



## CONTEMPORARY MATHEMATICS

Revised 8/12/11

C – L – CR  
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**COURSE NUMBER:** MAT 155

**PREREQUISITE(S):** Satisfactory placement

**CO-REQUISITE(S):** None

**COURSE DESCRIPTIONS**

This course includes the following topics: polynomial, rational, logarithmic, and exponential functions; inequalities; systems of equations and inequalities; matrices; determinants; and solutions of higher degree polynomials.

**TEXTBOOK(S):** Blitzer, Robert; *Thinking Mathematically*, 5<sup>th</sup> ed., Prentice Hall 2011.  
Textbook ISBN: 0-321-64585-5  
Student Access Kit  
Standalone ISBN:032119991X  
Bundle(with book) ISBN: 0321744446

**REFERENCE(S):** N/A

**OTHER REQUIRED MATERIALS, TOOLS, AND EQUIPMENT:**

For most recent requirements go to :  
<http://pearsonmylabandmastering.com/system-requirements/>

**TI-83 calculator or equivalent.** Calculators with algebraic symbolic operations are not allowed without instructor's approval.

**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.

**GRADING SYSTEM:**

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**

**Requirement: All students must register in MyMathLab**

**POLICY:**

**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 OUTCOMES  
& 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. Properties of and Operations with Real Numbers.
  1. Evaluate numerical expressions containing exponents, fractions, and decimals.
  2. Convert numbers from decimal notation to scientific notation and vice versa.
  3. Perform calculations with scientific notation.
  4. Solve applied problems involving integers, rational numbers, irrational numbers, and scientific notation.
  
- II. Elementary Algebra
  1. Evaluate algebraic expressions using order of operations.
  2. Solve linear equations in one variable.
  3. Solve applied problems involving linear equations in one variable.
  4. Graph linear equations in two variables.
  5. Evaluate a formula.
  6. Solve a formula for a specified variable.
  7. Construct ratios and solve problems.
  
- III. Consumer Mathematics
  1. Solve applied problems using proportions.
  2. Solve applied problems using percent.
  3. Solve applied problems involving simple and compound interest.
  
- IV. Measurement and Applied Geometry
  1. Convert within and between the customary and metric systems.
  2. Convert between degree Celsius and Fahrenheit.
  3. Define and calculate the measures of supplementary and complementary angles.
  4. Determine angle measures from parallel lines cut by a transversal.
  5. Use the Pythagorean Theorem to solve right triangles.
  6. Solve similar triangles.
  7. Calculate perimeter, area, and volume of geometric figures.
  8. Calculate the circumference and area of a circle.
  
- V. Descriptive Statistics
  1. Construct and interpret a frequency distribution.
  2. Construct and interpret statistical graphs.
  3. Calculate and interpret mean, median, mode, range, and standard deviation.

**SYLLABUS  
ADDENDUM  
MAT 155**

- I. Problem Solving and Critical Thinking (Chapter 1)
  1. Problem Solving 1.3
  
- II. Number Theory and the Real Number System (Chapter 5)
  1. Prime and Composite Numbers 5.1 (optional)
  2. The Integers; Order of Operations 5.2
  3. The Rational Numbers 5.3
  4. The Irrational Numbers 5.4
  5. Real Numbers and Their Properties 5.5
  6. Exponents and Scientific Notation 5.6
  
- III. Algebra: Equations and Inequalities (Chapters 6)
  1. Algebraic Expressions and Formulas 6.1
  2. Linear Equations in One Variable and Proportions 6.2
  3. Applications of Linear Equations 6.3
  
- IV. Algebra: Graphs, Functions, and Linear Systems (Chapter 7)
  1. Graphing and Functions 7.1
  2. Linear Functions and their Graphs 7.2
  
- V. Consumer Mathematics and Financial Management (Chapter 8)
  1. Percent, Sale Tax, and Income Tax 8.1
  2. Simple Interest 8.2
  3. Compound Interest 8.3
  
- VI. Measurement (Chapter 9)
  1. Measuring Length; The Metric System 9.1
  2. Measuring Area and Volume 9.2
  3. Measuring Weight and Temperature 9.3
  
- VII. Geometry (Chapter 10)
  1. Points, Lines, Planes, and Angles 10.1
  2. Triangles 10.2
  3. Polygons, Perimeter, and Tessellations 10.3
  4. Area and Circumference 10.4
  5. Volume 10.5
  
- VIII. Statistics (Chapter 12)
  1. Sampling, Frequency Distributions, and Graphs 12.1
  2. Measures of Central Tendency 12.2
  3. Measures of Dispersion 12.3