

Math111 /College Algebra /CRN 41914 /TuTh 7:30am-9:15 /MET 208 /F'14

Instructor: Liz Coleman **Office:** GRV 214

"Office hours": MWF 9:10-9:40 GRV 107 & 12:55-1:25 HCC230; TuTh 9:15-10:15am MET 208;

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Prerequisite: Math 95, Intermediate Algebra, with a grade of C or better.

Course Description: Mth 111 is a course designed to examine in detail the applied, real-world, and theoretical mathematical implications of the mathematical concept of a function. The symbolic, numerical, and graphical representations of the mathematical concept of a function introduced in Mth 95 will be expanded and explored. Emphasis will be on solving problems symbolically, numerically and graphically. Quadratic, polynomial, rational, exponential, and logarithmic functions will be studied.

Course Outcomes: Students who complete Math 111, College Algebra will be able to:

1. Model and solve applied, real-world, and theoretical mathematical problems requiring the solution of linear, quadratic, polynomial, rational, exponential, and logarithmic functions.
2. Use a graphing calculator to create appropriate graphs that represent mathematical models, determine appropriate viewing windows and accurately interpret and draw inferences regarding the meaning, implications and limitations of the graphs.
3. Examine a variety of relationships stated in symbolic, graphical, or tabular form and determine which represent functions; determine what the domain and range of functions are; and draw inferences regarding the meaning, implications and limitations of the given representation of the function.
4. Modify and combine algebraic and graphical representations of functions and describe the relationship between the methods and functional representations.
5. Investigate and solve one-variable non-linear inequalities by coordinate graphing and algebraic means and explain the relation between the methods and solutions.

Textbook: From the COCC bookstore: \$128.50 *College Algebra and Trigonometry* 3rd ed. packaged with WebAssign software, by James Stewart, ISBN:9781133532897 - this option is what you want if you're planning on taking 112 & 113 - or ebook version only with Web Assign for just single term use (\$74.50) ISBN: 9781285858500

Alternatively, you can just order the ebook version on line for \$75, or the bundle for \$107:
<http://www.cengagebrain.com/shop/en/US/storefront/US?cmd=DisplayLandingPage&id=56478>

Calculators: A graphing calculator is required, the TI83 or 84 is recommended.

Grading:	<u>Weight</u>	Approximate grading scale:	
Homework (HW - on WebAssign)	10%	A- - A	90%-100%
Problems Of the Day (PODs)	10%	B- - B+	80%-89.9%
Labs	20%	C- - C+	70%-79.9%
Exams (2 @ 20% each)	40%	D	60%-69.9%
<u>Final</u>	<u>20%</u>	F	<59.9%
Total	100%		

Attendance: Attendance is mandatory the first week and necessary thereafter if you plan on succeeding in this course. *You will be dropped if you miss a class the first week*

Disclaimer: The contents of this syllabus are subject to revision at the discretion of the instructor.

Tests and Final Exam:

Exams: There will be two tests and one final exam given throughout the quarter. *Tentative* dates for the tests and material covered are as follows:

Test 1: Week 5; Chapter 3, sections 3.1-3.6

Test 2: Week 8; Chapter 5 and section 3.7

MAKE-UP TESTS ARE GIVEN ONLY WITH PRIOR ARRANGEMENT.

Final exam: Tues, Dec 10, 8:00-10:00a.m.

The final is comprehensive, mandatory, and includes chapter 4.

Homework, PODs and Labs

Homework & Review: HW will be assigned every class meeting that we complete a section. I'm available right after class for an hour to go over questions you may have on the material. We will be using WebAssign, a web based program that has come packaged with your text, for your HW. You do not need to purchase the textbook. You may use the ebook version with the WebAssign homework by purchasing the disk/card from the bookstore or on line at webassign.net. See the next page for what sections we'll be covering each week. If you get your HW in by midnight of the "bonus due" date - which will be posted in class and on WebAssign - you will get a 40% bonus, 40% of the score for correct answers is added back to your score. You may turn in your HW "late" for no penalty, but no bonus either. **THE ABSOLUTE DEADLINE FOR ALL HW TO BE TESTED ON IS MIDNIGHT, THE DAY BEFORE EACH TEST.** You get 3 attempts for each problem. Make sure you work out your HW with pencil and paper, neatly and in a "homework" notebook. If you have any questions on any of the problems you can get help from me or at the tutor center, located in the library basement.

It is difficult to help you if you have no written work to show!

There are review problem sets due throughout the first $\frac{1}{2}$ of the term, which focus on algebra and problem solving skills. Four of the sets are on WebAssign and one or two more will be given as handouts and the written work collected.

Note: Get help immediately if you don't understand a concept or why your answer is not coming up correct (green check mark means correct in WA). One needs to "do" math to learn math. I highly recommend that you try to work with others while working on the homework. One way to learn math well is to explain it to others.

Problems of the Day (PODs): Every class day (18 of them), except test days (2 of them), will have "Problems of the Day" (POD) at 10 points each - some may have bonus points available - for a total of 160 points. They will be handed out at the beginning of each class and collected during class. I will count your total out of 150 points, so no late POD's are accepted. These problems will be review, or from previous material, or checks for understanding of key concepts. I encourage you to work together on the PODs.

Labs: We will have 7 labs this term. You may work together on labs but every one turns in their own work. The labs may have problems that are more interesting and are where you get to show me you know the material and how to present it. The labs will be graded on neatness, completeness - necessary work must be shown, as well as accuracy, and *must be done in pencil*. Late labs will receive a 10% penalty and accepted only up to one week late.

WEEK:	<u><i>Tentative weekly schedule for Math 111 Fall 2014</i></u>	
First: Sept 29	<p style="text-align: center;">INTRODUCTION TO FUNCTIONS</p> <p>This week we'll be <i>covering sections 3.1 and 3.2</i> from the text and working on some review. You should read the sections carefully, and start on the reading for section 3.3 before next week. HW due dates will be posted in class and on WebAssign. Please make sure you get signed up on WebAssign before the next class.</p>	
Second: Oct 6	<p><i>Sections covered this week: 3.3-3.5.</i></p> <p>Read the sections carefully before coming to class. Don't forget to work on the WebAssign Review assignments.</p>	
Third: Oct 13	<p style="text-align: center;">Finish 3.5, cover 3.6, start 3.7.</p>	
Fourth: Oct 20	<p>Cover 3.7. We'll be starting chapter 5 this week, as well. Read 5.1 and 5.2: EXPONENTIAL FUNCTIONS. REVIEW for the first test.</p>	
Fifth: Oct 28	Continue covering 5.1 and 5.2;	
	Chapter 3 test, covers 3.1-3.6. Read 5.3 for the next class.	
Sixth: Nov 3	<p style="text-align: center;">LOGARITHMIC FUNCTIONS</p> <p style="text-align: center;">Cover 5.3 & 5.4, introduce 5.5</p>	
Seventh: Nov 10	Tues Nov 12 Veterans' Day College closed	Cover 5.5, and introduce 5.6
Eighth: Nov 17	Wrap up 5.6, introduce Chapter 4: POLYNOMIAL FUNCTIONS - 4.1, and REVIEW for the chapter 5 test.	Ch 5 and section 3.7 test: Read 4.1 & 4.2 for the next class.
Ninth: Nov 24	Wrap up 4.1, cover 4.2, and introduce 4.6	Thurs & Fri, Nov 27&28 Thanksgiving College is closed
Tenth: Dec 1	Finish 4.6 and cover selected topics from 4.3-4.5 REVIEW for the final!	
Eleventh: Dec 8-12	FINAL (Comprehensive): Tuesday, December 9, 2014 in MET 208	

Note: we will be using my lecture notes for each section covered in M111. These notes are by no means complete, nor meant to be. You will need to attend class to get the missing pieces. **You may want to print out the notes, which are available on WebAssign in a pdf format, for sections 3.2-3.7 and chapters 5 & 4.** Look under the Announcements column on WebAssign.

Any work handed in SHOULD be presented:

- neat and in PENCIL ONLY (points will be deducted for pen, HW is excepted).
- your name -first and last, and class meeting time in the upper-most right-hand corner of the page.
- **no frilly edges.**
- Points will be deducted for incorrect notation, wrong answers, and infractions to presentation.
- **Always show any and all necessary work for full credit. Leave at least 2 spaces empty between each problem.**
- Staple more than one paper together; please do not fold the corners together or paper-clip papers together. Use both sides of the paper.

IF YOU STOP COMING TO CLASS PLEASE REMEMBER TO OFFICIALLY DROP THE CLASS OTHERWISE YOU WILL RECEIVE AN "F" FOR YOUR GRADE

Other important dates:

Oct 3	Last day to begin attendance in a new class
Oct 10, 5pm	Tuition due and last day for full refund
Nov 11 (Tues)	Veteran's Day, College is closed
Nov 14, 5pm	Last day to drop class with no grade on transcript
Nov 27&28	Thanksgiving Holiday, College is closed
Dec 3, 6pm	Last day to withdraw, receive a "W" grade (need instructor's signature)
Dec 8-12	Finals Week

Please do not use your cell phone during class. Have the ringer turned off, and do not use it for text messaging -- it's too distracting.

Instructional Methods: Lecture, small group work, and discussion. *It is highly recommended that you read the assigned section(s) before class.* Homework is submitted through an on-line, web-based component called WebAssign (see: www.webassign.net).

NOTE: You will only learn by doing; math is not a spectator subject. You should plan on **reading the text prior to class, take notes during class, and having 10-12 hrs of study time outside of class.** I encourage you to ask questions during lectures pertinent to the topic being discussed.

Dropping a Class/Audits: The end of the 7th week of the term is the last day to change from a grade to an audit, or vice versa. This date is also the last day to drop a course without receiving a W on your transcript. After the 7th week and by the end of the Wednesday prior to finals week, you may drop a course and receive a W on your transcript only with permission from your instructor

ADA statement: "Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should know of, or who need special arrangements in the event of evacuation, should make an appointment with the instructor as soon as possible, no later than the first week of the term. Students may also wish to contact the COCC Disability Office in BEC, (541) 383-7583."

Classroom behavior: We are here to work and to learn. I expect you to be respectful of the classroom environment and your fellow students. I expect you to be on time for class, and to stay until the end, unless you have checked in with me beforehand. Specifically, I expect you to abide by the guidelines explained in the COCC Student Rights and Responsibilities Handbook. The most up-to-date version of this handbook can be found at: <http://www.cocc.edu/general-procedures-manual/student/section-ii--student-rights-and-responsibilities/> Any violations of COCC's student rights and responsibilities policies will be reported to Office of Student Life.

Some Tips To Succeed

Attend class for all lectures and take notes, but if you must miss a class **be sure to read the text on the section(s) you missed**. I will not be able to give you a mini lecture in my office on the material you missed.

The general rule of thumb for college is that you should plan on studying at least 2 hours outside of class for every hour of class time; that means you should have at least 10 hours a week available for studying and homework for this class.

Do the homework daily, legibly and in correct form. You are essentially learning a new language that follows certain "grammatical" rules for presentation. If I can't read it I will not be able to grade it.

Don't do the homework at the last minute or during class! Start the home-work as soon as you can after it is assigned so that if you need help you will have time to get it from me or at the tutoring center.

Do more problems than what is assigned. The more you practice the better you'll get!

Ask questions during lecture for clarification if you are not following what is going on.

Read the book. You didn't shell out the big bucks for a paper weight!! Go through examples carefully making sure you understand how they get from one step to another and make sure you understand the definitions. Remember you can email me or call and leave a message with a return phone number (say it slowly) if you get stuck.

Make use of the free tutoring available in the tutoring and testing center in the library basement. (check out: <http://www.cocc.edu/tutoring-and-testing/>)

See me during office hours when you have questions or visit the tutor center.

Find someone you can study and compare homework with. Get their phone number.

For exams, start studying at least a week in advance just a few hours a day instead of cramming it in the night before. Lack of sleep makes a test harder. Practice doing problems and reviewing definitions. Also, don't study up to the last minute.

Reward yourself when you do well!

On "FAILURE": First Attempt In Learning; learning happens when you understand why you failed - try again!