

Math 1031, College Algebra and Probability, Fall 2009, Lec 020

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Course Content: This 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 and then move on to examine the behavior of functions in some depth including inverses, transformations, and compositions; we pay particular attention to linear, quadratic, polynomial, exponential, and logarithmic functions and their graphs and also focus on probability. This course meets the Mathematical Thinking requirement needed for graduation from the U, no matter what your major.

Course Prerequisites: Completion of 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. If you have any questions about your placement in this course let me know.

Credits and Workload Expectations: Each class hour corresponds to 3 hours of work per week to achieve a C in the course. Since this course has 5 class hours, you should expect to spend at least 2 hours each weekday on coursework outside the classroom. If math is a difficult subject for you then you will have to spend more hours on it.

Course Materials: The following are available at the Coffman Union Bookstore. The current hours for the bookstore are available at <http://www.bookstore.umn.edu> or by calling the bookstore at 612-625-6000.

- Textbook: *College Algebra*, Kaufmann & Schwitters, paperback edition. This comes bundled with a 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. You are not permitted to use a graphing calculator or one that does symbolic manipulation when taking an exam.
- Miscellaneous: pens, pencils, stapler, staples, scissors, notebooks (for taking notes in class), loose-leaf paper (for doing assignments to be handed in), graph paper, ...

Structure of the Course: This course consists of lecture, recitation, and PAL sessions.

- The MWF **lectures** are the primary source of new material in this course. I will explain the mathematics and provide plenty of examples.
- In the Tuesday **recitation sessions** the instructor will go over the most important parts of the lecture, do additional examples to help you with the homework, and answer your questions.

- In the Thursday **Peer Assisted Learning (PAL) sessions** you will work on problems in small groups, with the guidance of a PAL facilitator. The PAL facilitator will also help you develop problem-solving strategies for you to apply in solving homework problems and 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. Last year 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/pal.html>

Additional Resources: Besides getting help from your instructors and your book, you can get help from the following sources:

- SMART Learning Commons offers free math help. It has locations in Walter, Wilson, Magrath, and Klaeber Court, beginning Sept 14. See <http://smart.umn.edu>.
- The Taylor Center (150 Lind) is available 8-4:30 Mon-Fri for quiet individual study or for small groups of students to use working together.
- Your adviser: Your adviser is there to help you in any way he or she can. Ask your adviser any questions you have on scheduling, requirements, child care, etc.
- By the end of the semester the undergrad office (Vin 115, ugrad@math.umn.edu) will have a list of private tutors available for hire.

Homework: Each week you will have a problem set, typically due on Friday in lecture and returned in recitation. You will also have a weekly assignment in your PAL session. Each section of homework problems and each PAL assignment will be worth 5 points, partial credit being given on the basis of the percentage of the homework that is properly completed showing the necessary work. To receive full credit for homework and exam problems, your work must be neat, organized, and complete. In particular:

- Write your name, your discussion section, and the due date on the front page, and write your name on each page you hand in.
- Staple all the pages of your homework into one neat packet. Do not turn in a separate packet for each section.
- No frayed edges! If you do your homework in a notebook, either recopy it or trim the frayed edges off with scissors.
- Write neatly, and make sure that there is adequate space between problems. If you want to use columns, use no more than two.
- Show all your work! If you just copy down the answers from the back of the book, you will get no credit.
- Circle your answer.
- Turn in only the assigned problems. It is a great idea to do extra problems in order to learn the material, but don't turn them in.

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

- Homework (10%): weekly problem sets and PAL problems
- Exam 1 (7%): take-home, due at the start of lecture on Mon, Sept 21.
- Exam 2 (16%): in-class, Fri Oct 9: Ch 1, 2, 3.1, 3.2

- Exam 3 (16%): in-class, Mon Nov 9: Ch 3.3-3.7, 4.4 and 5
- Exam 4 (16%): in-class, Fri Dec 11: Ch 10 and the appendix
- Final exam (35%): (room TBA) Thurs Dec 17, 1:30-4:30: cumulative

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 2nd missed exam will be given a grade of 0.

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):

Grade	Score needed	
A	90-100	achievement exceptionally exceeding course requirements
B	80-90	achievement significantly exceeding course requirements
C	70-80	achievement meeting course requirements in every respect
D	60-70	achievement worthy of credit but not fully meeting course requirements
F	0-60	failure to meet course requirements

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, dont just stop coming to class!

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/>

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.