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 the 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 hours credit.)

Text

General Course Objectives
Upon completion of the course, the student will be able to:
1. Simplify algebraic expressions.
2. Solve and graph linear and quadratic equations and inequalities.
3. Solve applied problems.
4. Describe and define a function.
5. Find the equation for a linear function satisfying given conditions.
6. Identify the domain and range, sketch the graph, find the zeros, and compute the inverse of functions.
7. Find the composition of two given functions.
8. Find the equation of a circle satisfying given conditions and find the center and radius of a circle when given the equation.
9. Simplify exponential and logarithmic expressions and solve equations.
10. Solve systems of equations and inequalities.

Subject Matter or Content to be Studied
1. Review of Fundamental Concepts of Algebra
2. Algebraic Equations and Inequalities
3. The Cartesian Plane and Graphs of Equations
4. Functions and Graphs
5. Zeros of Polynomial Functions
6. Exponential and Logarithmic Functions
7. Systems of Equations and Inequalities

Methods of Instruction
1. Lecture with demonstration to include work with graphing calculators and computer software. (80%)
2. Cooperative learning through group work. (10%)
3. Classroom discussion. (10%)

Requirements
1. Regular and punctual attendance as stated in this syllabus.
2. Student preparation of homework assignments.
3. Student participation in class discussions and group work.
4. A hand-held calculator for computation (NOT A CELLULAR PHONE).

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 tutor room, Walters 278.

Evaluation and Grading
1. Assigned homework will be collected at irregular and unannounced intervals and graded at the discretion of the instructor. Because communication is an essential part of everyday life, assignments involving writing will be made and graded.
2. Unannounced daily quizzes may be given throughout the semester.
3. Scheduled tests, three or four, will be given during the semester.

Grading and Grading Scale
Grades will be assigned according to the following scale:
A (90% - 100%) B (80% - 89%) C (70% - 79%) D (60% - 69%) F (below 60%)

There are three categories of scores for this class: tests, homework/quizzes, and final examination. Each category will account for a various amount of your final average according to the following weights:
- tests - 70%
- final examination - 20%
- homework/quizzes - 10%

Within each category the average will be computed on a part out of total procedure. For example, suppose that you receive the following scores of three test: 51 out of 57, 78 out of 123, and 44 out of 45. The test average will be computed as follows:

\[
\frac{51 + 78 + 44}{57 + 123 + 45} = \frac{173}{225} = 76.89\%
\]

No late assignments will be accepted, but the two lowest homework - quizzes will be dropped.

Cheating and plagiarism are not tolerated. If it is established that a violation has occurred, the instructor may determine the penalty, or he 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
1. Prompt and regular attendance is necessary for success in this course. In order to receive credit in this course, the student must attend a minimum of 75% of the class meetings. Classes meeting three times per week will be allowed a total of 11, or for classes meeting twice per week 7 absences, 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.
2. When a student is tardy for class, it is the student's responsibility to request that the faculty member change the recorded absence to a tardy. This must be done on the day the tardy occurred. A maximum of 3 tardies will be allowed. Any additional tardies will be recorded as un-excused absences.
Classroom Policies and Make-Up Tests
1. Do not use tobacco or eat in the classroom.
2. Do not bring guests, including children, to class.
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. If you know that you are going to miss a class, but particularly a class with a scheduled test, notify your instructor as soon as possible before the absence and arrange a time to make up the work. Any absence from scheduled work must be covered by a written excuse from the Vice President for Academic Affairs, the Student Health Service, or a doctor before the student is allowed to make up that work. Any exception to this rule must be arranged before the missed work!
6. It is the responsibility of the individual student to inform the faculty member of any clinically diagnosed learning disability or other limiting disability that might in some way hinder the student's progress in this class. On request of the faculty member, evidence of such disability must be provided.
7. Calculator use is permitted on all homework assignments and tests.
8. Be sure to show all work on homework assignments and tests. No partial credit can be given if no work is shown.
9. Homework must be turned in when it is due. No late homework will be accepted.
10. Cheating and plagiarism are not tolerated. If it is established that a violation has occurred, the penalty will be a zero on the test, examination, or paper in question.
11. Pagers and cellular phones must be turned off during class and not seen. If your cellular phone does ring during class please gather your belongings and leave class for the day. You are not to stay!
12. Cellular phones are not to be used as calculators in class. No Exception!

Important Dates:
September 19 Last day a course may be changed from credit/audit
September 19 Grades of W or F in effect
November 9 Last day to withdraw from a course
A drop is not effective and complete until the drop slip has been signed by all parties designated and turned in to the Registrar's office.

If a student has a disability that qualifies under the American with Disabilities Act and requires accommodation, he should contact the Academic Support Lab (Union 311; phone 846-4654) for information on Appropriate policies and procedures.

The instructor reserves the right and privilege of altering or changing these guidelines with due notice.
Instructor: Dr. David Jay Hebert
Instructor's Office: Walters, 270-M
Office Phone: 846-4508 E-mail: dhebert@deltastate.edu

Instructor's Office Hours:
10.00 to 12.00 MWF 9.20 to 10.50 TTH and 1.00 to 2.00 MW
Other times by appointment
MAT 104 ASSIGNMENT SHEET
Section Assigned
Graphing - Lines and Functions

pg. 177 #'s: 1-38 odd, 39, 43, 45, 47-60 odd, 62, 65, 67
pg 188 #'s: 1-16 odd, 17, 19, 21-28 odd
pg 94 #'s: 1-30 odd, 31-46 odd
pg 105 #'s: 1-20 all
pg 199 #'s 1-28 odd, 29, 31, 33, 35, 39, 45, 47, 49, 51-71 odd
pg 234 #'s: 1-44 odd, 45-52 all
pg 148 #'s: 1-48 odd, 51-56 all

Quadratic - Rational Equations and Inequalities

pg 268 #'s: 1-32 odd
pg 123 #'s: 1-64 odd, 65-94 odd
pg 95 #'s: 47-50 all
pg 200 #'s: 51, 53 55, 57, 59, 61
pg 188 #'s: 29-54 odd
pg 159 #'s 1-42 odd

Radical - Absolute Value - Miscellaneous Equations and Inequalities

pg 136 #'s: 1-56 odd
pg 148 #'s: 57-84 odd

Even Odd Functions - Transformations - Composition and Inverse Functions

pg. 217 #'s: 51 - 62 all
pg. 234 #'s: 1-68 odd
pg. 247 #'s: 1-54 odd

Polynomial Functions and Zeros of Polynomials

pg. 280 #'s: 1-10 all, 27-34 odd, 35-50 odd
pg. 293 #'s: 17-32 odd
pg. 301 #'s: 1-40 odd

Exponential and Logarithmic Functions

pg. 359 #'s: 1-51 odd
pg. 372 #'s: 1-87 odd
pg. 392 #'s: 1-12 odd, 23-30 odd

Systems of Equations and Inequalities

pg. 427 #'s: 1-48 odd
pg. 455 #'s: 1-42 odd