Math 220 Section 1
Summer 2012

Instructor: Jeanette Martin
Office: Neill 313
Phone: 335-4308
Office Hours: M-Th 10:30 – 11:30 AM
Tu 1:30 – 2:30 PM
E-mail: martin@math.wsu.edu

Teaching Assistant: Ian Lundholm

Course Web page: http://www.math.wsu.edu/faculty/martin/summer/Math220.html

COURSE ASSIGNMENTS AND GRADING
The total points you accumulate throughout the semester on the items below will determine your grade:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>2 Exams</td>
<td>200</td>
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<tr>
<td>Final Exam</td>
<td>110</td>
</tr>
<tr>
<td>Homework</td>
<td>90</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>400</strong></td>
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Your course grade will be determined by the following scale:

- 93 – 100% A
- 90 – 92.9% A-
- 87 – 89.9% B+
- 83 – 86.9% B
- 80 – 82.9% B-
- 77 – 79.9% C+
- 73 – 76.9% C
- 70 – 72.9% C-
- 67 – 69.9% D+
- 60 – 66.9% D

HOMEWORK: Math is not a spectator sport. It is learned by doing. Thus, homework is critical to your success in this course. It will be assigned each day and collected in class as noted on the schedule. Three problems will be graded for two points each; the remaining four points will be based on the neatness and completeness of the remaining problems. Late homework will NOT be accepted. However, your lowest homework score will be dropped. Assignments are due in class. Assignments will not receive credit if they are pinned to the bulletin board or slid under the door to either the TA's office or mine. Points will be deducted for homework that cannot be read, is not stapled together or does not show a reasonable amount of work. A guideline for how much work to include would be to show the work for all steps that cannot be done in your head. If you are in doubt about how much work to show, include all steps and explain your reasoning. As long as your work is correct, organized, and legible, you will not lose points for showing "too much" work.

On Mondays and Wednesdays I will devote some time at the beginning of class to the discussion of one or two homework problems that have been requested via e-mail prior to 5 pm the night before. Please see the website (Study Tools Page) for guidelines for submitting homework questions. I will not be able to answer all homework questions in class. Plan on using office hours to clarify any issues I cannot help with during class time.

EXAMS: Exams will be given during class time on the dates shown on the course schedule. Exams will be closed book, closed notes. No graphing or programmable calculators are allowed during exams. No make-ups will be allowed for exams except for prearranged absences with appropriate documentation.

FINAL EXAM: There will be a comprehensive final exam on Thursday, June 14 during class time.

ATTENDANCE: It is strongly recommended that you do not miss class. You are responsible for all material covered in this course and for turning in all assignments, regardless of attendance. If you do find that you must miss class, there are two ways to arrange excused absences.
1. If you have an emergency situation resulting in an extended absence (longer illness, family emergency), contact the Office of Student Affairs (335-4531) immediately. They will issue letters to all of your instructors excusing you from the necessary class days and assignments.
2. Appropriate letters documenting excused university absences (such as participation in athletic events) will be accepted if arranged before missing class.

**LATE WORK:** Late homework will not be accepted. Assignments received after 2 pm will be considered to have come in the following business day; i.e., an assignment turned in at 3 pm on a Wednesday will be considered to have come in on Thursday.

Make-up work from excused absences will not be accepted after the last day of class.

**TECHNOLOGY:** A calculator will be helpful to assist you on the homework, but I encourage you NOT to rely too strongly on a calculator or computerized linear algebra package. Keep in mind that these will not be available to you during the exams.

Part of the learning experience in this course will also involve the use of the internet. If you do not have internet access, consider arranging an account at one of the campus labs. Information is available from Student Computing Services at the Information Technology Building (ITB), room 2091, 335-0534. Please see me if you are not able to arrange internet access.

Online access will be provided so that you can use Matlab, a software package designed for matrix computations.

**A NOTE ABOUT E-MAIL:** In general, I find e-mail to be a great communication tool – but it has limitations. If you have an urgent need to reach me, e-mail is not the best method. Unless you receive a reply from me you should NOT assume I received your message; it is safer to leave a message for me on my office phone. I will not discuss homework problems through e-mail, but I can answer questions about what is expected on an assignment. Also note that e-mail is not always an immediate communication method. I will get back to you as quickly as I can.

**STUDENTS WITH DISABILITIES:** Reasonable accommodations are available for students with a documented disability. If you have a disability and may need accommodations to fully participate in this class, please visit the Access Center. All accommodations MUST be approved through the Access Center (Washington Building, Room 217). Please stop by or call 509-335-3417 to make an appointment with an Access Advisor. Additional information is available on the Access Center website at www.drc.wsu.edu.

**WSU SAFETY MEASURES:** Washington State University is committed to maintaining a safe environment for its faculty, staff, and students. Please visit http://safetyplan.wsu.edu and http://oem.wsu.edu/emergencies to access the Campus Safety Plan and emergency information. You should also become familiar with the WSU Alert Site (http://alert.wsu.edu) where information about emergencies and other issues affecting WSU will be found.

**ACADEMIC INTEGRITY:** All assignments are to be done by you, not someone else. I encourage you to work together and to discuss homework assignments by asking questions such as, "How do you do this type of problem again?" or "What is the idea here?" But you should not sit down with someone else's paper in front of you and refer to it to get your work done. This is cheating and will not benefit you. Complicity (providing answers for another student) is also a form of cheating. If I see even questionable evidence of cheating on an assignment or exam, all involved students will receive a zero on the assignment and I will keep the evidence while further action is considered. If I am strongly convinced that a student has cheated the situation will be referred to Student Affairs, which could result in failure of this course or even expulsion from the university. It is strongly suggested that you read and understand these definitions: http://conduct.wsu.edu/Content/Files/conduct/2011-12fullstudenthandbook.pdf.

**CLASS CANCELLATIONS:** If a class meeting is ever cancelled for any reason, whatever was scheduled for the cancelled day will be done the next time we meet. This includes scheduled activities and homework.
submissions. If a cancellation occurs, I will post a note on my office door and on the course web site explaining what is happening.

**KEEPING TRACK:** All graded work will be returned to you with the exception of the final exam. Keep all of your returned work for reference and for the resolution of grade discrepancies. A password-protected grade web page will be maintained so that you may periodically check your points. However, you are expected to keep track of scores for your own information; the web page should only serve as a quick reference and as a check for accuracy. The web page will be updated approximately once a week.

**EXPECTATIONS:** Learning is an active process and is not accomplished by sitting and observing. Thus I expect you to work hard to accomplish our objectives. I expect you to take responsibility for your own learning by studying the textbook sections in advance. You should come to class prepared with questions about the reading, and ready to work problems from the topic covered by the reading. If you do not put forth this effort you will not learn, and you may expect that your final grade will reflect this. However, you are not alone in this venture -- please come to office hours for help if you are having trouble with the material, rather than giving up!

**COVERAGE:** We will cover the following sections of the text, give or take a few:

1.1 Systems of Linear Equations  
1.2 Row Reduction and Echelon Forms  
1.3 Vector Equations  
1.4 The Matrix Equation Ax = b  
1.5 Solution Sets of Linear Systems  
1.7 Linear Independence  
1.8 Introduction to Linear Transformations  
1.9 The Matrix of a Linear Transformation  
1.10 Linear Models in Business, Science, and Engineering  
2.1 Matrix Operations  
2.2 The Inverse of a Matrix  
2.3 Characterizations of Invertible Matrices  
2.8 Subspaces of $\mathbb{R}^n$  
2.9 Dimension and Rank  
3.1 Introduction to Determinants  
3.2 Properties of Determinants  
5.1 Eigenvectors and Eigenvalues  
5.2 The Characteristic Equation  
6.1 Inner Product, Length, and Orthogonality  
6.2 Orthogonal Sets  
6.4 The Gram–Schmidt Process
<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
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<tbody>
<tr>
<td>5/7</td>
<td>5/8</td>
<td>5/9</td>
<td>5/10</td>
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<tr>
<td>- Lecture 1.1, 1.2</td>
<td>- Lecture 1.2, 1.3</td>
<td>- Lecture 1.4, 1.5</td>
<td>- Lecture 1.7</td>
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<td>5/14</td>
<td>5/15</td>
<td>5/16</td>
<td>5/17</td>
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<tr>
<td>- Lecture 1.8, 1.9</td>
<td>- Lecture 1.10, 2.1</td>
<td>- Lecture 2.2</td>
<td>- Exam 1 (1.1-1.10)</td>
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<tr>
<td></td>
<td>- HW 2 due (1.3-1.5)</td>
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<td>- HW 3 due (1.7-1.10)</td>
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<tr>
<td>5/21</td>
<td>5/22</td>
<td>5/23</td>
<td>5/24</td>
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<td>- Lecture 2.2, 2.3</td>
<td>- Lecture 2.3, 2.8</td>
<td>- Lecture 2.9</td>
<td>- Lecture 3.1</td>
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<td>- HW 4 due (2.1)</td>
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<td>- HW 5 due (2.2, 2.3)</td>
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<td>5/28</td>
<td>5/29</td>
<td>5/30</td>
<td>5/31</td>
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<td>- No Class (Memorial Day)</td>
<td>- Lecture 3.2</td>
<td>- Lecture 5.1</td>
<td>- Lecture 5.1</td>
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<td>- HW 6 due (2.8, 2.9)</td>
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<td>- Review</td>
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<td>- HW 7 due (3.1)</td>
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<td>6/4</td>
<td>6/5</td>
<td>6/6</td>
<td>6/7</td>
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<tr>
<td>- Exam 2 (2.1-3.2)</td>
<td>- Lecture 5.2</td>
<td>- Lecture 6.1</td>
<td>- Lecture 6.2</td>
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<td>- HW 8 due (3.2)</td>
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<td>- HW 9 due (5.1, 5.2)</td>
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<td>6/11</td>
<td>6/12</td>
<td>6/13</td>
<td>6/14</td>
</tr>
<tr>
<td>- No Class</td>
<td>- Lecture 6.4</td>
<td>- Review</td>
<td>- Final Exam</td>
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<tr>
<td>- No Office Hours</td>
<td>- HW 10 due (6.1)</td>
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<td>(Cumulative, some emphasis on 5.1-6.4)</td>
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