

MATH 130 – WINTER 2012

COLLEGE ALGEBRA

Instructor:	Alina Birca
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Office:	Building 61 – Room 1658
Text:	<i>College Algebra</i> (10 th edition) by Lial/Hornsby, Schneider
Student Access Kit	Recommended. It is available bundled with your textbook or as a standalone item.
Sections	TWTh # 30043 11:20 – 3:00; # 30046 3:10 – 6:50 pm (Bldg 61 – Room 2419)

Course Objectives

This is a function oriented course including the concept of function and function notation. The course includes an in depth investigation of polynomial, rational, root, exponential and logarithmic functions, including their equations, graphs, and behavior. Tools from arithmetic, geometry and algebra are used to develop definitions, standard notations and theorems involving these functions and their application in the physical world. Other topics include sequences, series, the binomial theorem, and mathematical induction.

Some of the course objectives are:

- the ability to represent a function graphically, numerically, and analytically.
- the ability to recognize, graph, and solve equations involving polynomial, rational, exponential, root, and logarithmic functions.
- the ability to recognize and apply the appropriate function to solve problems involving tables, graphs, equations or words.
- understand and use the binomial theorem and the principal of mathematical induction.
- the ability to apply studied principles and skills to new situations in addition to situations that mirror those on the homework and those shown in class.

Methods of Instruction

This course will combine lecture, teamwork, and class discussion. Students will be required to do homework, group problems, quizzes and examinations.

Attendance and Participation

Understanding math requires more than just reading a textbook. Listening and participating in the class activities are as important as solving problems. College policy requires that you attend every class meeting. Moreover, I do notice when you do not show up. If your grade is on a borderline, those with regular attendance are more likely to be on the higher side of the line. In addition, you miss the material from that day and that day's quiz.

NOTE: You the student are responsible for dropping the course should you decide not to continue in it. If you stop attending and doing the work and you fail to drop, you will receive a failing grade in this course. If you miss class, are late more than 15 minutes, or leave early during the add period, you will be dropped and someone on the waiting list will be added. If you are absent two times or more, you may be dropped from the class. Being late or leaving early counts as half a day.

Prerequisites

There is a prerequisite for this course (Math 71 –Intermediate algebra), and I expect that you demonstrate college arithmetic skills as well as elementary and intermediate algebraic skills, including solving first and second degree equations and inequalities, factoring polynomials, working with fractions and rational expressions, graphing lines and parabolas.

Study time & Extra help

You are expected to study two hours outside class for every hour in class – that is a minimum of 22 hours a week (about 3 hours a day). If you have trouble completing assignments or understanding the mathematics, get help as soon as you need it. My office hours and email are listed above. Free tutorial services are available at T-MARC in building 61, first floor, MTWTh 9:00 am – 7:00 pm.

Late Work

Be prepared with all assignments on the day they are due. As a rule, I do not accept late written work nor are there any make up tests or quizzes.

Academic Honesty

Plagiarism or cheating will not be tolerated. There will be a zero on the assignment and risk failing the course.

Calculators

A graphing calculator is NOT REQUIRED for homework problems! All of the homework problems I will assign this semester will be done using paper, pencil, ruler and a scientific calculator. No graphing calculator is allowed during the tests. No cell phones are allowed during the tests.

If you have a phone or pager, please turn it to vibrate and sit close to the door in case you need to use it in an emergency. Thank you.

Accommodations

If accommodations are needed, please contact me immediately.

Organization, Grading and Requirements

You will need a 3-hole binder with 3 separators, labeled as follows:

LECTURES

HOMEWORK

TESTS

- **LECTURES** – Pay attention in class to what I say and do, and make careful notes. In particular, note the problems I work on the board, and copy the complete solutions as well as the theory presented in each section. Work as neatly as you can. Write your symbols clearly, and make sure the problems are clearly separated from each other. Do not hesitate to ask questions in class.
- **HOMEWORK** – Before you start on homework assignments, rework the problems I worked in class as well as all examples from the textbook. This will reinforce what you have learned. Make sure you check your previous work against the solution sections posted on my website.
- Keep all homework assignments and tests that are returned to you in your binder. Use them when you study for future tests and for the final exam.

Assignments in the course are divided into four areas and are worth a total of 1000 points. Those earning 900 points or more will be awarded an A, 800 to 899 points a B, 700 to 799 points a C, 600 to 699 points a D and less than 599 points an F.

Homework & Mini-quizzes 70 points

Homework and reading will be assigned each day. Read carefully all the directions from the homework handout. You are encouraged to discuss assignments with your classmates; however, you are required to write up your work independently. Copied homework will not be tolerated and identical, or nearly identical, assignments will share a single homework score. I will collect the homework on the day of a test. There will be daily 5 to 10-minute mini quizzes. The mini quizzes are given from the examples done in class and homework. I will make every effort to address homework questions in class as time permits. Notes must be complete and neatly written.

Quizzes 230 points

Two quizzes will be given (see Tentative Class Schedule). They may be given at the beginning or at the end of the class. These quizzes will be given from exercises and examples done in class as well as homework problems assigned from the topics covered up to that point. For an exercise to be complete there needs to be a detailed solution to the problem. Do not just write down an answer. **No proof, no credit given!** Each quiz is worth 115 points.

Tests 400 points

Two tests will be given over the major areas addressed in the course. Each test is worth 200 points. For an exercise to be complete there needs to be a detailed solution to the problem. Do not just write down an answer. **No proof, no credit given!**

Comprehensive final 300 points

The final is a 2 ½ hour exam. The final exam is a cumulative exam. If you qualify (homework & mini quizzes score must be at least 70%) , you may use the final exam percent score to replace your lowest test/quiz score. However, a test/quiz with a score of zero cannot be replaced by the final score You must take the final exam to pass this class.

Tentative Class Schedule

DATE		TOPICS	ASSIGNMENTS DUE
Tuesday	January 10	Chapter 1 – Review 2.1, 2.2	
Wednesday	January 11	2.3, 2.4, 2.5	
Thursday	January 12	2.6, 2.7, 2.8	
Tuesday	January 17	3.1	Quiz #1
Wednesday	January 18	3.2, 3.3	
Thursday	January 19	3.4 Review	
Tuesday	January 24	3.5, 3.6, 4.1	
Wednesday	January 25	Test #1 4.2	
Thursday	January 26	4.2, 4.3, 4.4	
Tuesday	January 31	4.5, 4.6	
Wednesday	February 1	5.1, 5.2, 5.7	
Thursday	February 2	5.6, 7.1	Quiz #2
Tuesday	February 7	7.2, 7.3	
Wednesday	February 8	7.4	
Thursday	February 9	Review	
Tuesday	February 14	Test #2 7.5	
Wednesday	February 15	Review	
Thursday	February 16	Final exam	

Grade Sheet

	+	
	+	
	+	
HOMEWORK & MINI-QUIZZES	=	/70
Quiz 1		/115
Quiz 2	+	/115
QUIZZES	=	/230
Test 1		/200
Test 2	+	/200
TESTS	=	/400
FINAL EXAM	=	/300
TOTAL	=	/1000