Math 451 NUMERICAL METHODS I Spring 2014

Instructor: Gregg Waterman, 176 Boivin Hall, 885-1324, gregg.waterman@oit.edu

Office Hours: 11-11:50 MTWF and 1-1:50 R. You are also welcome to drop in any time to see if I am around - if I am I can usually take some time to help you. I can also make appointments for other times, and I will almost always be available the hour after our class.

Text: An Introduction to Numerical Methods - A MATLAB Approach by Kharab and Guenther.

Web Page: http://math.oit.edu/~watermang/ There is a link to a page specifically for this class, at which you will find a variety of resources.

Course Goals and Objectives: After completing this course, students will be able to

- 1. solve non-linear equations with numerical methods
- 2. solve systems of equations with numerical methods
- 3. use numerical methods for curve fitting and approximation
- 4. write and interpret MATLAB programming

Grading: Your grade will be based on your scores on assignments, quizzes and exams.

- Assignments: Each assignment will have a due date and time, but I will give credit for late assignments if you get them to me before I grade the whole batch. Any assignment turned in after I have graded that assignment will receive no credit.
- *Quizzes:* Quizzes will be announced one or two class meetings ahead of time. There will be no make-up for missed quizzes, regardless of the reason.
- *Regular Exams:* There will be three exams given during the term. You MUST take exams at the scheduled times and there will be no make-up for missed exams. See the schedule at the end of this syllabus for exam dates. Make-up exams can be given for previously arranged absences if you have a good reason to miss an exam.
- *Final Exam:* The final will be given during the time period listed in the calendar below. It will be comprehensive. You MUST take the final at the designated time, so make all travel arrangements accordingly.

Grades will be computed from the above as follows: Each regular exam will be worth 100 points and the final exam will be worth 150 points. Each assignment point or quiz point will be equivalent to one exam point. The percentage of points possible that are earned will be computed, and you will receive a letter grade based on that percentage, using the grading scale 90-100% \Rightarrow A, 80-89% \Rightarrow B, 70-79% \Rightarrow C, 60-69% \Rightarrow D, and below that is an F.

Other Things of Importance:

• Incomplete Grades: An incomplete grade can only be assigned to you under the following circumstances:

1. You have/had a grade of 70% or better (including zeros for any work not done) by the date to withdraw with a W.

2. You have a SERIOUS problem that begins after the withdraw date and prevents you from being able to complete the term.

An incomplete grade will definitely not be assigned in the event that you are not performing well in the course and fear that you may not obtain a passing grade!

• *Disabilities:* If you have, or think you have, a disability that could affect your performance in this course, you can tell me outside of class or contact Bill Proebstel, Campus Access & Equal Opportunity, at 541-851-5227.

Calendar: Below are some important dates for the term.

April 17th/18th - Exam One May 8th/9th - Exam Two May 16th - Last day to withdraw with a "W" May 26th - Memorial Day Holiday May 29th/30th - Exam Three Monday, June 9th, 2-4:00 PM - Final Exam

Other Things: Here are some random thoughts and bits of information:

- You will need to save and store your MATLAB files. I would suggest using the S: drive for either your main storage or as a backup to a USB drive.
- You will need to be turning files in to me via e-mail. Our naming protocol will be this: Each file name will begin with your first name, all lower case, followed by an underscore, then the name that I give you for the assignment if it it is an assignment it will be the letters *assn* followed by the assignment number. So, for example, if I were turning in a file as assignment 3, I would name it *gregg_assn3.m.* (The *.m* will automatically be appended by *MATLAB*).
- For the "paper and pencil" portion of exams, you will be allowed one $8\frac{1}{2} \times 11$ page, front and back, of notes that you either handwrite or type yourself. For computer portions of exams you can also use one $8\frac{1}{2} \times 11$ page, front and back, of notes and any resources you can find on the internet. Remember, though, that you will have a limited amount of time to complete exams.
- If assignments are blatantly copied from another student, I will split one score for that assignment equally amongst all students who turn in the same assignment.
- I have not taught this class before, so other things of importance will certainly come up during the term. It is your responsibility to be aware of additional policies.