Time: 11:30-12:20 MWF
Classroom: ???
Instructor: Dr. Dena Morton
Office: Hinkle 108
Phone: x3674 (Note: I do not check my voice mail very often.)
Office Hours: By appointment (including some phone appointments at night and on Tuesdays/Thursdays – really, I mean it! 😊) and
- Monday 12:30-1:30, 2:45-3:45
- Wednesday 1:30-2:30
- Friday 12:30-2:00
e-mail: morton@xavier.edu
Note: this is the best way to reach me – I check my e-mail on a regular basis.
Web Page: http://cerebro.xu.edu/~morton/aclasses.html
Note: I update my webpage every day – all homework assignments are always posted online. Also, check out the beautiful mathematical pictures!

Prerequisites: MATH 225 and MATH 220. Math 370 is an upper-level required course and will, at times, be very abstract. The bulk of your work will be proof-writing. Therefore, it may be to your advantage to have some prior experience with proof-writing. If you have had Math 360 (Topology) some of our discussion may be familiar, but I do not assume any of the content of that course. You should have a good grasp of the properties of the various set operations (union, intersection, complement) and their application to indexed collections of sets. This material was sent out over the winter.

Purpose and Content: (From the course catalog:) Rigorous development of calculus of functions of a single variable. Topics include: The real number system, topology of the real line, continuity, uniform continuity, the derivative, the Riemann integral, sequences and series of real numbers, and uniform convergence. We will cover through chapter 8 (as time allows).

It is essential that you be conscientious about completing both the reading and homework assignments on time, and at least attempt every assigned problem. Questions are welcome at any time during class. I encourage you to participate actively in class by asking questions and by answering questions posed by either myself or by other students.

Textbook: Introduction to Real Analysis, fourth edition, by Bartle and Sherbert. Please bring your text with you for each class session.

Homework: Problem sets will be assigned weekly. Each student will be allowed to turn in one late homework set during the semester without penalty. The late homework must be handed in by the next class meeting. If you have more than one late homework, I reserve the right to either refuse to grade your homework or to dock you points for lateness.
**Quizzes:** Weekly quizzes on definitions and examples will be given on Wednesdays. I will grade these on a 5-point scale. The lowest quiz score will be dropped, so makeup quizzes will not be given. Quizzes will not be given during exam weeks. Note: These quizzes are invaluable - if you don't know the definitions, you cannot possibly expect to do the mathematics.

**Exams:** There will be three exams given throughout the semester, (possibly) involving both a take-home and an in-class component. There will also be a comprehensive final exam (also possibly with two components). If you must miss an exam for religious or academic reasons, or in cases of illness or emergency, you must submit a written excuse. A makeup may be scheduled -- this will be decided on a case-by-case basis.

**Grading:**
- Weekly quiz performance: 9%
- Three exams: 15% each
- Weekly graded problem sets: 26%
- Final exam (cumulative): 20%

Each exam will be curved separately and assigned a number grade between 0.0 (the lowest possible F) and 5.0 (the highest possible A). I will announce the cutoffs when returning the exam. If, for example, the cutoff for an A is 87 and the cutoff for a B is 71 and you get an 83, then the number grade corresponding to your 83 would be a 3.75 (B corresponds to 3.0 and you are 12/16=.75 of the way to the next cutoff). The homework and quizzes will be treated similarly. The total course grade may be curved further (that is, a 3.9 would result in an A or A- in the course), but the resulting curve will never lower your grade (that is, a 4.1 would always result in at least an A- in the course). +/- grades may be assigned in borderline cases. I reserve the right to assign a grade of “F” to any student who earns less than 50% on the final exam.

**Important Dates (exam dates may be subject to change):**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>Monday, Jan. 7</td>
<td>First day of class</td>
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<tr>
<td>Monday, Jan. 21</td>
<td>MLK Holiday (no classes)</td>
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<tr>
<td>Monday, Feb. 11</td>
<td>Exam I</td>
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<tr>
<td>Monday, Feb. 25 – Friday, Mar. 1</td>
<td>Spring Break (no classes)</td>
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<tr>
<td>Monday, Mar. 18</td>
<td>Exam II</td>
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<tr>
<td>Friday, Mar. 29-Monday, Apr. 1</td>
<td>Easter Break (no classes)</td>
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<tr>
<td>Tuesday, Apr. 2</td>
<td>Last Day to Withdraw</td>
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<td>Friday, Apr. 19</td>
<td>Exam III</td>
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<tr>
<td>Friday, Apr. 26</td>
<td>Last Day of Classes</td>
</tr>
<tr>
<td>Monday, Apr. 29</td>
<td>Study Day (no classes – we will have a review session)</td>
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<tr>
<td>10:30-12:20 Friday, May 3</td>
<td>Final Exam</td>
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**Attendance:** Class attendance is crucial. Lectures include the introduction and explanation of new topics, explorations of proofs, and solutions of discrete mathematics problems. Class notes are to be used in conjunction with the text, in order to elicit a fuller understanding of discrete mathematics.

*Please be courteous and come to class on time!*

University policies on attendance are stated in the undergraduate catalog.
**Group Work**: Working in a group can be beneficial for everyone involved, provided that you do not abuse the privilege. Make sure that everyone in your group is making a contribution. **Do not copy answers from one another, as this will only backfire against you come test-time and is also cheating!** Instead, let concepts gel after group discussion, and then write up the solutions by yourself. The Math department is happy to announce that Hinkle 126 will be available (early this semester) as a math student lounge – you will be informed more about this in an email.

**Academic Honesty**: You are expected to conduct yourself with integrity in this course. Cheating will be **dealt with as harshly as University regulations permit**; measures will be taken during exams to prevent cheating. Students are directed to the undergraduate bulletin for further information.

**How to Do Well in this Course**: Come to class! Come visit me during office hours! Read the text! Try the problems! Smile! Study hard! Read your class notes! Make sure you keep up with the material in class! Review your class notes! Don’t Panic! **Enjoy!** Most important of all, if you feel that you are falling behind, or that you do not understand a certain topic, or if you would just like to discuss a mathematical idea (or anything else), come to visit me in my office. That’s why I am here!😊