Course Description
This course covers variables and symbols; scientific notation; formulas and literal equations; slope, intercepts, and equations of lines; graphs of linear and quadratic functions; graphs of linear inequalities; solving systems of linear equations; polynomials, products and factors; roots, rational exponents, and complex numbers; rational expressions; solving linear, quadratic, and higher order equations; solving linear inequalities; an introduction to exponential and logarithmic functions, and applied problem solving. This course requires the use of an online learning system. 3 credits

Prerequisite: MATH 050 or its equivalent or Placement test

Course Objectives
Upon successful completion of the course, the student will be able to:

1. Use the properties of real numbers to simplify and evaluate expressions.
2. Solve linear equations and inequalities.
3. Use and transform formulas and functions.
4. Graph linear equations and inequalities in one and two variables.
5. Write the three forms of the equation of a line.
6. Solve systems of linear equations by graphing, substitution, and addition.
7. Apply the laws of exponents and use scientific notation.
8. Factor and perform operations with polynomials.
9. Solve quadratic equations by three methods: factoring, completing the square, and by using the Quadratic Formula.
10. Graph quadratic equations.
11. Perform operations with rational algebraic expressions, and solve rational equations.
12. Simplify and perform operations with radical expressions and rational exponents.
13. Use exponential and logarithmic functions.
14. Solve word problems using one or more of the above skills.
Course Requirements
Students are expected to attend all scheduled classes, do the homework assigned each day for the next class, take tests, and be active participants in the class. Students are expected to be fully registered and working in the online learning system by the end of the third week of the semester.

There are required electronic assignments in MyMathLab.
- Homework for each section.
- Mastery Quiz for each Chapter.

Student Evaluation and Testing

**Unit Assessments (Tests):** At the end of each unit (there are 4 units), a two part assessment will be completed by all students in the class. The first part will be a take home honor test and will consist of problem solving questions. The take home honor test will be due on the date specified on the assessment. Late take home test submissions will be assessed the value of one question for each calendar day late. The second part will consist of an in-class test and will concentrate on the application of properties and techniques (mechanics). The score from both tests will be combined to calculate an overall grade for the unit.

**MML Mastery Quizzes:** At the end of each chapter, a MML Mastery Quiz will be completed by all students in the class. The Mastery Quiz for each chapter will be due on the date specified in MML. Each student will take the quiz and submit their work on paper to the instructor on the class meeting after the MML mastery quiz closes. MML allows two chances at the mastery quiz, please submit the paperwork for the mastery quiz you would like me to consider for grading.

**Grading Policy:** Test will count 60% towards your final grade. Mastery Quizzes will count 30%. Homework will count 10% of the final grade.

**Test Makeup Policy:** If you are absent the day of an in class test, you have 1 calendar week to make up the test. After the week has elapsed, a grade of zero (0) will be assigned for the test. The take home honor test will be due on the date specified on the test. Late submissions will be assessed a penalty of one question for each calendar day late.

**Attendance Policy:** Attendance in class is critical to your success in this course and is mandatory. Three consecutive absences will result in an automatic failure (AF), and 5 cumulative absences will result in an automatic failure (AF). There is no such thing as an excused absence. Make your doctor appointments and schedule your other commitments when you are not scheduled for class.

**Extra Credit Assignment:** MyMathLab (MML) has a tool for tracking objectives mastered through the homework, mastery quizzes, and the study plan. At the end unit, the total number of objectives mastered for each chapter from MML will be used to calculate an extra credit score.
The grading policy stated in the SMCC Student Handbook for your final course grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
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<tbody>
<tr>
<td>A</td>
<td>93 - 100</td>
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<tr>
<td>A-</td>
<td>90 – 92</td>
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<tr>
<td>B+</td>
<td>87 - 89</td>
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<tr>
<td>B</td>
<td>83 - 86</td>
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<tr>
<td>B-</td>
<td>80 - 82</td>
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<td>C+</td>
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<td>C-</td>
<td>70 - 72</td>
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<td>D+</td>
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<td>D</td>
<td>63 - 66</td>
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<tr>
<td>F</td>
<td>fail</td>
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**Study Groups:** I strongly encourage you to form a study group with other students in the class. Social learning is a powerful educational tool. There are classrooms and other out of the way places that are great for a study group meeting. The Learning Commons on the second floor of the Campus center is also a great place for a study group to meet. If necessary, I would be willing to attend the occasional study group meeting to help with common issues.

**Semester End:** The semester ends for MATH 140 Wednesday August 13, 2014. Any assignment turned in after, August 13, 2014 will not be used to assess your final grade.

**Required Text, Tools, and/or Supplies**

2. Access to Course Compass/My Math Lab
3. Scientific calculator

**Required Course Topics, MATH140**

**Chapter 1  Review of the Real Numbers**

1.1 Basic Concepts
1.2 Operations on Real Numbers
1.3 Exponents, Roots, and Order of Operations
1.4 Properties of Real Numbers

**Chapter 2  Linear Equations, Inequalities & Applications**

2.1 Linear Equations in One Variable
2.2 Formulas and Percents
2.3 Applications of Linear Equations
2.4 Further Applications of Linear Equations
2.5 Linear Inequalities in One Variable
2.6 Set Operations and Compound Inequalities (Objectives 2 & 4 only)
2.7 Absolute Value Equations and Inequalities

**Chapter 3  Graphs, Linear Equations, and Functions**

3.1 The Rectangular Coordinate System (Objectives 1–6 only)
3.2 The Slope of a Line
3.3 Linear Equations in Two Variables
3.4 Linear Inequalities in Two Variables
3.5 Introduction to Relations and Functions
3.6 Function Notation and Linear Functions
Chapter 4  Systems of Linear Equations 4.1, 4.2, 4.3 (exclude 4.4)
4.1 Systems of Linear Equations in Two Variables
4.2 Systems of Linear Equations in Three Variables (Objectives 1 & 2 only)
4.3 Applications of Systems of Linear Equations (Objectives 1–3 only)

Chapter 5  Exponents, Polynomials, & Polynomial Functions all sections
5.1 Integer Exponents and Scientific Notation
5.2 Adding and Subtracting Polynomials
5.3 Polynomial Functions and Graphs (Objectives 1 & 2 only)
5.4 Multiplying Polynomials (Objectives 1–5 only)
5.5 Dividing Polynomials (Objectives 1 & 2 only)

Chapter 6  Factoring all sections
6.1 Greatest Common Factors and Factoring by Grouping
6.2 Factoring Trinomials (Objectives 1, 2, & 4 only)
6.3 Special Factoring
6.4 A General Approach to Factoring
6.5 Solving Equations by Factoring

Chapter 7  Rational Expressions and Functions all sections
7.1 Rational Expressions and Functions; Multiplying and Dividing
7.2 Adding and Subtracting Rational Expressions
7.3 Complex Fractions
7.4 Equations with Rational Expressions and Graphs (Objectives 1 & 2 only)
7.5 Applications of Rational Expressions (Objectives 1-3, & 5 only)
7.6 Variation (Objectives 1-3 only)

Chapter 8  Roots, Radicals, & Root Functions all sections
8.1 Radical Expressions and Graphs (Objectives 1, 2, 4, & 5 only)
8.2 Rational Exponents
8.3 Simplifying Radical Expressions (Objectives 1, 2, 3, & 5 only)
8.4 Adding and Subtracting Radical Expressions
8.5 Multiplying and Dividing Radical Expressions
8.6 Solving Equations with Radicals (Objectives 1, 2, & 3 only)
8.7 Complex Numbers

Chapter 11  Inverse, Exponential, & Logarithmic Functions 11.2 & 11.3 only
11.2 Exponential Functions (Objectives 1 & 3 only)
11.3 Logarithmic Functions (Objectives 1, 2, & 3 only)

Chapter 9  Quadratic Equations & Inequalities 9.1–9.4 only (exclude 9.5)
9.1 The Square Root Property and Completing the Square
9.2 The Quadratic Formula (Objectives 2 & 3 only)
9.3 Equations Quadratic in Form
9.4 Formulas and Further Applications (Objectives 3 & 4 only)
Chapter 10  Additional Graphs of Functions and Relations  10.3 only

10.3  More About Parabolas and Their Applications
(Objectives 1, 2, 3, & 4 only; for objective 1, begin with example 3 to exclude finding the vertex by completing the square)

Study Skills
In addition to the topics noted above, the textbook does a good job discussing study skills. Look for these as follows:

<table>
<thead>
<tr>
<th>Ch 1</th>
<th>Using Your Math Textbook</th>
<th>p xxii</th>
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<tbody>
<tr>
<td></td>
<td>Reading Your Math Textbook</td>
<td>p 46</td>
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<tr>
<td>Ch 2</td>
<td>Tackling Your Homework</td>
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<td>Taking Lecture Notes</td>
<td>p 80</td>
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<td>Using Study Cards</td>
<td>p 102</td>
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<tr>
<td></td>
<td>Using Study Cards Revisited</td>
<td>p 111</td>
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<tr>
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<td>Reviewing a Chapter</td>
<td>p 122</td>
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<td>Ch 3</td>
<td>Managing Your Time</td>
<td>p 147</td>
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<td>Taking Math Tests</td>
<td>p 198</td>
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<tr>
<td>Ch 4</td>
<td>Analyzing Your Test Results</td>
<td>p 225</td>
</tr>
<tr>
<td>Ch 8</td>
<td>Prep for Your Final Exam</td>
<td>p 482</td>
</tr>
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End–of–Course Evaluation
In order to gain access to final course grades, students must complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal site. Students can access the course evaluation report beginning two weeks before the end of classes. The deadline for submission of evaluations occurs 24 hours after the last day of classes each semester. Instructors will announce when the online course evaluation is available.

ADA Syllabus Statement
Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call 207–741–5798. If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the disability services coordinator who can be reached at 741–5629. There will be some documentation for your teachers that must be supplied before accommodations can be given. Further information about services for students with disabilities and the accommodation process is available upon request at this number.
**SMCC Pay-for-Print Policy**
In an effort to control the escalating cost of supplies and to encourage students to conserve resources, SMCC charges for printing. Students receive a $20 credit every semester. This credit resets for each semester and extra credit is not rolled over to the next semester. Per page costs are as follows:

- 8.5”x11” black and white: $0.10 per page
- 8.5”x11” color: $0.50 per page
- 8.5”x14” and 11”x17” black and white: $0.20 per page
- 8.5”x14” and 11”x17” color: $1.00 per page

Duplex (two-sided) pages are discounted 50% from the listed page costs. Students can monitor their remaining credit and number of pages printed by visiting the IT Help tab on MySMCC or by checking the Printing Information icon in the lower right corner of the screen while logged in to an SMCC computer. More information about the Pay-for-Print Policy is available on the IT Help tab on MySMCC.

**Add–Drop Policy**
Students who drop a course during the one-week “add/drop” period in the fall and spring semesters and the first three days of summer sessions receive a 100% refund of the tuition and associated fees for that course. Please note any course that meets for less than the traditional semester length, i.e., 15 weeks, has a pro-rated add/drop period. There is no refund for non-attendance.

**Withdrawal Policy**
A student may withdraw from a course only during the semester in which s/he is registered for that course. The withdrawal period is the second through twelfth week of the fall and spring semesters and the second through ninth week of twelve-week summer courses. This period is pro-rated for shorter-length courses. To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Enrollment Service Center (no phone calls, please). The designation “W” will appear on the transcript after a student has officially withdrawn. A course withdrawal is an uncompleted course and may adversely affect financial aid eligibility. Failure to attend or ceasing to attend class does not constitute withdrawal from the course. There is no refund associated with a withdrawal.

**Plagiarism Statement**
Adherence to ethical academic standards is obligatory. Cheating is a serious offense, whether it consists of taking credit for work done by another person or doing work for which another person will receive credit. Taking and using the ideas or writings of another person without clearly and fully crediting the source is plagiarism and violates the academic code as well as the Student Code of Conduct. If it is suspected that a student in any course in which s/he is enrolled has knowingly committed such a violation, the faculty member should refer the matter to the College’s Disciplinary Officer and appropriate action will be taken under the Student Code of Conduct. Sanctions may include suspension from the course and a failing grade in the course. Students have the right to appeal these actions to the Disciplinary Committee under the terms outlined in the Student Code of Conduct.