

Math 083 Online Syllabus

Fall 2008

WC2

Course Description: Intermediate Algebra includes factoring, rational expressions and equations, radicals, quadratic equations, complex numbers, functions and relations, and exponential and logarithmic functions. Online students should expect to spend on average 6 - 10 hours a week on this course. Realize this is an average and some students may need to spend more or less time each week.

Prerequisites: Satisfactory score on the placement exam or satisfactory completion of MATH082 AND Reading Level I (RDNG 051).

Instructor: Debra Loeffler

Email: Thru WebCT or if not available, dloeffler@cCBCmd.edu 24 hour response.

Text: Intermediate Algebra, Charles McKeague, 8th edition. Recommended, but not required. All material needed in online, along with practice problems, so text is a supplement to the course.

Supplies: Students are required to have a scientific calculator for this course.

The lecture notes have been developed using PowerPoint, if the computer you are using does not have PowerPoint, you will need to download a FREE [PowerPoint Viewer](#).

Course Objectives

The overall course goals are:

- Identify functions and use function notation.
- Determine the domain and range of a function.
- Factor, add, subtract, multiply, and divide functions.
- Graph linear, quadratic, exponential and logarithmic functions.
- Solve quadratic equations by 1) factoring, 2) completing the square, 3) the quadratic formula, 4) graphing the function.
- Solve applications of quadratic functions.
- Perform operations on radical expressions.
- Perform operations on complex numbers.
- Solve radical equations.
- Simplify, factor, add, subtract, multiply, and divide rational expressions.
- Solve rational equations.
- Determine the domain and range of exponential and logarithmic functions.
- Recognize and graph conic sections.

Major Topics

The following modules will be covered in this course:

- Factoring
 - Factor out greatest common factor
 - Factor quadratics
 - Factor difference of two squares
 - Factor sum or difference of cubes
 - Solve equations by factoring
- Rational Expressions
 - Simplify rationals
 - Add, subtract, multiply, and divide rational expressions
 - Solve rational equations
- Radicals
 - Simplify radical expressions
 - Add, subtract, multiply, and divide radical expressions
 - Add, subtract, multiply, and divide complex numbers
 - Solve radical equations
- Quadratic Equations
 - Solve quadratic equations by factoring
 - Solve quadratic equations by completing the square
 - Solve quadratic equations by using the quadratic formula
- Functions and Relations
 - Evaluate functions
 - Graph quadratic functions
 - Find the minimum or maximum of quadratic functions
 - Graph other functions
 - Perform operations on functions
 - Find the composition of two functions
- Exponential and Logarithmic Functions
 - Evaluate exponential functions
 - Graph exponential functions
 - Translate between exponential and logarithmic functions
 - Graph logarithmic functions
 - Solve exponential and logarithmic functions
- Circles
 - Graph circles
 - Find equations of circles

Beginning the Course: Unit 0 has been set up to quiz you on the information from the syllabus, so it is important to go to that Unit first before beginning any of the other units. The quiz in this unit does not count in your grade, but I find that students who do not study this unit, have many questions that this unit answers, so my response to those questions will be to refer you back to the unit 0 information or syllabus where the question is answered. You will also create a discussion on the Discussion Board to tell me and the other students in the class about your self. The information should include: your feelings about math in general, what is your major, why you are taking an online course vs. a traditional in-class course, and any other

information that you think the class would be interested in knowing about you. SEE EMAIL and DISCUSSIONS below for rules using each. Your next step is to then start Unit 1 and continue until the course is completed. Remember to pay attention to the Calendar since that will be the only reminder of when quizzes and tests are to be completed.

There are times when WebCT Administration will have to “take down” webCt to do updates, etc., that may cause your test time to be shorter , or I may have announcements that will “pop up”, and these may include a unit that may have stopped working, etc. , so pay special attention to those “pop-ups” when they appear.

Method of Instruction: This course will use lectures (with audio and written transcripts), quizzes, tests, a cumulative final exam, discussion board, and email.

Requirement, Points and Evaluation: The grade received in this class is based on tests, quizzes, and the Final Exam grade. Check the Calendar for due dates! Students should complete practice problems and self-quizzes to verify their understanding of the material, even though these problems will not be graded and count in the final grade.

Scores of 90 - 100% will be graded 'A'

Scores of 80 - 89% will be graded 'B'

Scores of 70 - 79% will be graded 'C'

Scores lower than 70% will be graded 'F'.

Quizzes and Tests	% of Course Grade
Unit Tests (1 per unit, 1 attempt allowed, make-ups during the week before final exam.)	50%
Quizzes (2 attempts allowed: average of the two attempts)	20%
Final Exam	30%
Total Points	100%

There are also practice problems and self-quizzes after each objective that do not count in the grade. They are only for the student to test their knowledge of each topic.

All tests and quizzes are completed online. The Final Exam however must be completed on campus at one of the three main Testing Centers for CCBC (this does not include the extension centers). Quizzes are due by the last day that the test for that unit is due. All quizzes are open the first day of class, but end after each unit test is due, so you can work ahead with the quizzes, just not the tests. Although tests are available for 3 days, it does not mean that you have 3 days to complete it. Once you start a quiz or test, you will have only a specific amount of time to take it. Each quiz/test has a particular timeframe so make sure that you note the time required before you take the assessments. A clock will be seen in the upper right hand side of the computer screen to help you manage your time. Once the time limit has been met, no more answers can be

saved, so make sure that you “save” each answer as you go thru the quiz/test. You can always go back within the timeframe and change your answer, but you must “save” the answer again or it will revert back to the original one. Also make sure that you “submit” your quiz/test when you are finished. Your grade for quizzes/tests will not appear until the end of the timeframe (3rd day of test). If you run out of time for the quizzes/tests and are not able to submit it, I am able to go in and “force” submit it for you.

Due to unforeseen circumstances that would prohibit the student from taking a test on time, illness, computer glitches, etc., make-up tests are given the week before the final exam. Since you can take the quizzes twice, there are no make-up quizzes. No exceptions!

WebCt testing does have a few “quirks” (no equation editor) when typing in answers so here is the list of equivalencies: Note: email does not equation editor capabilities.

$\frac{x+2}{x-1}$ should be typed as $(x+2)/(x-1)$, make sure to use the ().

$(x+2)^2 \rightarrow (x+2)^2$ “^” for powers

$x^{\frac{1}{2}} \rightarrow x^{(1/2)}$

$\sqrt{x+2} \rightarrow \text{square}[x+2]$ where [] means root

$\sqrt[3]{x-1} \rightarrow \text{cube}[x-1]$

Attendance Policy: While there are not specific times for students to be online, students are expected to log in to the course at least two times per week. Students not logging into the course will miss announcements and may be referred to the Registrar as a "non-attending" student. Audits are not allowed in this online class. If a student changes to an audit, please be aware that at the end of the semester when grades are turned in, the AU will become an F for the course. Incompletes can be given in certain circumstances, like hospitalization, incarceration, but must be documented and 75% of the course must be completed with an average grade of a “C”.

Email & Discussions: WebCt email is used when the student wants to have a private conversation with me or other students. Discussions are for ALL to see and for ALL to respond. I also monitor the discussion board to make sure that only appropriate “talking” is going on, so BEWARE! Discussion is a good place to ask questions about solving problems since I am not always online but fellow students are and can respond faster. I expect that all students be courteous in their comments to emails and discussions.

Hints for Success

Here are some tips you should follow which will help you to succeed in this course:

- Set aside a specific time each week to work on this course. The estimated amount of time you should spend is 8 hours/week, more in summer/winter condensed semesters.
- Keep in touch with me and your classmates by frequently checking your course e-mail, bulletin board, and calendar. This will help build a sense of community among us. Using the various communications tools provided in this course effectively is the same as "raising your hand" and participating in class discussions.
- Familiarize yourself with published deadlines. Check your calendar!
- If your computer is not reliable, use one at the college or local library. While this may be inconvenient, you don't want to have a test/quiz lost due to computer issues.
- Ask for help when you need it.
- Remember that there are traditional ways for keeping in touch. Use the telephone, a fax, or make an appointment to meet with me on campus.