

# MATH 130 – WINTER 2010

## COLLEGE ALGEBRA

Instructor:	Alina Birca
Email/Phone :	<b>abirca@mtsac.edu</b> ; 909-594-5611 ext 5364
Website:	<b>www.timetodare.com</b> or <a href="http://elearn.mtsac.edu/abirca/">http://elearn.mtsac.edu/abirca/</a>
Office:	Building 61 – Room 1658
Text:	<i>College Algebra</i> (10 <sup>th</sup> edition) by Lial/Hornsby, Schneider
Student Access Kit	Recommended. It is available bundled with your textbook or as a standalone item.
Sections	TWTh # 30150 11:20am – 3:00 pm; #30152 3:10 – 6:50 pm (Bldg 61 – Room 2306)

---

### 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. Do not be late to class. The homework is due at the beginning of the class. You may also miss the quiz if you are late. 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. **You may be dropped from this class if you miss class during the first 2 weeks of instruction.** Your seat will be given to a student who has been attending each 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 6 hours a week. 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

### 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.

---

## 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 & Notebook 55 points

Homework and reading will be assigned each day. 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 make every effort to address homework questions in class as time permits. Notes must be complete and neatly written. Please feel free to contact me by email if you need additional help.

### Quizzes 300 points

Three 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 100 points.

### Tests 360 points

Two tests will be given over the major areas addressed in the course. Each test is worth 180 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 285 points

The final is a 2 ½ hour exam. The final is a cumulative exam. You may use the final exam percent score to replace your lowest test score (a test with a score of zero cannot be replaced by the final score). You must take the final to pass this class.

## Tentative Class Schedule

DATE		TOPICS	ASSIGNMENTS DUE
Tuesday	January 5	Chapter 1 – Review 2.1, 2.2	
Wednesday	January 6	2.3, 2.4, 2.5	
Thursday	January 7	2.6, 2.7, 2.8	
Tuesday	January 12	3.1	<b>Quiz #1</b>
Wednesday	January 13	<b>3.2, 3.3</b>	
Thursday	January 14	3.4 Review	
Tuesday	January 19	<b>Test #1</b> 3.5	
Wednesday	January 20	3.6, 4.1, 4.2	
Thursday	January 21	4.2, 4.3, 4.4	
Tuesday	January 26	4.5, 4.6	<b>Quiz #2</b>
Wednesday	January 27	5.1, 5.2, 5.7	
Thursday	January 28	5.6 Review	
Tuesday	February 2	<b>Test #2</b> 7.1	
Wednesday	February 3	7.2, 7.3	
Thursday	February 4	7.4	
Tuesday	February 9	7.5	<b>Quiz #3</b>
Wednesday	February 10	Review	
Thursday	February 11	<b>Final exam</b>	

## Grade Sheet

	+	
	+	
	+	
<b>HOMEWORK &amp; NOTEBOOK</b>	=	<b>/55</b>
Quiz 1		/100
Quiz 2	+	/100
Quiz 3	+	/100
<b>QUIZZES</b>	=	<b>/300</b>
Test 1		/180
Test 2	+	/180
<b>TESTS</b>	=	<b>/360</b>
<b>FINAL EXAM</b>	=	<b>/285</b>
<b>TOTAL</b>	=	<b>/1000</b>