# College Algebra

## Syllabus

Math 111 – CRN 20158 – Winter 2015 – Course ID: mock41674

### Class Info

**Day/Time:** MWF/2:00pm-2:50pm  
**Room:** MWF: NS 215  
**R:** MNB 110  
**Instructor:** Chris Mock

### Contact Info

Office: Maaske 305  
Phone: 503-838-9710  
E-mail: mockc@wou.edu  
Website: http://www.wou.edu/~mockc

### Office Hours

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
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(I may, or may not, be present in my office during times that are not marked on the above chart)

### Prerequisites

A grade of C- or better in math 95 or a satisfactory score on the WOU placement test. Official transcripts of high enough SAT or ACT scores on the math section are also acceptable.

### Course Objectives

- Know a working definition of function.
- Be able to represent functions graphically, numerically (tables), symbolically (formulas), and verbally (words), and be able to readily switch between these representations for given functions.
- Understand and use the linear, polynomial, rational, exponential, logarithmic, and power families of functions.
- Model and solve problems involving those families of functions.
- Have a rudimentary understanding of the arithmetic of complex numbers.
(COURSE OBJECTIVES cont...)

- Know when inverse functions exist and if not, why not.
- Be able to compute and use inverse functions graphically, numerically, symbolically, and verbally.
- Symbolically fit linear and exponential functions to data.
- Fit all families of functions to data with regression.
- Have solidified his/her algebra and graphing skills.
- Have developed an appreciation of the power of mathematics to solve real-life problems.

(COURSE MATERIALS)

- Text: Algebra and Trigonometry, with modeling and visualization (5th Edition), by Gary Rockswold (ISBN: 978-0321900456 with MML / ISBN-13: 9780321826121 without MML bundle). You will also need access to the online homework, which is available through MyMathLab and requires an access code. You can attain these things two different ways:
  i. You can purchase the book new from the bookstore, it is a bundle that includes an access code to MML – price is around $250
  ii. You can go to www.coursecompass.com and purchase the access code directly. Doing so will also give you an online version of the text – price is around $87

> | RELEVANT NOTE: for technical support on the MML website, please contact PEARSON at 800-667-6337 |

- A Scientific calculator with at least the capabilities of a TI-83 is required. A TI-83 or 84 is highly recommended. No TI-89, nor any other calculator with a computer algebra system, such as the TI-Nspire, is permissible for use in this course.

(GRADE WEIGHTS)

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<tr>
<th>Grade</th>
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<tr>
<td>Homework</td>
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<td>Quizzes</td>
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<td>Exam I</td>
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<td>Exam II</td>
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<td>Exam III</td>
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<tr>
<td>Total</td>
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F 0.00% - 59.9% or not passed skills test  
D- 60.0% - 62.9%  
D 63.0% - 66.9%  
D+ 67.0% - 69.9%  
C- 70.0% - 72.9%  
C 73.0% - 76.9%  
C+ 77.0% - 79.9%  
B- 80.0% - 82.9%  
B 83.0% - 86.9%  
B+ 87.0% - 89.9%  
A- 90.0% - 92.9%  
A 93.0% +

Special Grades

Incomplete grades may be assigned at the discretion of the instructor. An Incomplete can only be granted for a student who is passing a class and has a documented emergency that prevents them from completing a very small portion of the course (e.g. the final exam). A contract between the student and instructor for completion of the remaining course work is required.

If the course is taken on a pass/no-pass basis, a passing score is designated at a C- or better.
(HOMEWORK)

Homework will be assigned nearly every class day, and will, unless otherwise specified, be due the following class day. We will always spend the first 5-7 minutes of class going over any questions from the previous class’ homework assignment. There are two ways in which homework will be assigned: written (or out of book) and online. It will always be one or the other; you will never have a day where both written and online homework is assigned.

Written homework

Each written homework assignment will have two scores, and will usually be presented like this:

   complete: 6
   correct: 4

Generally you will be awarded 6 points for completing the assignment, and then I will pick 2 problems (at random) to grade for 2 points each, for a total of 10 points possible on any written assignment. You will be expected to have given a serious attempt for each problem assigned in the homework and bring any questions you may have during the next class session. Please feel free to ask homework questions at the beginning of any class. As there will only be a limited amount of time available at the beginning of each class period for questions, some questions may need to be asked during office hours (either scheduled or by appointment). Written homework will be due by 3:45PM in my office on the due date. Late homework will be awarded completeness points only (subject to change as I see fit).

There is a certain level of organization that I expect from all of you for each written homework assignment. To be perfectly clear, the following style is required (not simply suggested) for written solutions:

   o Your handwriting must be completely legible
   o In the upper-right corner of each homework assignment, please write
     ▪ Your name
     ▪ Course section (foxtrot)
     ▪ Section number (ex: section 4.1)
   o The title of your assignment should be the page # and problems that you will complete
   o Each problem is ordered numerically, and each solution is bordered with a circle or box.

If the above is not met, you will see reduction in completeness points.

Online homework

It is very likely that the majority of our assignments are of the online variety. Online homework will be posted usually the morning it is assigned. I don’t like to post assignments much earlier than that so I can keep the pacing of the course at the level I want it to be at. Since we won’t have computers in our classroom, if you know that you will want to ask a question in class the next day, please write your question on a piece of paper so that we can talk about the problem without having to spend time logging on to the system for me to see what question you are asking about. Online homework will be due at 5:00pm (which is after office hours – giving you time outside of class time to come ask me questions individually).

(QUIZZES)

My goal this term is to give quizzes every Friday of non-exam weeks at the end of class. These quizzes, while part of your grade, are in place to help you prepare for upcoming chapter exams, and also help me get a sense for how the class is performing as a whole. They will be given roughly 15-20 minutes before class ends. Each quiz will have questions directly from your homework assignments.
The Mathematics Department has stipulated that a “Skills Test” for MTH 111 assessing competency in some basic pre-MTH 111 skills will be required. Each MTH 111 student must pass the Skills Test by the end of the Friday of Dead Week. Any student not passing the Skills Test at least once by the deadline will receive an F in the course. This test MUST be passed with a score of at least 80% in order to pass the class.

The first skills test will be taken Monday of week 2. Beginning during week 2 (after the in-class attempt) retakes will be administered at drop-in group retake sessions in MNB 110 (Retakes may be taken up to once per week) at the following times each week:

Monday: 9:00 AM  
Thursday: 3:00 PM  
Friday: 2:00 PM

If you need to retake a skills test, simply show up to one of those time slots – just keep in mind, you can only try once per week, so you can’t show up to all 3 in the same week. Also there will be no skills test Monday, January 19th campus is closed for MLK.

There will be three mid-terms throughout this course as well as a cumulative final exam. Each one will be based off of material that has been covered in lectures, homework problems, and in-class assignments. Attendance and completion of assignments are essential to being a successful test taker. Make-up exams are not allowed unless you have spoken with me beforehand and it is an unusual circumstance. On each exam (final included), you may use a single 3 x 5 note card (front and back).

Important note: the final exam can not be taken at a different time. If it is physically impossible for you to make the time, then you must seek permission from the mathematics department. Please see me for details.

Projected Grade (PG:)
When I pass back an exam you will see two letter grades, one is the score you got on your exam; the second will always come after “PG:” and it represents the grade you will receive if you continue to perform at your current exam/quiz & homework level.

For example, let’s say you take the first exam and score a B, but you haven’t turned in a lot of your homework - you might see “PG: C-“ at the top of your paper. What that means is this: if you continue to both perform at the B level on your exams and not turn in a lot of homework, you are on course to receiving a C- in the class.

In that sense, the projected grade is somewhat of a warning flag – it is telling you what grade you are currently projected to earn. With each exam you take, the closer your projected grade gets to becoming your actual grade in the course - your projected grade approaches your actual grade. So if you get your first exam back and it says “PG: D-“ – don’t freak out – it’s projecting that you will perform at the level of the average of your current exams on every exam (including the final) for the rest of the term (which you can avoid by taking appropriate action).
(APPROPRIATE CLASSROOM BEHAVIOR)

You are ultimately responsible for your own attendance and performance. Disruptive classroom behavior of any kind, such as talking during lecture or consistently coming to class late etc., is not appropriate. This prescribed conduct for all students is described in the University Catalog. In particular, academic dishonesty of any kind will not be tolerated, and will be reported to the university. Also, leave your cell phone off or on silent when you come to class. They are not to be used at all during class. If for some reason you absolutely need to be contacted (in some emergency situation), inform me before class and an arrangement can be made.

(DISABILITY AND VETERAN SERVICES)

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Services, APSC 405, or at 503-838-8250, as early as possible in the term. Students needing medical or mental health care can access the Student Health and Counseling Center by calling 503-838-8313, emailing at health@wou.edu, or by walking in to schedule an appointment.

(WOLF CONNECTION SYSTEM)

If the instructor determines your performance in this class is placing you at academic risk, you may be referred to Jesse Poole, Western’s Student Success Specials. Jesse will offer to work with you to address issues and develop a student success strategy. Regardless of whether a referral has or has not been made, you are ultimately responsible for tracking your own progress in this course. If you would like to meet with Jesse regarding any academic struggles you are experiencing, please contact the Academic Advising and Learning Center at 503-838-8428.

(MATH CENTER)

The Math Center is a great place to go for additional help on concepts talked about in this course. It is located in Hamersly Library room 228 (see picture below)

and is open Monday through Friday from 11:00 am to 5:00 pm (3:00pm on Fridays) beginning week 2 and ending week 10. For addition information on the tutoring center and its hours, please visit

http://www.wou.edu/ls/natsci_math/math/tutor/
This section of the syllabus serves as advertisement for my personal website! There are lots of cool things to check on my website, including (but not limited to):

- My office hours
- The schedule of your math course (lets you know exactly what we will be learning on any given day)
- The current homework that is due the very next class day
- Tutoring center webpage
- Copy of this syllabus
- How to set up MyMathLab subscription
- Helpful links and videos to help with the learning of difficult topics
- Any handouts which were given in class (so you can print them if you missed a day)

Please make use of this website! I work hard on maintaining it, and I would hate for it to be a waste. I would say that the most notable thing about it is that it will show you day-by-day what we covered in class on any particular day. I will be updating it every morning with the current day’s worth of information.

So you might ask me “Mr. Mock, how can I be successful in this class?” Here are just a few tips:

- Show up to class – there are those who believe that showing up to class is optional…and I suppose that’s true from the philosophical perspective of free will, but if you don’t show up to class, you may miss something important!
- Do the homework – contrary to popular belief, doing the homework actually does help students practice and learn the material.
- Ask questions – If there is something you don’t understand or need more clarification on, ask me! You can ask during the lecture, come to my office hours, or even send me an email. As a general rule, you can assume that someone else in the class has that same question, so do not feel like you are wasting class time by asking!
- Go to the tutoring center – the students who work at the tutoring center are undergrad mathematics students, and are eager to help students in math 70, 95, 105, 111, and 112.
- Find a study buddy – hold each other accountable for finishing homework, find a time to meet up outside of class to work on the more difficult problems. It’s a lot easier to find motivation when you have a partner.
- Remember why you are here – No doubt all of us are here for a reason. I understand that math 111 is a required course, and maybe not all of us enjoy being here, and at times it may be hard to find the resolve to do 25 math problems some nights for homework, but just remember your ultimate goal – be it nursing school, a business degree, or maybe even a mathematician – this class is en route to your bachelors.
- CHECK MY WEBSITE! — look at the course schedule, know what upcoming chapters are and read them beforehand. Know what I will teach before I actually teach it!
- Check your WOU email regularly. If I have something to announce outside of class, it will be through email. I would say I do this often – usually it’s to announce if something unexpected happens and I need to cancel class, or maybe to send an attachment (such as answer keys to a in class review), etc...
- Take practice exams – test anxiety is very real, and very apparent for a lot of students in a math course. One thing you can do to prepare for your exam is to pick 15 or 20 problems from you homework or notes and try to do them all in 50 minutes. If you get stuck at some point or run out of time, that may give you a good indication of how ready you are for your actual exam; and it may also give you insight on what kinds of things you should include on your note card. There is a way to lessen the pressure of timed exams: practice with a time limit.

- Don’t “week 9” me…. A lot of students approach me at the end of the term with excuses on why their attendance has been poor or why their exam scores have been low and they always ask: “Is there anything I can do to pass this course.” So instead I will take the liberty to answer that question right now: There’s nothing you can do at week 9 that can make up for a whole term of absences and poor exam scores. If you find yourself falling behind at like week 4, come see me! Don’t wait!

- Don’t give up – a lot of students struggle with mathematics; and sometimes you will want to throw your book across the room in anger and frustration – and that’s okay. But after you’ve whispered curse words under your breath at the creation of mathematics, take a deep breath. Go over to your book and pick it up and try doing the problems again! Challenging yourself is a good thing!
# Math 111 Schedule  
(Winter Term 2015)

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</table>
| **Week I**  
(jan 5 – jan 9) | syllabus | functions + piecewise | rates of change + diff. quotient + [skills test] | linear word problems |
| **Week II**  
(jan 12 – jan 16) | quadratics | quadratics | quadratic word problems | EXAM I |
| **Week III**  
(jan 19 – jan 23) | [MLK] | section 4.1 (extrema) | section 4.2 (end behavior) | section 4.3 (poly div) + quiz |
| **Week IV**  
(jan 26 – jan 30) | section 4.4 (real zeros) | section 4.4 (real zeros) | section 4.5 | section 4.5 + quiz |
| **Week V**  
(feb 2 – feb 6) | section 4.6 | section 4.6 | section 4.8 | section 4.8 + quiz |
| **Week VI**  
(feb 9 – feb 13) | section 4.8 | section 4.7/loose ends over ch. 4 | review | EXAM II |
| **Week VII**  
(feb 16 – feb 20) | section 5.1 | section 5.2 | section 5.2 | section 5.3 + quiz |
| **Week VIII**  
(feb 23 – feb 27) | section 5.3 | section 5.4 | section 5.4 | section 5.5 + quiz |
| **Week IX**  
(mar 2 – mar 6) | section 5.6 | section 5.6 | section 5.7 | Section 3.5 |
| **Week X**  
(mar 9 – mar 13) | review | EXAM III | review for final | go over exam III |
| **Finals Week**  
(mar 16 – mar 20) | FINAL EXAM | | | |

*No class*