MAC 1105 – COLLEGE ALGEBRA (3 cr.) – Summer 2012
Section 27355: meets Monday/Wednesday 3:00 – 5:05 in Social Sciences Room 128

Professor: Brooke Quinlan  Email: bquinlan@hccfl.edu
Office: DSSC 220  Office Phone: 259-6313
My Website: http://www.hccfl.edu/faculty-info/brooke-quinlan.aspx (Bookmark it!)

The full version of the textbook is fine as well. (ISBN 0321559835)
The Student Solutions Manual is optional.

SOFTWARE: MathXL homework is required for this course. The bookstore has copies of the textbook
that have MathXL packaged with them. Or, you can buy a 12-month license for $50.00 at
www.mathxl.com (our bookstore also sells MathXL Access Codes). However, if you used
MathXL in a previous class, it is possible that the license will last through the end of this
course, so you need to contact MathXL’s technical support at 1-800-677-6337 to see if your
license lasts until at least July 23, 2012.

The MathXL course ID for this course is: XL0W-L11E-301Y-5JC2

CALCULATOR: You will need a scientific calculator (that has "ln" and "e^x" buttons) for some topics. A
graphing calculator is recommended but not required. I will use a TI-84 Plus in class.
You need to bring your calculator to class every day.
Cell phone calculators are not allowed at any time.

PREREQUISITE: Grade of C or better in MAT-1033 or appropriate score on the Math Placement Exam.

GRADING: The grading scale is the standard 10-point scale (90-100 is an A, etc.). The final grade is computed as follows:
  Attendance Average = 2%
  You Try Average = 3%
  Homework Average = 15%
  Test Average = 60%
  Final Exam = 20%

My Schedule
Available Office Hour times are shaded and bolded.

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Wednesday</th>
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<tr>
<td>2:30 – 3:00</td>
<td><strong>Office Hours</strong> DSSC 220</td>
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<td>3:00 – 5:05</td>
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SPECIAL ACCOMMODATIONS STATEMENT:
Any student whose disability falls within the American Disabilities Act (ADA) and requires accommodations should contact the Office of Services for Students with Disabilities. The office is located in the Student Service Building Room 204. You may also reach the office by phone at (813) 259-6035.

RESTRICTIONS ON RECORDING:
A student shall not make or receive any recording, including but not limited to audio and video recordings or photographs, during any class or meeting without the faculty member’s permission. Further, the student does not have permission to post class lectures on the web.

CLASS RULES:
- Cell phones are disruptive to your learning and to my teaching. Therefore, cell phones must be turned off and put away for the duration of class. If your cell phone is out for any reason, I will confiscate it until the end of class.
- I will deduct 10 points from your next test score if you use your cell phone (for any reason) during class.
- Cheating is not permitted. Any form of academic dishonesty will result in an “F” in the course and may result in HCC disciplinary action.

ATTENDANCE:
- Attendance will be taken at every class, and you are expected to attend every class meeting. History has shown that missing a single class meeting results in a 10-20% lower score on the following test due to missing all of the material taught on that day. I will not re-teach or provide notes for material that you missed when you were absent. It is your responsibility to get notes from a classmate for any classes that you miss, so you need to make a few friends in the class.
- Attendance counts as 2% of your final grade in the course. The attendance grade is calculated by dividing the number of days you were in class by the number of days that the class met.
- You are expected to arrive on time. Late arrivals will be marked as “Tardy”, and 2 Tardy’s will equal 1 unexcused absence when calculating the attendance grade.
- If you need to leave class early, let me know before class begins. If you leave class early without informing me prior to the class starting, then I will mark you absent for that day.

“YOU TRY”:
- During most lectures, I will teach a new topic, do several exercises, and then give you a problem or two that I call a “You Try” problem. Always write the “You Try” problems on an index card. At the beginning of the semester I will give you a few index cards. These are just a starter set; you need to get some index cards of your own in order to have enough for the whole semester.
- Occasionally, I will collect the index cards containing the “You Try” problems from that day. I will grade the collected “You Try” problems based on effort. Because you are working these problems as you are learning a topic, I don’t expect them to be exactly correct. But I do expect you to put in your best effort when attempting the problems.
- Sometimes at the end of a class, I will give you a problem (or two) and tell you to bring it to the next class meeting. These count as ”You Try” problems also and are fair game to be collected at the beginning of the next class, so make sure you always attempt these problems!
- At the end of the semester, the average of the collected “You Try” problems will count as 3% of your overall grade in the class.
HOMEWORK:

- The only way to learn math is by working exercises, so homework is required for the course. All homework will be completed online using MathXL software. The website for login is www.mathxl.com.

- If you do not have a computer at home, there are computer labs throughout campus that can be used for completing your homework assignments.

- MathXL homework is due by 11:59 p.m. on the dates specified on the attached schedule. There is one homework assignment for each section that we will be covering in the book, plus two review assignments.

- A 25% penalty will be applied to any questions submitted after the due date (and time) has passed.

- You can work on any homework in the course (with the 25% penalty applied) up until 3:00 on July 23rd (the start of the final exam).

- You can re-work a problem as many times as necessary in MathXL until you get the correct answer. If you attempt the same problem 3 times and get it wrong (a red “x” will appear over the problem number along the top of the window), then just hit the “Similar Exercise” button and the problem will regenerate with new values. Since you can re-work missed problems, there is really no reason to not have a perfect homework score (or at least an “A”!!!)

- The two lowest homework scores will be dropped at the end of the semester.

- Homework is worth 15% of your final grade in the course. If you do not have a passing grade on the homework, you will almost certainly NOT pass the course.

TESTS:

- There will be four in-class tests, but I will use only the three highest test grades to compute your overall test average, which counts as 60% of your final grade in the class.

- There will be NO makeup tests. If you miss one test, your remaining three test scores will be used to calculate your test average. Any additionally missed tests will receive a grade of zero.

- If you know that you will miss a test you must make prior arrangements with me in order to take the test in the testing center BEFORE THE REST OF THE CLASS TAKES THE TEST.

- No tests will be administered after the class has taken a test except for extreme circumstances, such as hospitalization. If there has been an extreme circumstance that caused you to miss a test, then you need to notify me via email as soon as possible (and before the next class meeting). FYI, "My car wouldn't start" is not an extreme circumstance. There are these things called taxis you can call and they come to your house and pick you up and take you wherever you need to go! It's like magic! Also, "I had a headache", "My allergies were acting up", and "I was up all night studying and didn't hear my alarm" are not "extreme circumstances" either. You need to be an adult and show up on test days.

FINAL EXAM:

- If you take ALL 4 TESTS and the average of all 4 tests is a 90% or higher, then you do NOT have to take the final exam. ☺ (When computing this average, I will count the Test Review bonus points for each test, but I will not include bonus points from volunteering, blood donation, or movie worksheets.)

- For those of you who do have to take the final exam, it will be cumulative and is worth 20% of the final grade in the course.
**BONUS POINT OPPORTUNITIES:**

There are four ways to get bonus points in this class, as outlined below. **Any bonus points earned from options B, C, and D will be added to the sum of your test grades.**

A. Test Reviews: On the bottom of the next page is a list of Test Review Problems which come from the Chapter Reviews in the textbook. Work these problems out in an orderly fashion. Number all of the problems and show all of your work for each problem. Then on the day of the test, you can hand these review problems in and I will look over them. The neatness and completeness of your work will determine the number of bonus points that will be added to your test (*between 0 and 2 bonus points*). Any bonus points that you earn for the Test Reviews are for that test only and are not transferable to other tests. **The Test Review problems MUST be handed in on the day of the test.**

B. Donating Blood: If you donate blood, I will award you **5 bonus points.** As proof, you must bring in the slip of paper they give you when you donate blood that has your name on it and the date of donation. You can donate blood every 8 weeks, so if you plan to do this twice during the semester, you need to donate near the beginning of the semester so there will be time to donate again before the end of the semester. (Note: if you are eligible to donate red blood cells using the ALYX system, this counts as **two** blood donations so you get the entire 10 points with that one donation. If you do ALYX, **make sure it is clearly noted on the paper they give you!**)

C. Volunteering: If you volunteer **4 hours** with a non-profit agency (such as a hospital, nursing home, animal shelter, etc.), I will award you **5 bonus points.** As proof, you must bring a letter from the volunteer coordinator or someone in charge that states what you did, how long you volunteered for, the dates you volunteered on, and includes that person’s name and phone number. **You can take advantage of options B &/or C up to twice a semester for a maximum of 10 bonus points.**

Thus, to get your maximum of 10 points, you can EITHER

1. donate blood twice (5 points × 2)
2. volunteer for 8 hours (4 hours + 4 hours = 5 points × 2)
3. donate blood once (5 points) + volunteer for 4 hours (5 points)

D. I have several copies of *An Inconvenient Truth* and *Who Killed the Electric Car?* on DVD. You can “check out” a copy of these DVDs from me, watch them, and fill out the worksheet about the movie (the worksheets are located on my website: [http://www.hccfl.edu/faculty-info/brooke-quinlan.aspx](http://www.hccfl.edu/faculty-info/brooke-quinlan.aspx)). Each movie/worksheet is worth **2 bonus points.** If you have already seen one or both movies, then you can still receive the bonus points if you can convince a friend or family member who has NOT seen the movie to watch it and fill out the non-math portion of the worksheet. You must still complete the math portion. If you watch both movies and complete the worksheets, you can get **4 total bonus points.**

**Bonus Point Opportunities Summary:**

- 2 points for each Test Review = 8 points
- Blood donation/volunteer work points from options B and/or C = 10 points
- 2 points for each movie times 2 movies = 4 points
- **TOTAL NUMBER OF BONUS POINTS AVAILABLE IN THE COURSE = 22**

All bonus points get added to the "Tests" portion of your grade. No bonus points will be added to the final exam, "You Try", homework, or attendance portions of your grade. Please take advantage of these bonus point opportunities throughout the semester, and don't wait until the very end of the semester to do them.
COURSE OUTCOMES:
Upon completion of the course, the student should be able to:

1. FUNCTIONS AND GRAPHS
   a. Define and identify relations and functions.
   b. Find the domain and range of relations and functions.
   c. Use function notation.
   d. Evaluate and simplify the difference quotient of a function.
   e. Identify linear functions and solve applied problems with linear functions.
   f. Perform operations with functions, including composition.
   g. Understand characteristics and properties of the graphs of functions, including symmetry, extrema, and intervals of increasing, decreasing, constant.
   h. Graph basic functions.
   i. Apply graphical transformations to functions.
   j. Graph piecewise defined functions.
   k. Find the inverse of a function algebraically and graphically.

2. POLYNOMIAL FUNCTIONS
   a. Graph quadratic functions and Solve optimization problems involving quadratic functions.
   b. Use characteristics of polynomial functions to graph, including end behavior and multiplicity of zeros.
   c. Solve polynomial inequalities.

3. RATIONAL FUNCTIONS
   a. Graph rational functions including intercepts, vertical and horizontal asymptotes, and end behavior.
   b. Solve rational inequalities.
   c. Solve application problems involving rational functions.

4. EXPONENTIAL AND LOGARITHMIC FUNCTIONS
   a. Convert between exponential and logarithmic form.
   b. Evaluate logarithmic and exponential expressions.
   c. Use and apply the properties of logarithms, including change of base.
   d. Graph exponential and logarithmic functions.
   e. Solve exponential and logarithmic equations.
   f. Solve applications of exponential growth and decay.

5. SYSTEMS OF EQUATIONS AND INEQUALITIES
   a. Solve systems of linear equations in 3 variables by elimination/substitution.
   b. Solve systems of non-linear equations in 2 variables.
   c. Solve a system of non-linear inequalities graphically.
   d. Solve application problems using systems of equations.

TEST REVIEW PROBLEMS
DO ONLY THE ODD-NUMBERED PROBLEMS UNLESS AN EVEN-NUMBERED PROBLEM IS SPECIFIED!
These reviews are worth up to 2 points per test. You MUST show your work. No bonus points will be awarded if only answers are submitted.

Test 1:  Ch. 1 Review, p.193-194: #58, 60, 62, 63, 66-69 all, 86, 87
          Ch. 2 Review, p. 304-306: #1, 3, 7, 9-12 all, 17, 19, 21-23 all, 25-28 all, 31-37 odd, 38, 41, 43, 45, 47, 48

Test 2:   Ch. 2 Review, p. 304-308: #49, 50, 53, 54-56 all, 58, 59, 62, 65, 67, 70-75 all, 79, 80, 81 (part a only), 97, 98, 101-105 all
          Ch. 3 Review, p. 406-407: #3-7 all, 10-13 all, 16, 17, 19-25 odd

Test 3:   Ch. 3 Review, p. 406-407: #57-60 all, 69-73 all
          Ch. 5 Review, p. 549-551: #1, 5, 12, 13, 15, 25-31 odd, 35, 39-43 odd, 47-55 odd

Test 4:   Ch. 2 Review, p. 307-308: #87-96 all
          Ch. 4 Review, p. 475-478: #1-7 all, 13-27 odd, 41, 42, 50, 51-57 odd, 58, 59, 65-71 odd, 74-77 all, 83, 84, 86, 87
MAC 1105 – College Algebra – Summer 2012
TENTATIVE SCHEDULE (subject to change)

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture</th>
<th>Assignment Due</th>
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<tbody>
<tr>
<td>M 5/14</td>
<td>Orientation, 1.5, 1.6</td>
<td>—</td>
<td>M 6/18</td>
<td>3.5, 3.6</td>
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<td>T 6/19</td>
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<td>W 5/16</td>
<td>1.6, 2.1</td>
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<tr>
<td>Sun 5/20</td>
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<td>Sun 6/24</td>
<td>HW 3.5, 3.6, 5.1, 5.2</td>
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<td>M 5/21</td>
<td>2.1, 2.2</td>
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<td>M 6/25</td>
<td>5.4, 5.5, Review</td>
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<tr>
<td>T 5/22</td>
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<td>T 6/26</td>
<td>HW 5.4, 5.5</td>
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<td>W 5/23</td>
<td>2.3, 2.4, Review</td>
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<td>W 6/27</td>
<td>TEST 3</td>
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<td>R 5/24</td>
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<td><em>Intermediate Algebra Topics</em> Quiz</td>
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<td>Sun 5/27</td>
<td>—</td>
<td>HW Intermediate Algebra Refresher, 1.5, 1.6, 2.1</td>
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<td>M 5/28</td>
<td>No Class Memorial Day</td>
<td>M 7/2</td>
<td>2.7, 4.1</td>
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<td>TEST 1</td>
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<td>Sun 7/22</td>
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<td>HW Final Exam Review</td>
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<td>FINAL EXAM</td>
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★ Last day to withdraw without a grade: Monday, June 25 ★