Math 1031

College Algebra & Probability Syllabus for Fall 2010

Lecturer: Erin Manlove  Office: Room 420 Vincent Hall
e-mail: emanlove@umn.edu  Office hours:  M 1:25-2:15, W 3:35-4:25, F 8-8:50 AndH350

Course: This School of Mathematics course covers the content of a standard College Algebra course, with the addition of a chapter on probability. We begin with a quick review of high school algebra; then we examine the behavior of functions including inverses, transformations, and compositions; and finally we study probability. We pay particular attention to linear, quadratic, polynomial, exponential, and logarithmic functions and their graphs.

Liberal Education: This course meets the Mathematical Thinking requirement needed for graduation from the University, no matter what your major. In it, you will develop your skills for thinking logically and quantitatively about many kinds of problems. In a very real sense, you will be doing what mathematicians do: start with problems that are initially stated in words, turn them into precisely framed mathematical problems, apply mathematical techniques to find solutions, and interpret the solutions in the context of the original problem. Some of these problems will come from real life, such as problems involving population growth and decay or gambling, and others will come straight from mathematics itself.

Course Prerequisites: To be successful in this course you should have completed at least three years of high school math or PsTL 0731 or PsTL 0732 here at the U with a grade of at least a C and you still remember all the material! Information on the kinds of things you should know before taking Math 1031 can be found at http://www.tc.umn.edu/~droberts/2007%20Math%20Place%20HO.pdf If you have any questions about your placement in this course let Erin know.

Course Difficulty: Although you may have had a course called "Algebra” or “Precalculus” in high school, the difficulty, level of abstraction, and expectations are much higher here at the U.

Lecturer: My name is Erin Manlove. Please call me Erin. I am a fourth year graduate student working toward my PhD in the math department at the U. Please contact me with any questions or concerns that arise throughout the semester. You may speak with me before or after lecture, visit my office hours, or email me at emanlove@umn.edu. I make every effort to respond to emails within 24 hours. If you cannot make it to my office hours but would like to speak to me in person, email me to set up a meeting time.

Website: The website for this class is www.math.umn.edu/~emanlove/math1031. At this website, you will be able to access materials such as sample exams. If you have any trouble loading the website or accessing links, please let me know.

Course Materials: The following materials are available at the Coffman Union Bookstore. The current hours for the bookstore are available at www.bookstore.umn.edu.

•Textbook: College Algebra, Kaufmann & Schwitters, paperback edition. (This is a special copy made for the U of MN) This comes bundled with the Student Solutions Manual, which has the answers to all the odd-numbered problems and practice exams.
•Calculator: A $15 scientific calculator is sufficient for this course. The Math Department will not allow you to use a graphing calculator or one that does symbolic manipulation when taking an exam.
•Office supplies: You will need materials including pencils with erasers, a stapler, and an organizational system for keeping track of notes and assignments.
Teaching Method:

Lecture MWF: The primary source of new material in this course will be the MWF lectures. I will explain the mathematics and provide plenty of examples. Attending the lectures is very important. Students who skip the lectures tend to fail the course.

Discussion T: In Discussion on Tuesday, your TA will go over the most important parts of the lecture, do additional examples to help you with the homework, have you do problems in class, and answer your questions.

PAL Th: In your PAL (Peer-Assisted Learning) sessions on Thursdays, you will participate in small groups to work problems. A PAL facilitator will provide guidance in the problem-solving process and you will develop problem-solving strategies to apply in solving homework problems as well as exam questions. There is substantial evidence that THE most effective strategy for students to learn math and science is to practice solving problems in small groups; our experience supports this. In the past, PAL-supported classes saw median grades go up an entire letter grade. To learn more about Peer-Assisted Learning go to http://smart.umn.edu/aboutpal.

Time outside of class: Success depends on your commitment. Plan to study and work outside of class seven days a week. I encourage you to find a study group to work with.

Expectations: You will be expected to make a good faith effort to learn the course material, follow directions, and exhibit behaviors that will improve your chances for success. These behaviors include:

• Showing up for every class on time and prepared, and staying until class is over. If you don't need to attend class to learn the material, then you are wasting your time and money and should be in a different class.

• Stay actively engaged during class. This means taking good notes during Lecture, asking questions and working problems during Discussion, and contributing to your group during PALs sessions.

• Turning in all assigned homework on time and with complete worked-out solutions.

• Getting help outside of class during Erin's or your TA's office hours, or visiting a tutor. Information about free tutoring options can be found at http://smart.umn.edu.

Grade Lines: Letter grades will most likely be assigned as follows (these cuts MAY be modified downward based on the final exam, but will NOT be raised upward):

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points needed</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>90-100</td>
<td>Represents achievement that is outstanding relative to the level necessary to meet course requirements.</td>
</tr>
<tr>
<td>B</td>
<td>80 – 89</td>
<td>Represents achievement that is significantly above the level necessary to meet course requirements.</td>
</tr>
<tr>
<td>C</td>
<td>70 – 79</td>
<td>Represents achievement that meets the course requirements in every respect.</td>
</tr>
<tr>
<td>D</td>
<td>65 – 69</td>
<td>Represents achievement that is worthy of credit even though it fails to meet fully the course requirements.</td>
</tr>
<tr>
<td>S</td>
<td>73 – 100</td>
<td>Represents achievement that is satisfactory, i.e., is equivalent to a C.</td>
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</table>
Under 65 Represents a failure to meet course requirements.

Under 73 Represents a failure to meet course requirements.

You may get your grades or transcript by going to One Stop at the following address: onestop.umn.edu/onestop/grades.html.

Grading: The final grade for this course will be computed from your exam scores and homework, weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Description</th>
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<tbody>
<tr>
<td>Homework</td>
<td>10%</td>
<td>Handed in during Discussion on Tuesday or during Lecture on exam days, and completed in class during PAL sessions</td>
</tr>
<tr>
<td>Exam #1</td>
<td>10%</td>
<td>In-class exam covering Chapter 1</td>
</tr>
<tr>
<td>Exam #2</td>
<td>15%</td>
<td>In-class exam covering Chapters 2 and Sections 3.1-3.4</td>
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<tr>
<td>Exam #3</td>
<td>15%</td>
<td>In-class exam covering Sections 3.5-3.7, 4.4, and Chapter 5</td>
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<tr>
<td>Exam #4</td>
<td>15%</td>
<td>In-class exam covering Chapter 10 and the appendix</td>
</tr>
<tr>
<td>Final exam</td>
<td>35%</td>
<td>Exam covering the entire course</td>
</tr>
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</table>

Incompletes: Grades of I are normally not given in this course. However, they may be permitted due to extenuating circumstances. In those cases a well-documented petition is required and the grade of I is subject to the approval of the Director of Undergraduate Studies of the Department of Mathematics.

Withdrawals: Grades of W are subject to the conditions of your college and cannot be given if you take the final exam. If you find that you need to withdraw from the course, contact your adviser immediately. Don’t just stop coming to class!

Exams: The four midterms exams and the final exam will take place in class. You will not be allowed to use a textbook or notes on these exams. However, you will be allowed to use a scientific calculator. Graphing calculators, symbolic calculators, and calculators on cell phones or other devices will not be permitted.

If you miss an exam, the grade from your final exam will be substituted for your missed exam. If you miss more than one exam, the second missed exam will be given a grade of 0. It is generally in students’ best interest to take every exam.

Homework Problems: Practicing the skills you learn in this course is of utmost importance. As the problems become more difficult you will have to perform basic operations and manipulations without thinking about them. Homework is designed to get you to this level by repeated practice.

Homework is assigned according to the schedule you were given. Be sure to do every assigned problem; be sure to check the answer of every problem in the back of your textbook or Student Solutions Manual; be sure to do more than the assigned problems if you are having difficulty with a particular topic. Doing mathematics is the only way you can learn it.

Writing and Turning in Homework Assignments: On lined notebook paper or graph paper, write out the solution to each assigned problem, and CIRCLE YOUR ANSWER. You will be graded on your written solution—not only your answer—so be sure to SHOW YOUR WORK. You may write on both sides of the paper.

To hand in a homework assignment, put the papers in order and staple them in the upper left corner. Label your homework with your name (written legibly), your Discussion section number, your TA’s
name, and the assigned problems. Homework will be collected on Tuesdays in your Discussion section and on exam days in Lecture. It will be returned to you at your next Discussion.

Late homework assignments will not be accepted in this course. If you are unable to attend class on a day that homework is due (e.g. for a medical reason, a University event, or a religious holiday), discuss alternatives with your TA.

**Homework Grading:** Each homework section assignment will be worth 5 points. Grading will be based on the percentage of the homework that is properly completed showing the necessary work.

One assignment each week will also be collected from your PAL session. This counts for 5 points like any other homework assignment. You MUST attend the PAL session to do this assignment.

**Cell Phones:** In order to maintain a focused academic environment for the other students in class, please do not use a cell phone, laptop computer, music player, or other electronic entertainment device during class. Please be respectful of your classmates and turn off your cell phone before entering class. You may NOT use a cell phone calculator during exams.

**Student Conduct:** The University of Minnesota Student Conduct Code governs all activities in the University, including this course. Students who engage in behavior that disrupts the learning environment for others may be subject to disciplinary action under the Code. This includes any behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities. Students responsible for such behavior may be asked to cancel their registration (or have their registration canceled).

**Disability Accommodations:** Reasonable accommodations will be provided for students with disabilities on an individualized and flexible basis. Disability Services determine appropriate accommodations through consultation with the student. More information is available at [http://ds.umn.edu/](http://ds.umn.edu/)

If you receive test accommodations through Disability Services, I will need a copy of your accommodation letter as soon as possible. Your exams (and quizzes) need to be scheduled by you with the DS Testing Center via the online scheduling site at least 7 days before you need to take the exam.

**Harassment:** The University of Minnesota is committed to providing a safe climate for all students, faculty, and staff. All persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. Reports of harassment are taken seriously, and there are individuals and offices available for help. Contact the Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 612-624-9547.

**Complaints Regarding Teaching/Grading:** Students with complaints about teaching or grading should first try to resolve the problem with the instructor involved. If no satisfactory resolution can be reached, students may then discuss the matter with Professor Frank, Director of Undergraduate Studies of the Department of Mathematics, 115 Vincent Hall, who will attempt to mediate. Failing an informal resolution, the Professor Frank will facilitate the filing of a formal complaint.

**Scholastic Dishonesty:** This includes plagiarizing, cheating on assignments or examinations, using a graphing calculator while taking an exam, engaging in unauthorized collaboration on academic work, and taking, acquiring, or using test materials without faculty permission. Scholastic dishonesty in any portion of the academic work for a course shall be grounds for awarding a grade of F or N for the entire course.¹

¹ Adapted from [http://advisingtools.class.umn.edu/cgep/studentconduct.html](http://advisingtools.class.umn.edu/cgep/studentconduct.html)