SYLLABUS

MAT137 – INTERMEDIATE ALGEBRA

CRN 30177
Monday and Wednesday, 9:30 a.m. – 10:50 a.m., Room 300, Mohegan Campus
Three Rivers Community College, 7 Mahan Drive, Norwich, Connecticut 06360

INSTRUCTOR INFORMATION

Mrs. Mary Anne Stewart, Adjunct Instructor
OFFICE HOURS: Mon. & Wed. 9:00 – 9:25 a.m. and 11:00 a.m. – 12:20 p.m., Adjunct Office
VOICE MAIL: (860) 886-0177, ext. 2114
E_MAIL: mstewart@trcc.commnet.edu
WebCT MAIL: Log on to http://vista.ctdlc.org, select this course, use the "Mail" feature

COURSE DESCRIPTION

This course continues the development of algebraic skills and concepts. The topics include linear equations, functions and graphs, applications of systems of equations, inequalities, rational expressions and equations, operations on radicals and rational exponents, quadratic equations, exponential and logarithmic functions.
Prerequisite: Acceptable placement score or MAT095 with a "C#" grade or better. A thorough knowledge of basic algebra is needed for this course.

REQUIRED TEXT

Intermediate Algebra: A Graphing Approach, 3rd ed., Martin-Gay and Greene, ©2005 Pearson Education, Inc., ISBN 0-13-146900-2 (student edition)

SUPPLIES

- One (1) three-ring notebook and tabbed dividers or similar to create sections in your notebook
- Pencils and erasers
- Paper for homework and taking notes in class
- One 6" or 12" ruler
- Texas Instrument graphing calculator TI-83. Students should attend one of the calculator workshops.

ASSIGNMENTS

Students are expected to work on assignments (homework) regularly and to seek assistance if the problems are not understood. All work should be kept in a notebook which is to be available for review upon request by the instructor.

COURSE CONTENT and OUTCOMES

See attached sheet.

COURSE OUTLINE, SCHEDULE, ASSIGNMENTS, and DUE DATES

See attached GREEN sheets. Place these at the front of your notebook and refer to them for each class.

DISABILITIES STATEMENT

Students with hidden or visible disabilities who may require special accommodations and support services are encouraged to notify the instructor and Chris Scarborough, (860) 892-5751, who is coordinating services to students with disabilities, during the first two weeks of class.

METHOD OF EVALUATION

The student's grade for the course will be determined by the arithmetic average of four (4) tests. Each test will be graded based on a maximum of 100 points. Each student will be allowed to make-up any one test on the scheduled make-up test day near the end of the semester.

GRADING SYSTEM

These letter grades and corresponding numerical grades will be used for tests and the course grade:
A (94–100), A– (90–93), B+ (87–89), B (83–86), B– (80–82), C+ (77–79), C (73–76),
C– (70–72), D+ (67–69), D (63–66), D– (60–62), F (below 60)

ATTENDANCE

Students are expected to attend all classes, to arrive for class on time, and to remain for the duration of the class meeting. It is the student's responsibility to request any missed work, assignments, or materials **before** the next class. Students who are consistently tardy, leave class early, and/or walk in and out of class are a distraction to the instructor and the other students. This results in a disruption of the class and the learning process. (See "Student Behavior.")

RULES of CONDUCT in CLASS

- **No food or beverages in the classroom**.

- **Electronic/digital devices**: Cell phones, beepers and similar devices are allowed in class if they are turned off or turned to a silent mode. These devices are NOT to be used in class. When there are extenuating circumstances that require a student be available by such a device, the student must speak to the instructor prior to class, so that together they can arrive at an agreement.

- **Student Behavior**: "*The College has the right and responsibility to take appropriate action when a student's conduct directly and significantly interferes with the College's educational mission and the rights of others to pursue their educational objectives in an environment conducive to learning.*" - from the TRCC Student Handbook
  Such action will, at minimum, be the removal of the student from the remainder of that day's class and any graded work from that day will be graded zero, F, with no possibility to make-up that work.

ACADEMIC INTEGRITY POLICY

Each student is expected to demonstrate his/her knowledge of the subject matter on each test and the final exam. If a student is caught cheating on a test or the final exam, he/she will receive a grade of zero, F, and will not be allowed to make-up that test or final exam.

COLLEGE WITHDRAWL POLICY

Dec. 3   Last day to withdraw from classes (Withdraw at the Registrar's Office)

CLASS CANCELLATION POLICY

If class is cancelled by the instructor, a notice will be placed on the classroom door. If time permits, students may be notified by a message on the instructor's voice mail, by email, or by phone.
If class is cancelled by the school, pay attention to radio and TV announcements, call the college's main phone number 860-886-0177, or visit the college's home web page www.trcc.commnet.edu

COURSE CONTENT AND OUTCOMES

CHAPTER 1: Real Numbers, Algebraic Expressions, and Equations
Upon completion, student must be able to:
1. Solve linear equations algebraically,
2. Apply the steps for problem solving, and
3. Solve a formula for a specified variable and use formulas to solve problems.

Right Triangle Trigonometry, Applications
Upon completion, student must be able to:
1. Find the value of trigonometric functions of acute angles,
2. Solve right triangles and applied problems.

CHAPTER 2: Graphs and Functions
Upon completion, student must be able to:
1. Write the equation of a line using slope-intercept form and point-slope form,
2. Write equations of vertical, horizontal, parallel and perpendicular lines, and
3. Graph a line using its slope and y-intercept.

CHAPTER 3: Equations and Inequalities
Upon completion, student must be able to:
1. Solve linear inequalities using the addition and multiplication properties of inequality,
2. Solve problems that can be modeled by linear inequalities, and
3. Find the intersection and union of two sets and solve compound inequalities.

CHAPTER 4: Systems of Equations
Upon completion, student must be able to:
1. Solve a system of linear equations in two variables by graphing, substitution, and elimination,
2. Solve a system of three linear equations in three variables, and
3. Solve problems: a) that can be modeled by a system of two and three linear equations, and b) with cost and revenue functions.

CHAPTER 5: Exponents, Polynomials, and Polynomial Functions
Upon completion, student must be able to:
1. Use the product and quotient rules for exponents, use the power rules for exponents, and use exponent rules and definitions to simplify exponential expressions,
2. Convert between scientific and standard notation and compute using scientific notation,

3. Identify, define, add, subtract, and multiply polynomials; identify and multiply binomials,
4. Multiply the sum and difference of two terms and evaluate polynomial functions,
5. Identify the GCF, factor out the GCF, and factor polynomials by grouping,
6. Factor trinomials and factor by substitution,
7. Factor by special products, and
8. Solve polynomial equations by factoring and problem solving.

CHAPTER 6: Rational Expressions
Upon completion, student must be able to:
1. Find the domain, and simplify, multiply, and divide rational expressions,
2. Use rational functions in applications,
3. Add and subtract rational expressions with common and unlike denominators,
4. Simplify complex fractions and expressions with negative exponents, and
5. Solve equations containing rational expressions and problem solving.

CHAPTER 7: Rational Exponents, Radicals, and Complex Numbers
Upon completion, student must be able to:
1. Evaluate radicals and radical functions,
2. Understand rational exponents and use rules for exponents to simplify expressions,
3. Simplify and solve radical expressions, and
4. Problem solving.

CHAPTER 8: Quadratic Equations and Functions
Upon completion, student must be able to:
1. Solve quadratic equations by completing the square and by the quadratic formula,
2. Solve equations by using quadratic methods, and
3. Graph quadratic functions of special forms.

CHAPTER 9: Exponential and Logarithmic Functions
Upon completion, student must be able to:
1. Solve and graph exponential functions,
2. Use logarithmic notation, Write and solve logarithmic equations, and identify and graph logarithmic functions,
3. Use properties of logarithms,
4. Identify and evaluate common logarithms and natural logarithms, and
5. Solve exponential and logarithmic equations.