Mathematics seems to endow one with something like a new sense.
Charles Darwin, in N. Rose (ed.) Mathematical Maxims and Minims.

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Class Website: http://www.math.washington.edu/~nichifor/310S08.htm

Welcome to Math 310, *Introduction to Mathematical Reasoning*. Much of higher mathematics involves logical reasoning rather than plain calculation. This course is intended to bridge the gap between calculus-style classes and higher level courses, by giving you the opportunity to learn how to formulate mathematical arguments in an elementary mathematical setting. It emphasizes arguments and the writing of proofs, while introducing ideas of discrete mathematics and forming a foundation for more abstract mathematics.

This class is very different than the classes which precede it at UW. The accent is no longer on content and formulas (though you *are* expected to learn a certain amount of content too), but rather on solution-finding and proof-writing. A great deal of emphasis will be placed on clarity, precision, and the communication of mathematics. Homework and exam grading will reflect this emphasis.

The textbook, *An Introduction to Mathematical Reasoning: numbers, sets and functions* by Peter J. Eccles is an important part of the course, and the sections assigned in class should be read carefully. The author does a good job of showing how to construct and how to present arguments.

There will be one in-class midterm exam on **Friday, May 2nd**, and one final exam as follows:
- Lecture A: on **Monday, June 09, 8:30-10:20**
- Lecture B: on **Wednesday, June 11, 2:30-4:20 pm**

A tentative class schedule is posted on the class website. Changes, if any, will be announced in class.

The grade breakdown is as follows:  
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<th>Homework</th>
<th>Midterm</th>
<th>Final</th>
<th>Group Presentation</th>
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<tbody>
<tr>
<td></td>
<td>35%</td>
<td>20%</td>
<td>40%</td>
<td>5%</td>
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**Homework** is the best way to learn and practice the content and the methods of the class. It consists of:

1. **Reading**: each textbook section should be read carefully before class (or at least soon after.)
2. **Practice Problems**: Some of the assigned problems from the text have full solutions at the back of the book. For your own benefit, you should not read the solutions until you have discovered and written your own -- or until you have tried for a reasonable amount of time.
3. **Graded Problems**: The collected part of the homework will consist of problems which are not in the textbook, or do not have solutions at the back of the book. You are encouraged to discuss the homework with each other, and hints can be obtained from me on request. There is also a discussion board for Math 310 (link on website).
   **Write-up**: While it’s OK to get hints or discuss the problems with me or with each other, the writing of the solutions must be done individually. To get high scores, you should not only solve all the listed problems, but also write neat, legible, clear, correct, complete, and convincing solutions. This means you may have to write a few drafts for each problem before the final version that you submit!
Group Presentation: After the midterm, I encourage you to form groups of 3-5 people and choose a subject related to one of our in-class topics. Your group then can prepare a 10 minute presentation of your topic, and schedule with me a time during the last 2-3 weeks when you wish to make your presentation. The group presentation counts for a small part of your grade (5%), so you can still do well in the class if you choose not to participate, but it would certainly help to participate. It’s also a good way to learn more about a topic that catches your interest, and to improve your communication skills.

Absences:

If you miss class, you are responsible to know what was discussed or announced on the day you were absent. I recommend you get class notes from a classmate.

If you have to miss class on the day your homework is due, you have the following options:

- Turn your homework in earlier, or slide it under my office door before the deadline.
- Type it or scan it -- and turn it in via the digital homework collection box link on our website.
- If a serious and documented reason prevents you from doing or turning in your homework, you can talk to me and bring me your documentation to excuse your missed assignment.
- Your lowest homework grade is dropped automatically.

If you have to miss the midterm due to a serious, unavoidable, and documented reason, talk to me as soon as possible.

Math 310 Resources:

- Class website: includes announcements and materials, and it’s updated at least weekly.
- Office hours (posted on website and announced in class)
- Optional discussion session (to be scheduled)
- Class discussion board (link on website)

UW Resources:

- The University of Washington is committed to providing access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation, contact the Disability Resources for Students office at least ten days in advance at: 206-543-8924 (Voice), 206-543-8925 (TTY), 206-616-8379 (FAX), or uwdss@u.washington.edu.

- The Student Counseling Center holds academic skills workshops on a variety of topics including stress management, test anxiety and time management to help you succeed at the University of Washington. If any of these is an issue for you, check out the schedule of workshops at http://depts.washington.edu/counsels/services/workshops/workshops.html