INSTRUCTOR: Professor Emeritus Donald R. Coscia  OFFICE: Online

COURSE: MAT111-Algebra II  SECTION & CRN: 159 – CRN# 93296

PREREQUISITE: MAT007-Algebra I or equivalent

TELEPHONES: (631) 451-4740 personnel extension: *5381 (Prof. Donald R. Coscia)
(631) 451-4263 (FAX)
(631) 451-4270 (Mathematics Department Day Secretary)
(631) 696-4910 (college information)

HOMEPAGE:  http://www2.sunysuffolk.edu/cosciad/

OFFICE HOURS: Using Desire2Learn Course Messages

Copies of the departmental syllabi for all math courses are available in the Math Office (R352). The following items are specific requirements for the course:

OBJECTIVES:
Upon successful completion of this course, students will be able to:
1. solve the following types of equations: linear equations, quadratic equations, absolute-value equations, equations involving rational expressions, equations involving radicals, systems of two equations in two unknowns, systems of three equations in three unknowns;
2. solve the following types of inequalities: linear inequalities, absolute-value inequalities, systems of linear inequalities in two variables;
3. graph the following: lines, parabolas, linear inequalities in two variables;
4. perform the elementary operations on the following: polynomials, rational expressions, complex numbers, radicals;
5. simplify algebraic expressions including: reducing to lowest terms; complex fractions; algebraically rewriting results using basic definitions, laws of exponents, distributive law, factoring, and other basic properties of real numbers; rationalizing the denominator;
6. set up and solve word problems which apply linear equations, quadratic equations, equations involving rational expressions;

7. interpret the basic relationships linking linear equations and linear inequalities in two variables, and parabolic equations to their graphs such as: solution sets, slope, parallel and perpendicular lines, forms of equations of lines, x-intercepts, y-intercepts, intersection of lines.

**STUDENT REQUIREMENTS:**
The method of instruction will include reading textbooks, viewing lecture videos, daily student journal reports, weekly on-line discussions, Study Plan exercises, and topic/chapter examinations. The minimum requirements for successful completion of this course are:

1. Take all chapter examinations;
2. Do all Homework assignments on time;
3. Complete Journal Reports;
4. Participate in chapter discussions (3 post per chapter);
5. Achieve an average grade of 60% (70%, if you need to transfer the grade) or higher
6. In addition to the course text, and supplemental materials, students will also be required to use a calculator.
7. Students are expected to use Microsoft Word and an equation editor to submit discussion posts;
8. Students will be required to install plug-ins and software for CourseCompass (Access Code packaged free with new Text package or may be purchased on-line).

**COLLEGE-WIDE ATTENDANCE POLICY:**
All students are expected to attend every session of each course for which they are registered. Students are responsible for all that transpires in class whether or not they are in attendance. The College defines excessive absence or lateness as more than the equivalent of one week of class meetings during the semester. Excessive absence or lateness may lead to failure in a course or removal from the class roster.

**INSTRUCTOR’S ATTENDANCE POLICY:**
Attending class means that a student logs into the course websites and participate in class activities (contribute to class discussions with posts addressing course content, make Journal posts, complete Homework exercises, and take examinations are all considered class activities) at least three (3) times a week during the semester. Failure to attend class will NOT be considered withdrawn from the class under any circumstances and a student will receive a Final Course Grade as described below.

**WITHDRAW POLICY:**
*If a student wishes to withdraw from the class, it is the student's responsibility to submit the necessary paperwork to the Registrar's Office on or before the semester's Midterm (as posted on the Suffolk Community College Academic Calendar).* No W will be assigned by the instructor as it is not an academic grade, but rather an attendance status determined by the student. Lack of participation (contribute to class discussions with posts addressing course content, make Journal posts, complete Homework exercises, take practice examinations, and take scheduled examinations are all considered
class activities) does NOT constitute withdrawing from the class. Failure to withdraw in a timely fashion will result in the student's final course grade being calculated as if the student had participated in all class activities (missing class activities receive a grade of 0 or F).

**GRADING PRACTICE:**
Each student is required to submit all chapter examinations (there will be 9 chapter examinations), Homework exercises (there will be 390 exercises, approximately 28 exercises per week, 6 exercises per day) given during the semester, D2L Journal Reports, and chapter-posts on the D2L Discussion Board. There will be no make-up examinations or Homework exercises. Submissions of chapter examinations and Homework exercises are due by 11:59 P. M. ET on the end of the chapter due date. A grade of zero (0) will be given to any submission that is late.

The student's final average will be determined as follows:

1. Participation: 20% [NOTE: This consists of thirteen (13) Journal Reports for the semester and twenty-seven (27) Discussion Board posts for the semester]
2. Nine (9) Chapter Examination Average: 40%
3. Comprehensive Final Examination: 10%
4. Three-hundred ninety (390) Homework Exercises for the semester: 30%

A student’s final course grade will be based on the student’s final average as follows:

<table>
<thead>
<tr>
<th>Final Course Grade</th>
<th>Final Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 – 100%</td>
</tr>
<tr>
<td>B+</td>
<td>89 – 85%</td>
</tr>
<tr>
<td>B</td>
<td>80 – 84%</td>
</tr>
<tr>
<td>C+</td>
<td>75 – 79%</td>
</tr>
<tr>
<td>C</td>
<td>70 – 74%</td>
</tr>
<tr>
<td>D+</td>
<td>65 – 69%</td>
</tr>
<tr>
<td>D</td>
<td>60 – 64%</td>
</tr>
<tr>
<td>F</td>
<td>Less than 60%</td>
</tr>
</tbody>
</table>

**TEXTBOOK/e-Book:**

by Margaret L. Lial, John Hornsby, and Terry McGinnis
Addison-Wesley Publisher, Boston

with

CourseCompass Access to SCC-MAT111-Fall2011  Course ID: coscia64339

This textbook (new) package should come with a student access code to the website Course Compass/MyMathLab (http://www.coursecompass.com/). It can be purchased at the Suffolk CCC Ammerman Campus bookstore (http://www3.sunysuffolk.edu/Academics/bookstores.asp). If you do not have that student access code (you purchased a used textbook), you can purchase CourseCompass access at the website - http://www.coursecompass.com/.

*Alternately*, you do not have to purchase the printed textbook and can purchase only the CourseCompass access to its website, which contains an e-Book version of the textbook - http://www.coursecompass.com/. The on-line chapter Study Plan exercises, videos, power point slides, solution guides and topic/chapter examinations are all located on the CourseCompass website. Hence, you MUST have access to CourseCompass’ SCC-MAT111-Fall2011 Course ID: coscia64339.

**WEEKLY OUTLINE OF TOPICS:**
Please note that the Topic/Chapter Examinations you have a two (2) to three (3) day time frame to take the examination! Each one is due BEFORE 11:59 PM ET of the date due.

<table>
<thead>
<tr>
<th>Topics</th>
<th>Chapters</th>
<th>Approximate Time (Including Examinations)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Elementary Algebra Review</strong></td>
<td>1</td>
<td>1 week</td>
</tr>
<tr>
<td>1. arithmetical operations on integers and rationals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. terminology: associate, commutative and distributive properties; subsets of reals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Note: appropriate review topics can be covered as each core topic is introduced.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Examination on Chapter 1</strong></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>B. Review Linear Equations in One Variable</strong></td>
<td>2</td>
<td>1 week</td>
</tr>
<tr>
<td>1. addition and multiplication principles introduced and used in solution process with integral coefficients/constants and parentheses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. solution process with rational and decimal coefficients/constants and parentheses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. formula evaluation and rearrangement (literal coefficients/constants)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. word problems (age, coin, geometric, consecutive integers).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C. Linear Inequalities in One Variable</strong></td>
<td>2</td>
<td>1/2 week</td>
</tr>
<tr>
<td>1. review number line graphing of solution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. compound inequality statements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topics</td>
<td>Chapters</td>
<td>Approximate Time (Including Examinations)</td>
</tr>
<tr>
<td>--------</td>
<td>----------</td>
<td>------------------------------------------</td>
</tr>
</tbody>
</table>
| **D. Absolute Value (linear domains)**
  1. \( c \left| ax + b \right| + d = e \)
  2. \( c \left| ax + b \right| + d < e \) and \( c \left| ax + b \right| + d > e \)
  3. number line graphing of solution
  **Examination on Chapter 2** | 2 | 1/2 week |
| **E. Graphs of Lines in Two Variables**
  1. point-slope form
  2. slope-intercept form
  3. slope of parallel and perpendicular lines
  4. formula for the distance between two points
  5. sketching linear inequalities in two variables
  **Examination on Chapter 3** | 3 | 1 week |
| **F. Systems of Equations**
  6. elimination and substitution techniques for 2x2 and 3x3 systems
  7. graphical interpretation of 2x2 and 3x3 systems, including inconsistent and dependent systems
  8. appropriate word problems (as in item B4 above, as well as motion and interest)
  **Examination on Chapter 4** | 4 | 1 week |
| **G. Polynomials**
  1. properties of integral exponents
  2. four basic operations (including long division)
  **Examination on Chapter 5**
  3. factoring common factors
  4. factoring by grouping (including multi-termed factor)
  5. factoring \( ax^2 + bx + c \)
  6. special products and factoring (perfect square trinomials, difference of two squares, sum/difference of two cubes)
  **Examination on Chapter 6** | 5 & 6 | 2 weeks |
| **H. Rational Expressions**
  1. lowest term reduction
  2. four basic operations on rational expressions
  3. equations involving rational expressions | 7 | 2 weeks |
<table>
<thead>
<tr>
<th>Topics</th>
<th>Chapters</th>
<th>Approximate Time (Including Examinations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. complex fractions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. variation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. appropriate word problems (motion, work, etc.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Examination on Chapter 7**

I. Rational Exponents and Roots
   1. exponential properties applied to rational exponents
   2. simplified radical form
   3. four basic operations on radical expressions
   4. equations with radicals
   5. four basic operations on complex numbers

**Examination on Chapter 8**

J. Quadratic Equations
   1. solutions by factoring
   2. completing the square
   3. quadratic formula usage and discriminant
   4. quadratic form equations
   5. graphing parabolas
   6. word problems

**Examination on Chapter 9**

MATHEMATICS LEARNING CENTER:
Free tutoring and use of computer software is available in the Riverhead Building, room R235, the Math Learning Center. Hours are posted on the door. You must sign in each time you use the MLC. The college and the mathematics department support the MLC. The MLC’s website is [http://www3.sunysuffolk.edu/Academics/Dept/Mathematics/MLC.asp](http://www3.sunysuffolk.edu/Academics/Dept/Mathematics/MLC.asp).

MISCELLANEOUS INFORMATION:

- Students are required to use the Discussion Board area (D2L MAT111 course website) for each chapter. Use the Discussion Board area for discussions of course concepts with other students.
- Students are required to post on the Journal Report area (D2L MAT111 course website) by the end of each Wednesday. Use the Journal Report area to describe to your Professor what activities you have accomplished in MAT111 for each week.
- Students are encouraged to use the Message area (D2L MAT111 course website) for private communications with the Professor. Use the Message area for private discussions of course procedures with your Professor.
- Students can use a calculator
SUPPLEMENTARY READING:
The readings associated with this course are within your textbook or e-Book. Should you decide you need additional material, do not hesitate to use alternate sources. If your post refers to a source other than your text, please indicate where it is from so that we can all have access to it.