Purpose of the Course:

- To introduce modern approximation techniques;
- To explain how, why, and when the numerical methods can be expected to work;
- To provide a foundation for further study of numerical analysis as a mathematical subject.

Homework:

- Policy: You will have to complete a weekly homework assignments. The homework will consist of problems over the topics covered during previous lectures. Due dates will be posted on Pirates' View Vista. The list of problems from the textbook will be provided that emphasize the ideas from that section.
- Labs: There will also be computer lab assignments using the Sage computer algebra system or Mathematica. Each lab will consist of problems similar to book problems but are generally harder to do by hand. We will have a few Lab Days throughout the semester in which we will learn how to use Sage and Mathematica as well as have time to work on the lab assignments. I will post introductory Sage worksheets on Desire2Learn as well as any worksheets I use in class. Pirate's View will also contain links to resources for Sage and Mathematica.

Exams:

- Policy: There will be a total of four exams, three midterms(100 points each) and a final exam(200 points). All students are expected to take every exam.
- Make-up exams will not be given. If a student contacts me prior to the exam and provides written verification for missing the exam for a legitimate reason (e.g. extreme illness, death in the immediate family), then the student will receive the percentage scored on the final exam toward the missed exam grade. (This can only be done once during the semester.)

Exam 1 .................................................. Sept 12
Exam 2 .................................................. Oct 10
Exam 3 .................................................. Nov 7
Final .................................................. Dec 10 10:30 AM - 12:30 PM
Participation:

- **Policy**: Each student is expected to attend each class session. If a student misses class, that student is responsible for the material covered and to get the notes from a classmate.

Grade Policy:

<table>
<thead>
<tr>
<th>Exams(3)</th>
<th>20% each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final</td>
<td>25%</td>
</tr>
<tr>
<td>HW</td>
<td>15%</td>
</tr>
</tbody>
</table>

Behavior/Ethics:

- Turn off all cellphones, PDA’s, ipods, etc. during class. If you must have a cell phone on at all times (due to being an emergency contact) please place the device in vibrate mode during class.

- During class you will be working both individually, and possibly in pairs. Teamwork is an essential skill that we will cultivate. To work well, teamwork requires from each of its team members, patience, willingness to help, sharing knowledge, collaboration, and above all, it also requires that you be tactful and considerate toward each other.

- Get together and help each other answer any questions regarding the reading assignment.

- Together, discuss and solve the exercises and problems you have had trouble solving on your own. Do not accept or give away any answers or solutions unless they are also clarified or explained by the person who thinks that he/she knows how to do them. Be critical about any proposed solutions.

- Cooperation on homework does not mean copying mindlessly the answers from someone else who has already done the work. Such practice leads nowhere and the negative effects that will ensue from such practice will definitely be reflected on ones achievement in subsequent tests and quizzes.
Expectations:

1. You are no longer in high school. The great majority of you, not having done so already, will have to discard high school notions of teaching and learning and replace them by university-level notions. This may be difficult, but it must happen sooner or later, so sooner is better. Our goal is more than just getting you to reproduce what was told to you in the classroom.

2. Expect to have material covered at two to three times the pace of high school. Above that, we aim for greater command of the material, especially the ability to apply what you have learned to new situations (when relevant).

3. Lecture time is at a premium, so it must be used efficiently. You cannot be taught everything in the classroom. It is your responsibility to learn the material. Most of this learning must take place outside the classroom. You should be willing to put in two hours outside the classroom for each hour of class.

4. The instructor’s job is primarily to provide a framework, with some of the particulars, to guide you in doing your learning of the concepts and methods that comprise the material of the course. It is not to program you with isolated facts and problem types nor to monitor your progress.

5. You are expected to read the textbook for comprehension. It gives the detailed account of the material of the course. It also contains many examples of problems worked out, and these should be used to supplement those you see in the lecture. The textbook is not a novel, so the reading must often be slow-going and careful. However, there is the clear advantage that you can read it at your own pace. Use pencil and paper to work through the material and to fill in omitted steps.

6. As for when you engage the textbook, you have the following dichotomy:
   
   (a) (recommended for most students) Read for the first time the appropriate section(s) of the book before the material is presented in lecture. That is, come prepared for class. Then the faster-paced college-style lecture will make more sense.
   
   (b) If you haven’t looked at the book beforehand, try to pick up what you can from the lecture (absorb the general idea and/or take thorough notes) and count on sorting it out later while studying from the book outside of class.

7. Exams will consist largely of fresh problems that fall within the material that is being tested.

8. Reference: Zucker, Steven Teaching at the University Level, Notices of the AMS, vol 43 no.8, 1996

9. Other references with regards to expectations
   
   (a) http://www.taft.cc.ca.us/newTC/StudentServices/ACE/differences.htm
   
   (b) http://www.iupui.edu/parents/success1.html

**ADA/Special Accomodations:** If you have a disability and need accommodations (as documented with a letter from AASU’s Director of Disability Services), if I must know of emergency medical information about you, or if you need special arrangements in case the building must be evacuated, please inform me privately after class or in my office as soon as possible.

**Academic Honesty:** Academic honesty is fundamental to the activities and principles of an university. All members of the academic community must be confident that each person’s work has been responsibly and honorably acquired, developed and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, or collaboration consult the instructor. Each student is expected to adhere to the rules of the Honor Code and the Code of Conduct listed the the AASU catalog and on the following website:

http://www.sa.armstrong.edu/Activities/hccoc.html