BYU’s policy against sexual harassment extends not only to employees of the university but to students as well. If you encounter sexual harassment, gender-based discrimination, or other inappropriate behavior, please talk to your professor, contact the Equal Employment Office at 422-5895 or 367-5689, or contact the Honor Code Office at 422-2847.

2. Students With Disabilities

   BYU is committed to providing reasonable accommodation to qualified persons with disabilities. If you have any disability that may adversely affect your success in this course, please contact the University Accessibility Center at 422-2767. Services deemed appropriate will be coordinated with the student and instructor by that office.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assigned Exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 9 – Jan 13</td>
<td>1.1</td>
<td>1, 4a(ii)ce, 7bd, 9, 11bdf, 13</td>
</tr>
<tr>
<td></td>
<td>1.2</td>
<td>1, 2, 4, 6, 9, 10, 27bd, 28bd</td>
</tr>
<tr>
<td></td>
<td>1.3</td>
<td>2bd, 3bdf, 4bdf, 6bd, 15, 17</td>
</tr>
<tr>
<td></td>
<td>1.4</td>
<td>2, 4, 6, 7bd, 8bcefh, 9abd, 11</td>
</tr>
<tr>
<td>Jan 17 – Jan 20</td>
<td>1.5</td>
<td>1bdf, 2ceg, 5, 8begi, 9bdf, 13bdh, 21</td>
</tr>
<tr>
<td></td>
<td>1.6</td>
<td>1bdh, 2bd, 3bdf, 5, 8, 10, 12</td>
</tr>
<tr>
<td></td>
<td>1.7</td>
<td>1bdff, 2bdf, 7, 10</td>
</tr>
<tr>
<td>Jan 23 – Jan 27</td>
<td>1.8</td>
<td>1bdf, 3bdf, 4, 7, 9, 11, 13, 14b, 23, 29bde</td>
</tr>
<tr>
<td></td>
<td>1.9</td>
<td>1bdff, 2, 6ce, 8a, 9, 12abc, 14, 17</td>
</tr>
<tr>
<td></td>
<td>2.1</td>
<td>1bd, 3, 7, 9, 11, 14</td>
</tr>
<tr>
<td></td>
<td>2.2</td>
<td>1bdf, 2dhlp, 3bc, 4bc, 5b, 6abc, 13a, 14defkl</td>
</tr>
<tr>
<td>Jan 30 – Feb 3</td>
<td>2.3</td>
<td>1bdffhlj, 2bdffhjm, 4</td>
</tr>
<tr>
<td></td>
<td>2.4</td>
<td>1bdffhj, 2bdfh, 3bdf, 7, 10bd, 11bdf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Review</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Midterm 1</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Midterm Exam 1 must be given by Wednesday, Feb 8. It must be graded and returned to students by Friday, Feb 10. The drop with W deadline is Monday, February 13.</td>
</tr>
<tr>
<td>Feb 6 – Feb 10</td>
<td>2.5</td>
<td>1bdff, 5dfh, 8b, 9bdf, 10a, 11dfh, 12f, 13f</td>
</tr>
<tr>
<td></td>
<td>2.6</td>
<td>1bd, 2bd, 3bd, 4ef, 5bdf, 11</td>
</tr>
<tr>
<td></td>
<td>2.7</td>
<td>1bdff, 2, 3b, 5, 6b</td>
</tr>
<tr>
<td></td>
<td>2.7</td>
<td>7bd, 11, 13, 17b, 18</td>
</tr>
<tr>
<td>Feb 13 – Feb 17</td>
<td>3.1</td>
<td>4, 5bd, 7bd, 8, 9bd, 10, 13, 15ac</td>
</tr>
<tr>
<td></td>
<td>3.2</td>
<td>1, 2, 4, 5ad, 6, 8bc, 17, 18, 19, 25</td>
</tr>
<tr>
<td></td>
<td>3.3</td>
<td>3bdffhjl, 4bdffhjl, 5bdf, 6, 13bf, 15bd</td>
</tr>
<tr>
<td></td>
<td>3.4</td>
<td>3bdffhjl, 4bdffhjl, 5bdf, 7, 9, 11, 13b, 18</td>
</tr>
<tr>
<td>Feb 20 – Feb 24</td>
<td>3.5</td>
<td>1bdffhlj, 2bdf, 3bdfhjlnp, 4bdhj</td>
</tr>
<tr>
<td></td>
<td>3.5</td>
<td>5bd, 6, 8, 10bd</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Review</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Midterm 2</strong></td>
</tr>
<tr>
<td>Feb 27 – Mar 3</td>
<td>4.1</td>
<td>2, 4, 6, 8, 10bdfhln, 11bdfh</td>
</tr>
<tr>
<td></td>
<td>4.2</td>
<td>1bdffhjlnp, 3, 4b, 6, 7bd, 8bd, 10</td>
</tr>
<tr>
<td></td>
<td>4.3</td>
<td>1bd, 3b, 5bfjnr, 6b, 7, 8, 17bfj, 19</td>
</tr>
<tr>
<td>Mar 6 – Mar 10</td>
<td>4.4</td>
<td>1bdffhjl, 2bdfhj, 6, 8</td>
</tr>
<tr>
<td></td>
<td>4.5</td>
<td>2, 4, 5, 6, 10, 12, 14, 17, 18, 20, 24</td>
</tr>
<tr>
<td></td>
<td>4.5</td>
<td>26, 28, 30, 31, 32, 34, 35</td>
</tr>
<tr>
<td></td>
<td>4.6</td>
<td>2, 4, 6, 8, 10, 11, 15b, 17</td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>Assigned Exercises</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Mar 13 – Mar 17</td>
<td>4.7</td>
<td>2, 6, 8, 11, 12, 18</td>
</tr>
<tr>
<td></td>
<td>4.8</td>
<td>2, 4, 6, 9, 12, 16, 19, 22</td>
</tr>
<tr>
<td></td>
<td>4.9</td>
<td>1bdhjl, 2bdhjl, 3bd, 4b, 6</td>
</tr>
<tr>
<td></td>
<td>4.10</td>
<td>1, 2bd, 3b, 4bdh, 5bfj</td>
</tr>
<tr>
<td>Mar 20 – Mar 24</td>
<td>5.1</td>
<td>1ac, 2f, 3f, 4bd, 5bf, 6, 7, 8b, 9b, 10, 14, 18, 20</td>
</tr>
<tr>
<td></td>
<td>5.2</td>
<td>2bdh, 3b, 4, 6, 10, 12, 14</td>
</tr>
<tr>
<td></td>
<td>Review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Midterm 3</td>
<td></td>
</tr>
<tr>
<td>Mar 27 – Mar 31</td>
<td>5.3</td>
<td>3, 6, 8, 10</td>
</tr>
<tr>
<td></td>
<td>5.3</td>
<td>13, 16, 18, 19</td>
</tr>
<tr>
<td></td>
<td>6.1</td>
<td>1, 3, 4b, 6, 8bd</td>
</tr>
<tr>
<td></td>
<td>6.2</td>
<td>2, 3, 5, 9, 10bd, 11bd, 13</td>
</tr>
<tr>
<td>Apr 3 – Apr 7</td>
<td>6.3</td>
<td>1bd, 2bd, 3bd, 4, 6, 9bd</td>
</tr>
<tr>
<td></td>
<td>6.4</td>
<td>1bd, 2, 3, 4, 5bdh</td>
</tr>
<tr>
<td>Apr 10 – Apr 14</td>
<td>6.4</td>
<td>6, 8, 14bd, 15, 18c</td>
</tr>
<tr>
<td></td>
<td>6.5</td>
<td>1bdhjl, 2bdhjl, 3bdh, 4b, 5bd, 8</td>
</tr>
<tr>
<td></td>
<td>6.6</td>
<td>1bdh, 2bdh, 3bdh, 4bd, 6d, 9, 10b, 12, 13, 16</td>
</tr>
<tr>
<td></td>
<td>6.7</td>
<td>1bdhj, 2bdhj, 3bdhjlo</td>
</tr>
<tr>
<td>Apr 17 – Apr 21</td>
<td>6.7</td>
<td>4abdf, 5ab, 6ab, 7bdf, 13</td>
</tr>
<tr>
<td></td>
<td>Review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Review</td>
<td></td>
</tr>
<tr>
<td>Final Exam</td>
<td></td>
<td>The final exam will be given (tentatively) on <strong>Friday, April 21, 2006 from 3pm to 6pm</strong>. Your class will receive a room assignment for the final in April. The time and location will be different from the BYU wide Final Exam schedule posted on the BYU web site. (An alternate time will be provided for those students with a conflicting final exam.) <strong>Except under extreme circumstance or with mathematics department’s permission, you are not allowed to take the final outside the scheduled times.</strong></td>
</tr>
</tbody>
</table>