Frederick Community College

MA 092 Intermediate Algebra

Fall 2006

www.geocities.com/fccmath1

Instructor Information:

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Course Information:

Credits: 3	Last Day to Drop: 6 Nov 2006
Prerequisites: MA 091 or equiv	Co-requisites: None
Meeting Day(s): M/W	Meeting Time(s): 11-12:15

Course Description:

A noncredit course for students requiring mastery of intermediate algebra skills. Topics include graphing of equations and functions, solving equations and systems of equations, exponents and polynomials, rational expressions, complex fractions, radicals, complex numbers, quadratic functions, exponential and logarithmic functions. Graphing calculator technology is integrated with traditional skill practice throughout the course.

Core Learning Outcomes:

By the completion of the course students will:

1. Increase understanding of the algebraic problem solving process and gain confidence in using problem solving skills.
2. Increase skills in communicating mathematical ideas verbally and with symbolic representation
3. Use data, graphs and equations to model problem situations.
4. Master the algebraic skills needed to graph, interpret and solve linear functions, systems of equations, quadratic, exponential and logarithmic functions.

Specific Learning Outcomes:

1. Determine whether a relation is a function, evaluate a function and determine the domain and range of a function.

2. Write an equation of a line and determine whether two given linear functions represent parallel lines, perpendicular lines or neither. Solve linear equations using the intersection of graphs method.
3. Solve a system of linear equations using the substitution, elimination and graphing methods.
4. Evaluate and simplify expressions containing integer and rational exponents. Add, subtract, multiply, divide and evaluate radical expressions.
5. Write decimals scientific notation and numbers in scientific notation to decimals. Multiply and divide numbers in scientific notation.
6. Graph a quadratic function, find the vertex and the x, y intercepts.
7. Solve a quadratic equation by extracting square roots, completing the square, using the quadratic formula and by graphing.
8. Model and solve application problems using linear and quadratic functions.
9. Find the combination and composition of two functions.
10. Find the inverse of a function and determine whether the function is one-to-one. Graph inverse function and check for symmetry about y=x.
11. Evaluate exponential functions. Write logarithmic equations in exponential form and exponential equations in logarithmic form.
12. Use the properties of logarithms to expand and contract expressions.
13. Solve radical, quadratic, rational, exponential and logarithmic equations.
14. Graph quadratic, rational, polynomial, exponential and logarithmic functions.

Instructional Methods:

1. The lecture method will be used along with question and answer/problem solving sessions. Student participation will be a critical part of the course. It will be assumed the reading assignment of text material shown in the Topical Outline, will be done prior to class to allow for appropriate discussion. 2. We will also have ***weekly, in-class quizzes*** the second class of the week, based upon the previous class' material. They will be nominally 10 minutes in length.

Text and Calculator for Course:

Intermediate Algebra Functions and Graphs by Katherine and Bruce Yoshiwara, Brooks/Cole, 2004. TI-83 + or TI 84 Graphing Calculators. Other calculators may be used, however all instructions will be via the 83+/84.

Evaluation Methods:

Tests	Points	Final Grade Scale
Test 1	100	20%
Test 2	100	20%
Test 3	100	20%
Test 4	100	20%
Quizzes	100	20%

- ✓ Your grade in this course does not count in your GPA. However, this course is subject to satisfactory academic progress standards. Students who are identified as not having made satisfactory academic progress will be placed on academic probation status. A grade of C or better is required for MA105, 106, 111, 201, 202, 206 or 207.
- ✓ All tests belong to FCC and will be returned to the professor after review in class.
- ✓ Equation sheets will be provided for tests, if appropriate.
- ✓ All significant work must be shown on all problems on tests, requiring calculations. **No credit will be given for problems with correct answers, unless appropriate work is shown.**
- ✓ **There will be no make-ups on missed tests, unless prior (**to the test**) notification is given and approval obtained. Make-up tests must be completed within one week of the date of the original test.**
- ✓ There will be no make-ups for the last, or final test.
- ✓ All tests will be in-class tests and last for 1¼ hours.
- ✓ There will be NO MAKE-UPS for missed quizzes.
- ✓ Grading for the course will conform to the following scale:

  90 - 100: A
  80 - 89: B
  70 - 79: C
  60 - 69: D
  Below 60: F

Progress Report:

By no later than the end of the sixth week, the student will know by virtue of tests/quizzes taken, their grade in the class.

Student Support:

Some of the support resources available are:

1) Use the CD-Rom that is in the front cover of your textbook. The examples

that are highlighted in the book with a CD icon are explained.
2) Pick up a MA092 math video in B112 to borrow overnight.
3) Sign up for free online tutoring in the Tutoring Services office. (L223)

4) Walk-in/Drop-in tutoring in the Math Suite, B 110. Look for posted hours.
5) Sign up for a 1:1 tutor in the Tutoring Services office. (L223)
6) Professor's office hours, B 106

Attendance Policy:

The College attendance policy states: "Students are expected to attend all class sessions except in cases of emergency, religious holidays or participation in official College functions. In these cases, notification or verification, if requested, well be given to the instructor by the student."

Computer Locations:

FCC has computers in at least the following locations that are available for student use.
LRC (library): L 220
Writing Center: L 106

School Closures:

FCC does close occasionally due to inclement weather or unforseen circumstances. If there is any question as to whether the college is open; FIND OUT before you come in!!
Radio
TV
301 846 2400
www.frederick.edu
My web site for any consequences!

Honesty Policy:

Standards of student conduct and disciplinary policies are outlined in the College Policies section of the catalog. At a minimum, any student/s guilty of cheating on an exam, will be expelled from the class and receive an "F" grade for the course.