

**MAT 104 – College Algebra Course Syllabus**  
**Tuesday, Thursday (1:40 – 2:55 pm) / Caylor 105**  
**Fall 2009**

**COURSE DESIGNATION**

MAT 104, College Algebra. Review of the fundamentals of algebra; linear and quadratic equations and inequalities; functions and graphs; systems of equations and inequalities; exponential and logarithmic functions; and theory of equations. A student who has earned credit in MAT 106 cannot receive credit for this course. Prerequisite: 2 years of high school algebra or equivalent. ( 3 credit hours )

**TEXT**

Paul Sisson. College Algebra. Second Edition. Hawkes Learning systems 2008.

**INSTRUCTOR**

Mack Smith      Email: [msmith@deltastate.edu](mailto:msmith@deltastate.edu)      Office: Walters 270-G      Phone: 846-4517

**General Course Objectives**

Upon completion of the course, the student will be able to:

1. Simplify algebraic expressions.
2. Solve linear equations.
3. Solve quadratic equations.
4. Solve inequalities.
5. Solve applied problems.
6. Describe and define a function.
7. Find the equation of a linear function satisfying given conditions.
8. Identify the domain and range.
9. Find the intercepts of an equation or graph.
10. Sketch the graph of a function.
11. Verify that a function has an inverse and compute the inverse of a function.
12. Simplify exponential and logarithmic expressions and solve equations.
13. Solve systems of linear equations.

**TUTORING SERVICE**

Free tutoring will be available in the Mathematics Department for students who need help outside of class. Hours when tutors are available will be given to the students and posted on the door of the math office, Walters 270.

**GRADING AND EVALUATION**

1. **Weekly quizzes** will be scheduled for the math lab (based on homework assignments).
2. **Homework** (to be done on the computer using Hawkes Learning Systems software) must be done by the due date to get full credit.

**Late homework penalties** will be assessed as follows:

- 25% for homework 1 days late;
  - 50% for homework 2-3 days late;
  - 75% for homework 4 days late;
  - 100% for homework more than 4 days late.
3. **Four scheduled tests** will be given during the semester.
  4. **A comprehensive final exam will be given on December 7, 2009 at 8:00 am.**

Your **final grade** will be the **calculated as follows: homework (5/49) 10.2%; quizzes (2/49) 4.1%; Four scheduled tests (28/49) 57.1%; and the final exam (14/49) 28.6%. i.e., 1/7; 4/7; 2/7.**

**There will be No Extra Credit or “make-up” work to improve your grade.**

**Grades will be assigned according to the following scale:**

A ( 90 – 100 )      B ( 80 – 89 )      C ( 70 – 79 )      D ( 60 – 69 )      F ( Below 60 )

**Graduating seniors should notify me as soon as possible of their status as seniors.**

**Cheating and plagiarism are not tolerated.** If it is established that a violation has occurred, the instructor may determine the penalty, or he/she may report the offense to the department chair and dean of the school. The usual penalty involves a grade of zero on the test, examination or paper in question.

**CLASS ATTENDANCE**

**Prompt and regular attendance is necessary** for success in this course. To receive credit in this course, you must attend a minimum number of the class meetings. **Classes meeting three times per week** will be allowed a **total of 9 absences** (excused and unexcused), and **classes meeting two times per week** will be allowed a **total of 7** (excused and unexcused). If you **exceed the allowable number** of absences, a **grade of “F”** will be assigned as the final grade in the course. **To be counted present, you must arrive on time for the class and remain in class the entire time.** When a student is tardy for class, it is the student’s responsibility to request that the instructor change the recorded absence to a tardy. **This must be done on the day the tardy occurs. A maximum of 3 tardies will be allowed** without consequences. **Each additional tardy** will be recorded as an **unexcused absence.**

**CLASSROOM POLICIES AND MAKE-UP TESTS**

1. **Do NOT go to SLEEP in CLASS!!!**
2. Do not use tobacco or eat in the classroom.
3. Do **come to class on time** and be prepared to begin class at the scheduled time.
4. Do not ask to leave class early. Schedule all appointments at times that do not conflict with class time.
5. **Cell Phones and Pagers must be turned off during class.** Cell Phones may not be used as calculators.
6. Calculator use is permitted during all classes and tests.
7. **Take earphones and listening devices out of your ears upon entering the classroom.**
8. Scheduled tests will be announced about a week prior to the actual test dates.
9. Be sure to **show all work on tests.** No partial credit will be given if the work is not shown in detail. **“Answers only” will not be accepted.**
10. Come to my office for help during scheduled office hours. No appointment is necessary. It is extremely important that you understand the material and are able to complete the homework assignments for each class prior to the next class. Tutoring is also available in Walters 272.
11. You must expect to practice assigned problems until you understand them. HLS is a good tool for this purpose.
12. **Make-up tests will be given only to those students presenting a written excuse,** acceptable by the university. **Any absence from scheduled work must be covered by a written excuse by the Vice President for Academic Affairs, the Student Health Service, or a doctor before the student is allowed to make up that missed work.** All make-up work must be completed within three days of returning to class. Any exception to this rule must be arranged before the work is missed.
13. Buy a scientific calculator or graphing calculator early in the semester and learn how to use it. Do not expect me to know how to use your calculator without the manual. Please do not ask to borrow a calculator from me or one of your classmates on test day since rarely do two calculators operate exactly the same. **BRING YOUR CALCULATOR TO CLASS EVERY DAY.**

**Note: OKRA mail is the official communications link between students and the university.**

**IMPORTANT DATES**

**August 25, 2009** is the last day that a course may be added to your schedule; this includes changes from one section to another within the same course. If you plan to **audit** this course, you must make the change by **August 28, 2009.** Students who remain in the course **after August 31, 2009,** and who elect to drop the course will receive a grade of **W if passing or F if failing** the course at the time of the drop. The withdrawal process is not complete until the drop slip has been signed by all designated parties and the completed form has been turned in to the Registrar’s office. **The last day to drop a class is December 4, 2009.**

The **comprehensive Final Exam** for this course is scheduled for **December 7, 2009** at 8:00 am. You will be required to take the exam on the day it is given.

<b>Labor Day Holiday</b>	September 7, 2009
<b>Fall Break</b>	October 15 –26, 2009
<b>Thanksgiving Holidays</b>	November 23 - 27, 2009

**OFFICE HOURS**

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
07:30 – 08:00	07:30 – 08:00	07:30 – 08:00	07:30 – 08:00	07:30 – 08:00
09:00 – 10:00	09:30 – 10:45	09:00 – 10:00	09:30 – 10:45	09:00 – 10:00
11:00 – 12:00		11:00 – 12:00		11:00 – 12:00

***Other Times by Appointment***

# **MAT 104 COLLEGE ALGEBRA - PRACTICE HOMEWORK**

*Please note that this is only tentative and is subject to change during the semester*

## **CHAPTER 1 Number Systems and Fundamental Concepts of Algebra**

### **Section 1.3 Properties of Exponents**

p. 39, #'s: 1–45 odd

### **Section 1.5 Polynomials and Factoring**

p. 73, #'s: 39–87 odd

## **CHAPTER 2 Equations and Inequalities of One Variable**

### **Section 2.1 Linear Equations in One Variable**

p. 106, #'s: 1–25 odd, 47–55 odd, 61–71 odd

### **Section 2.2 Linear Inequalities in One Variable**

p. 118, #'s: 5–33 odd, 49, 53, 57

### **Section 2.3 Quadratic Equations in One Variable**

p. 132, #'s: 1–23 odd, 3–41 odd, 44, 49, 51, 59, 61, 63

## **Test #1**

### **Section 2.4 Higher Degree Polynomial Equations**

p. 141, #'s: 1, 3, 9, 15, 19–33 odd

### **Section 2.5 Rational Expressions and Equations**

p. 152, #'s: 1–13 odd, 17, 19, 23–31 odd, 49, 55

### **Section 2.6 Radical Equations**

p. 162, #'s: 1, 5, 6, 9, 23, 25, 27

## **CHAPTER 3 Linear Equations and Inequalities in Two Variables**

### **Section 3.1 The Cartesian Coordinate System**

p. 185, #'s: 33, 37, 39, 42

### **Section 3.2 Linear Equations in Two Variables**

p. 194-, #'s: 1, 2, 5, 11, 17, 25, 28, 29, 33, 37

### **Section 3.3 Forms of Linear Equations**

p. 209, #'s: 1–11 odd, 13, 15, 16, 18, 21, 25, 29, 35, 37, 41, 43, 45, 48, 49, 52, 66, 69

## **Test #2**

## **CHAPTER 4 Relations, Functions, and Their Graphs**

### **Section 4.1 Relations and Functions**

p. 266, #'s: 1, 3, 4, 9, 13, 17–19, 25, 31, 37, 39, 43, 45, 51, 61–73 odd

### **Section 4.2 Linear and Quadratic Functions**

p. 281, #'s: 3, 4, 17–29 odd, 39, 41, 43, 49, 51

### **Section 4.3 Other Common Functions**

p. 299, #'s: 26, 30, 45–49

### **Section 4.5 Combining Functions**

p. 330, #'s: 1, 3, 11, 17, 23, 25, 31, 35, 40

### **Section 4.6 Inverses of Functions**

p. 344, #'s: 1, 3, 7, 13, 15, 17, 21, 29, 31, 35, 37, 47, 51

## **Test #3**

## **CHAPTER 7 Exponential and Logarithmic Functions**

### **Section 7.1 Exponential Functions and Their Graphs**

p. 514-, #'s: 1, 3, 7, 23, 29, 33, 37, 45

### **Section 7.2 Applications of Exponential Functions**

p.p. 526, #'s: 13, 15, 23, 25, 29, 33

### **Section 7.3 Logarithmic Functions and Their Graphs**

p. 541, #'s: 1–17 odd, 47–69 odd

### **Section 7.4 Exponential Functions and Their Graphs**

p. 555, #'s: 1, 3, 19, 21, 33, 55, 59, 75, 79, 81, 82, 85, 90, 93

### **Section 7.5 Exponential and Logarithmic Equations**

p.p. 571, #'s: 1, 2, 5, 9, 18, 20, 27, 28, 31, 45, 46, 58, 75, 79

## **Test #4**