Math 112 – College Algebra - Fall 2010

MWF 9:00 - 9:50 MRC 346

Instructor:

Diane Overturf, M.S.
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Office Hours: W 11:00-11:50. Other times can be arranged by appointment.
Additional help: Individual help is also available in the Learning Center located in MRC 332.
You may sign up for individual tutoring or drop in for homework help.
Drop-In Math Homework Help: See the Learning Center site or the Blackboard announcement page

Text:

Required: College Algebra, Second Edition by Ratti & McWaters ISBN: 0321640314
Optional: Student's Solutions Manual for the text listed above ISBN: 032166471X. Although this is not required, I strongly recommend purchasing it.

Course Catalog Description:

This course builds on the concepts and skills developed in MATH 111, or an equivalent second-year Algebra course, and prepares students for MATH 270 (Managerial Mathematics) or serves as a co/pre-requisite for MATH 220 (Calculus I). Topics covered include functions and their graphs, polynomial and rational functions, exponential and logarithmic functions, matrices and linear systems, sequences and series. Prerequisite: adequate placement or grade of C or higher in 111 or its equivalent.

Core Skill Objectives:

1. Communication Skills
   - Writes competently within the major and for a variety of purposes and audiences.
   - Reads with comprehension and the ability to analyze and evaluate.
   - Speaks effectively, both formally and informally.
   - Listens with an open mind and responds with respect.
   - Accesses information and communicates using current technology.
2. Thinking Skills
   - Uses reasoned standards in solving problems and presenting arguments.
3. Life Values
   - Analyzes, evaluates and responds to ethical issues from an informed personal value system.
4. Aesthetic Skills
   - Develops an aesthetic sensitivity.
5. Cultural Skills
   - Participates in activities that broaden the student's customary way of thinking.

Course Objectives:

1. Communication Skills
   - Produces both written and oral communication throughout course; particular attention is paid to the accurate and appropriate use of the language of algebra.
   - Uses technology to solve problems and to be able to communicate solutions and explore options.
2. Thinking Skills
   - Study briefly the basic ideas of a first algebra course.
   - Learn to solve quadratic equations by factoring, completing the square, and by use of the quadratic formula
   - Improve one's ability to read and solve application problems by means of constructing appropriate algebraic models and applying algebraic techniques to find a solution.
   - Explore exponential and logarithmic functions, including application problem and the efficient and appropriate use of logarithms and their properties.
   - Learn the techniques of solving systems of equations and appropria`tely applying these processes to work problems.
3. Life Values
   - Adheres to the Academic Honesty Policy.
4. Aesthetic Skills
   - Develops an appreciation for symmetry.
5. Cultural Skills
   - Understand how knowledge is developed and verified in mathematics.

Course Outline:
Ch 4: Exponential and Logarithmic Functions
Ch 5: Systems of Equations and Inequalities
Ch 6: Matrices and Determinants
Ch 7: Conic Sections
Ch 8: Further Topics of Algebra

Attendance and Academic Honesty:
Attendance is essential. You are adults and mature enough to realize that in order to succeed in this class it is vital that you be here. If you cannot make it to class and have any questions, contact someone in the class or myself. To make up a missed quiz or exam you must contact me before the start of class. You will not be allowed to make up an exam unless I have written confirmation (I.e. from doctor, school nurse, police report, mechanic, etc) that it is a legitimate excuse.

Tardiness is a disruptive influence on the class and will affect your grade as follows. After 4 times of being tardy, one point will be deducted from your quiz total points for each additional day you are tardy.

Cheating will not be tolerated. First offense will be a zero for the particular work; a second offense will result in an F for the course.

Responsibility:
My responsibility is to help you learn the material in this class through presenting new concepts, modeling the process of solving problems, and challenging you do your best. I will do this to the best of my ability.

Your responsibility is to be actively engaged in the process of learning through attending class, reading the text, listening attentively, taking notes, practicing the concepts through doing daily assigned homework, asking questions when you need clarification, and seeking outside help when you need it. You will not succeed in this class if you are unwilling to put time into practicing the concepts outside of class. I encourage you to study with others and to seek a tutor if you find the material very difficult.

You are responsible for all information and assignments given during class, even if absent.

You are expected to be respectful and considerate. Harassment, swearing, and sexual innuendo will not be tolerated. Do not talk while others are talking. Do not use cell phones during class. Anyone who cannot control their behavior will be asked to leave the room.

Calculators:
A good scientific calculator will be sufficient for this course. Calculators on cell phones will not be permitted during exams or quizzes. A graphing calculator is not required for this course. However, if you choose to purchase one a TI 83 or 84 version is recommended.

Americans with Disabilities Act (ADA):
If you have a disability and require auxiliary aids, services or accommodations for this class, please inform this professor and Jane Eddy, the disability coordinator (located in the Learning Center MRC 332 or at 796-3194) to discuss your needs.

May your life be like arithmetic
Friends added, enemies subtracted
Joys multiplied and errors divided

Assessment:

Grading scale: A: 91%-100%, AB: 88%-90%, B: 81%-87%, BC 78%-80%, C: 71%-77%, CD: 68%-70%, D: 61%-67%, F: 60% and below.

Your grade will be based on the following weighted components:

Chapter Exams: (30%) **Notes** are **not** allowed for exams.

Assignments: (30%)

Practice assignments are given almost every day. These practice assignments are not graded but there is a direct correlation between completing practice assignments and grades earned. For most chapters, you will receive 2 graded assignments; a chapter and a review assignment. As a rule the chapter assignment will be due 2 class periods before the exam and the review assignment due at the time of the exam. Group assignments are to be completed as a group. Every member of the group will receive the same grade. Writing Assignments: Writing Assignments will be graded on accuracy, completeness, thought put into your responses, and writing skills.

Quizzes: (10%)

Quizzes will be given approximately once a week. You will have a quiz the last day of every week (usually Friday), with some exceptions. A pop quiz can occur at any time. You may use a note card with formulas only.

Final Exam: (30%)

Your final exam grade will consist of a take home group, open book exam and a comprehensive individual, closed book exam given on Wednesday Dec 15 from 7:40 to 9:40 am. The two will be combined to form one final exam grade as follows: group exam (1/3), individual exam (2/3). You can use a page of notes, with formulas only, for the final.

Late Assignments will be accepted up to three days late. For each day late your grade will be deducted 10 percentage points (one grade level). After three days, a zero will be given for that assignment. Tuesday and Thursday counts even though class does not meet. Assignments can be placed in the slot on my door. Any extra credit assignments will not be accepted late.

Extra Credit assignments might be offered during the semester. Extra credit assignments are not accepted late. Extra Credit points are added to your quiz scores. Extra Credit will not raise your grade more than one half grade level. I.e. it can raise your grade from a BC to a B but not from a C to a B.

Missed Quizzes and Exams: Missed quizzes and exams may be made up if and only if you contact me before the quiz or exam and have a legitimate excuse. You will not be allowed to make up an exam unless I have written confirmation (i.e. from a doctor, school nurse, police, mechanic, etc) that it is a legitimate excuse. Exams and quizzes must be taken by the next class period unless you have made other arrangements with me. Makeup exams and quizzes are taken in the Learning Center during their testing hours.

Schedule:

This is a new course so there is a high probability this schedule will change as we progress through the course. You will be notified of any changes.

Aug 30 – Sep 20	Review and Chapter 4
Sep 15	**Writing Assignment #1 Due**
Sep 17	Chapter 4 Assignment Due
Sep 22	Chapter 4 Review Assignment Due
Sep 22	**Exam Ch 4**
Sep 24 – Oct 11	Ch 5
Oct 8	Chapter 5 Assignment Due
Oct 13	Chapter 5 Review Assignment Due
Oct 13	**Exam Ch 5**
Oct 15 – 29	Ch 6
Oct 25	**Writing Assignment #2 Due**
Oct 27	Chapter 6 Assignment Due
Nov 1	Chapter 6 Review Assignment Due
Nov 1	**Exam Ch 6**
Nov 3 – 10	Ch 7
Nov 12	Chapter 7 Review Assignment Due
Nov 12	**Exam Ch 7**
Nov 15 – Dec 6	Ch 8
Dec 3	Chapter 8 Assignment Due
Dec 6	**Writing Assignment #3 due**
Dec 8	Chapter 8 Review Assignment Due
Dec 8	**Exam Ch 8**
Dec 10	Group Final Exam in-class work day
Dec 15 7:40 – 9:40	**Final Exam- Take Home Group Final Exam collected**