Intermediate Algebra
MAT 1033 (Seq. #: 394240)
Summer – Session 3, 2010, Broward College
TENTATIVE Course Syllabus

Instructor: Gregory Maxwell
Office: 57-139
Phone: (954) 201-2283 (Math Main Office)
Fax: (954) 201-2479
Website: http://webhome.broward.edu/~gmaxwell
Email: gmaxmath@yahoo.com; gmaxwell@broward.edu

Time and Location: Mon. & Wed. 6:00 – 9:20 PM, in Bldg. 47, Room 303 (North Campus)
Office Hours: Mon. & Wed. 5:30 – 6:00 PM, in 47-303; or by appointment

ISBN: 0321127137
Prerequisite: Basic Algebra II; OR 1 year high school algebra & adequate score on placement test.
Co-requisite: None
Course Description: This is a continuation of algebra and prepares students for College Algebra (MAC 1105). It deals with topics such as sets, properties of real numbers, linear equations & inequalities, exponents & radicals, products & factoring, algebraic fractions, and quadratic equations; along with applications of these topics. **This course does not satisfy Gordon Rule mathematics graduation requirements.** This course counts as elective credit only.

Course Website and Update information: Announcements, important and useful links, notes, PowerPoint presentations, and much more will be posted on the course website (http://webhome.broward.edu/~gmaxwell/mat1033). Be sure to check the site everyday for updates.

Assessment:

Homework: There will be regular homework assignments, *not collected.* They are for practice. See below for assigned exercises.

Quizzes: There will be a **10-minute** Multiple-Choice quiz given at the **BEGINNING** of each class, except on test days. In addition, a take-home quiz will be assigned the class before a test. This quiz will be collected at the beginning of class on test days. Late quizzes will not be accepted. Quizzes will be based on homework and class instruction. The best ten (10) quiz scores will be counted together (total of approx. 100 points) as a test.

Tests: There will be four one-hour Multiple-Choice midterm exams, each worth 100 points. A two-hour final exam, given at the end of the semester, will count as a total of 200 points. All tests contain questions from previous sections. That is, all tests are cumulative.

Tutoring & Extra Credit: Extra-credit will be discussed in class.
For each test, it is your responsibility to bring one 5-choice, 100-item GREEN Scantron Answer Sheet, (Form No. 882-E-BC), with a number 2 pencil to class for each test and the final. (These forms are available in the campus bookstore.) You should complete the left hand side of the Answer Sheet before coming to class. No additional time will be allocated. You should transfer the answer one at a time to the Scantron Answer Sheet. Only answers recorded on the Answer Sheet will be counted.

**BE SURE TO TAKE A PICTURE ID TO EACH QUIZ AND TEST.**

There are no make-up quizzes. Tests will be made up only with a valid, documented reason, as stipulated by the PBCC catalogue. No time extensions will be given to latecomers. A missed quiz or examination scores a 0.

Exam Dates:

- Exam #1: July 7, 2010
- Exam #2: July 19, 2010
- Exam #3: July 26, 2010
- Exam #4: August 2, 2010
- Final Exam: *August 4, 2010* (Tentative)

**Grading:** The grading scale is as follows:

<table>
<thead>
<tr>
<th>Course Grade</th>
<th>Course % Score Greater than or equal to</th>
<th>Course % Score Less than</th>
<th>Total Points (Out of 700)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90</td>
<td>627 &amp; Over</td>
<td>627 &amp; Over</td>
</tr>
<tr>
<td>B</td>
<td>80</td>
<td>557 – 626</td>
<td>557 – 626</td>
</tr>
<tr>
<td>C</td>
<td>70</td>
<td>487 – 556</td>
<td>487 – 556</td>
</tr>
<tr>
<td>D</td>
<td>60</td>
<td>417 – 486</td>
<td>417 – 486</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>0 – 416</td>
<td>0 – 416</td>
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</tbody>
</table>

**Special Dates:**

- July 1: Last Day to Drop with 100% Refund; Last Day to change from Credit to Audit
- July 22: Last Day to Withdraw (indicated on record)
- August 4: Final Exam (*Tentative*)

**Useful Links to help you with Intermediate Algebra (and other Math Courses):**

- **InterAct Math:** [http://www.interactmath.com/](http://www.interactmath.com/)
  
  Note: Click “Enter”, then scroll to book author “Lial: Intermediate Algebra, 9e” (choose the one with the cover that looks like your book). You can then do practice questions online, with worked examples and guidance.


- **Intermediate Algebra PowerPoint Presentations by Prof. Shawna Haider of Salt Lake Community College** [http://rwdacad01.slcc.edu/academics/dept/math/shaider/Powereerpoint/Math1010internet/index.html](http://rwdacad01.slcc.edu/academics/dept/math/shaider/Powereerpoint/Math1010internet/index.html)
**Course Core Objectives**

**Student should be able to:**
1. Apply the product rule, negative exponent rule and/or quotient rule to exponents. Write numbers in scientific notation and use the rule of exponents with scientific notation. The students should be able to work with the power rules for exponents, add and subtract polynomials, use \( P(x) \) notation, multiply two polynomials, find the difference of two squares, find the square of a binomial, factor by grouping, factor out common factors, factor trinomials, factor by substitution, factor the difference of two squares, perfect square trinomial, difference/sum of two cubes, factor using more than one technique, and solve word problems using the zero-factor property.

2. Define rational expressions, write a rational expression with a specified denominator, multiply/divide/add/subtract rational expressions; simplify complex fractions; divide polynomials, solve equations with rational expressions.

3. Use the rule of exponents with rational exponents, use radical notation, write exponential expressions with radicals, rationalize denominators, write rational exponents in lowest terms, simplify radical expressions, multiply radical expressions, use the power rule to solve equations with radicals.

4. Write an equation with fractions in quadratic form, use quadratic equation to solve word problems, solve an equation that is quadratic in form by substitution; add, subtract, multiply and divide complex numbers, find powers of \( i \); use the square root property, solve quadratic equations by completing the square, use the quadratic formula to solve quadratic equations and word problems, use the discriminant, be able to apply the Pythagorean formula to word problems.

5. Understand the concept and be able to graph and interpret graphs in the Cartesian Coordinate system and develop equations for lines.

6. Understand the basic concept of function including domain and range.

7. Be able to solve linear systems of equations.

8. Be able to graph linear inequalities.

### Weekly Schedule (Tentative)

<table>
<thead>
<tr>
<th>Week</th>
<th>Tuesday</th>
<th>Thursday</th>
<th>Assessment/Additional Info.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>2.1 – 2.7</td>
<td>3.1 – 3.5</td>
<td><strong>July 1:</strong> Last Day to Drop with 100% Refund Review Ch. 1 on your own</td>
</tr>
<tr>
<td>(June 28 &amp; 30)</td>
<td></td>
<td>Quiz 1 due &amp; Quiz 2</td>
<td></td>
</tr>
<tr>
<td>Week 2</td>
<td>NO CLASS</td>
<td><strong>Exam 1</strong> 4.1, 4.3, 5.1</td>
<td><strong>Exam 1</strong> is based on Ch. 2 &amp; 3</td>
</tr>
<tr>
<td>(July 5 &amp; 7)</td>
<td><strong>Indep. Day Holiday</strong></td>
<td>Quiz 3 due</td>
<td></td>
</tr>
<tr>
<td>Week 3</td>
<td>5.2 – 5.4, 6.1 – 6.3</td>
<td>6.4 – 6.5, 7.1 – 7.3</td>
<td><strong>July 22:</strong> Last Day to Withdraw; Last Day to Change from Credit to Audit or change from Audit</td>
</tr>
<tr>
<td>(July 12 &amp; 14)</td>
<td>Quiz 4 due &amp; Quiz 5</td>
<td>Quiz 6</td>
<td></td>
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<tr>
<td>Week 4</td>
<td><strong>Exam 2</strong> 7.4 – 7.5, 8.1</td>
<td>8.2 – 8.6</td>
<td><strong>Exam 2</strong> is based on Sec. 4.1, 4.3, Ch. 5, 6 &amp; Sec. 7.1 – 7.3</td>
</tr>
<tr>
<td>(July 19 &amp; 21)</td>
<td>Quiz 7 due</td>
<td>Quiz 8</td>
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<tr>
<td>Week 5</td>
<td><strong>Exam 3</strong> 8.7, 9.1 – 9.2</td>
<td>9.2 – 9.4</td>
<td><strong>Exam 3</strong> is based on Ch. 7, 4 and Sec. 8.1 – 8.6</td>
</tr>
<tr>
<td>(July 26 &amp; 28)</td>
<td>Quiz 9 due</td>
<td>Quiz 10</td>
<td></td>
</tr>
<tr>
<td>Week 6</td>
<td><strong>Exam 4</strong> Final Exam Review</td>
<td><strong>Final Exam</strong></td>
<td><strong>Exam 4</strong> is based on Ch. 8 &amp; 9 Final Exam is 2 hours long</td>
</tr>
<tr>
<td>(Aug. 2 &amp; 4)</td>
<td>Quiz 11 due</td>
<td>Quiz 12 due</td>
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<td><strong>Note:</strong> It is possible that the Final Exam may be given on Aug. 9</td>
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</table>

**Note:** Read the assigned sections BEFORE the class meets.

**Reading and Homework Assignments:** (Unless otherwise specified, you should read the entire section and do the recommended exercises before the class meets). **NOTE:** These are the minimum required exercises. You should do more if possible. Additional assignments may be given. It is also strongly recommended that you attempt the Review Exercises at the end of each chapter in addition to the assigned exercises. Along with homework and class work, tests and quizzes will also be based on Review Exercises at the end of chapters.

Do all ODD-numbered questions in each section identified in the Course Schedule.