



BEGINNING ALGEBRA

Revised 8/01/11

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COURSE NUMBER: MAT 101

PREREQUISITE(S): Satisfactory placement.

CO-REQUISITE(S): None

COURSE DESCRIPTION: This course includes the study of rational numbers and their applications, operations with algebraic expressions, linear equations and applications, linear inequalities, graphs of linear equations, operations with exponents and polynomials and factoring.

TEXTBOOK(S): Martin-Gay, K. Elayn. *Beginning and Intermediate Algebra, 4th Edition*. Upper Saddle River, New Jersey: Prentice-Hall, 2009.
Text and MyMathLab ISBN: 0-3215-8594-1
MyMathLab ISBN: 0-32119991X

REFERENCE(S): N/A

OTHER REQUIRED MATERIALS, TOOLS, AND EQUIPMENT: For most recent requirements go to :
<http://pearsonmylabandmastering.com/system-requirements/>

Computer with Internet access, Internet Explorer 5.0 or higher or other current browser, Java, word processing software (must be able to save Word format), and anti-virus software.

METHOD OF INSTRUCTION: This course will be taught via the internet. The concepts will be instructor-led by reading, watching, and/or exploring using an internet-based math tutorial and a textbook.

<u>GRADING SYSTEM:</u>	90	-	100	=	A
	80	-	89	=	B
	70	-	79	=	C
	60	-	69	=	D
	Below	-	60	=	F

**GRADE
CALCULATION
METHOD:**

See instructor's handout.

CONFIDENTIALITY:

All students' e-mail addresses may be available to other students in the class. Although some assignments in an online course may encourage or require peer communication, the instructor will make every effort to protect the confidentiality of any personal communication (for example, grades). However, you should recognize that e-mail and other electronic media are not secure; there is no guarantee of the privacy of your e-mail or other personal information.

**APPROPRIATE
ONLINE BEHAVIOR:**

The use of Spartanburg Community College's website, e-mail service or course management software for creation and/or distribution of material not pertaining to course participation is prohibited and is grounds for dismissal according to College policy under "disruptive behavior." Such actions, include, but are not limited to:

- Inappropriate use of email and discussion boards for:
 - ✓ Harassment
 - ✓ Unlawful solicitation
 - ✓ "Spamming"
 - ✓ "Flaming"
- Use of online editing tools within the course management software to:
 - ✓ Create offensive material
 - ✓ Link to inappropriate materials

**ATTENDANCE
POLICY:**

Requirement: All students must register in MyMathLab during the first week of scheduled classes. At the end of the first week, the instructor will drop any student from the course who has not registered in MyMathLab.

Instructors maintain attendance records. However, it is the student's responsibility to withdraw from a course. A student who stops attending the online class and fails to initiate a withdrawal will remain on the class roster. *With this in mind, for every assignment, test, or exam not completed while still enrolled in the course, the student will receive a grade of zero and the final course grade will be calculated accordingly.*

Withdrawal Policy: During the first 75% of the course, a student may initiate withdrawal and receive a grade of W. A student cannot initiate a withdrawal during the last 25% of the course. Extenuating circumstances require documentation and approval by the appropriate department head and academic dean.

**ACADEMIC
CONDUCT:**

ACADEMIC DISHONESTY: Students are expected to uphold the integrity of the College's standard of conduct, specifically in regards to academic honesty. All forms of academic dishonesty including, but not limited to, cheating on assignments/tests, plagiarism, collusion, and falsification of information will call for disciplinary action. Disciplinary action imposed may include one or more of the following: written reprimand, loss of credit for assignment/test, termination from course, and probation, suspension, or expulsion from the College. For further explanation of this and other conduct codes, please refer to the Student Handbook.

TESTING:

Tests will be taken online in approved Testing Centers with proctors. The instructor may allow, at most, one test to be taken online unproctored. For SCC students, tests will be taken online and will be administered in the **Testing Center located in E-3 of the East Building on the SCC campus.** If the SCC campus is not convenient, the

student may contact the instructor for an alternate testing site. For Tech Online students, the test will be administered in the testing center at your host college. Refer to the class outline for test availability. If any test is not taken during the specified time frame, a zero will be awarded for the test grade. Everyone must take a comprehensive final exam.

East Building Room 3 Testing Center: PHOTO ID REQUIRED!

Go to <http://www.sccsc.edu/resources/testing> for hours of operation.

ACCOMMODATIONS: Students who need special accommodations in this class because of a documented disability should notify Student Disability Services. You may contact Student Disability Services by calling, (864) 592-4811, toll-free 1-800-922-3679; via email through the Spartanburg Community College web site at <http://www.sccsc.edu/resources/disabilities> ; or by visiting the office located in the Dan Lee Terhune Student Services Building, room 112 of the Spartanburg Community College campus. By contacting Student Disability Services early in the semester, students with disabilities give the College an opportunity to provide necessary support services and appropriate accommodations.

COURSE
COMPETENCIES &
OBJECTIVES:

Upon satisfactory completion of this course, the students should be able to demonstrate competency in the General Education Outcome listed as “their ability to express themselves effectively in quantitative and qualitative terms” in the following competencies and objectives:

- I. Perform basic operations with signed numbers.
 1. Add real numbers.
 2. Subtract real numbers.
 3. Multiply and divide real numbers.

- II. Solve and graph basic linear equations.
 1. Simplify algebraic expressions.
 2. Solve equations using the addition-subtraction principle.
 3. Solve equations using the multiplication-division principle.
 4. Solve and graph linear equations.
 5. Solve for a specific variable.
 6. Plot ordered pairs on the rectangular coordinate system.
 7. Calculate the slope of a line.
 8. Employ special forms of linear equations.

- III. Solve application problems.
 1. Apply the steps for problem solving.
 2. Use formulas to solve word problems.
 3. Solve a formula or equation for one of its variables.

- IV. Perform operations with powers.
 1. Use the product and power rules for exponents.
 2. Use the quotient rule, and simplify expressions with zero exponents.
 3. Simplify expressions with negative exponents, and use scientific notation.
 4. Add and subtract polynomials.
 5. Multiply polynomials.
 7. Multiply binomials by inspection.
 8. Divide polynomials by monomials.

- V. Multiply and factor algebraic expressions.
 1. Factor out the greatest common factor.
 2. Factor trinomials of the form $x^2 + bx + c$
 3. Factor trinomials of the form $ax^2 + b + c$
 4. Factor special forms of polynomials.
 5. Determine the most appropriate strategy for factoring a polynomial.
 6. Solve equations by factoring.

SYLLABUS ADDENDUM for Math 101

1.5 Adding Real Numbers	3 hours
1.6 Subtracting Real Numbers	
1.7 Multiplying and Dividing Real Numbers	
1.8 Properties of Real Numbers	
	11 hours
2.1 Simplifying Algebraic Expressions	11 hours
2.2 The Addition and Multiplication Properties of Equality	
2.3 Solving Linear Equations	
2.4 An Introduction to Problem Solving	
2.5 Formulas and Problem Solving	
2.7 Further Problem Solving (optional)	
2.8 Solving Linear Inequalities	
3.1 The Rectangular Coordinate System	8 hours
3.2 Graphing Linear Equations	
3.3 Intercepts	
3.4 Slope and Rate of Change	
3.5 Equations of Lines	
3.6 Functions	
5.1 Exponents	11 hours
5.2 Polynomial Functions and Adding and Subtracting Polynomials	
5.3 Multiplying Polynomials	
5.4 Special Products	
5.5 Negative Exponents and Scientific Notation	
5.6 Dividing Polynomials	
5.7 Synthetic Division and the Remainder Theorem (optional)	
6.1 The Greatest Common Factor and Factoring by Grouping	8 hours
6.2 Factoring Trinomials of the form $x^2 + bx + c$	
6.3 Factoring Trinomials of the form $ax^2 + bx + c$ and Perfect Square Trinomials	
6.4 Factoring Trinomials of the form $ax^2 + bx + c$ by Grouping	
6.5 Factoring Binomials	
6.6 Solving Quadratic Equations by Factoring	
6.7 Quadratic Equations and Problem Solving	