

## COURSE SYLLABUS

### MA 112, PRE-CALCULUS ALGEBRA

\*This information is to be completed by the instructor for the course.



#### I. \*INSTRUCTOR INFORMATION

- A. Name:
- B. Office:
- C. Office Phone Number:
- D. E-mail Address:
- E. Office Hours:

#### II. COURSE INFORMATION

- A. Course name, number, and credit hours:  
Pre-calculus Algebra, MA 112, 3 credit hours.
- B. \*Semester, Section number:
- C. \*Class meeting time (days, time, location):
- D. Prerequisites: Minimum mathematics ACT score of 22 and credit in high school Algebra I, Algebra II, and Geometry; or grade of C or better in Intermediate Algebra.
- E. Course Description: This course emphasizes the algebra of functions – including polynomial, rational, exponential, and logarithmic functions. The course also covers systems of equations and inequalities, quadratic inequalities, and the binomial theorem. Additional topics may include matrices, Cramer's rule, and mathematical induction.
- F. Course Objectives: The student shall demonstrate knowledge of
  1. The basic concepts of arithmetic.
  2. The basic concepts of algebra.
  3. Elementary functions.
  4. The sequential nature of mathematics and the interrelated nature of the various branches of mathematics.
  5. Problem-solving strategies, which shall include reading and interpreting the problem, devising a plan to solve the problem, carrying out that plan, and reflecting on the reasonableness of the answer. Working problems backwards.
  6. Estimation, prediction, and an ability to check answers.
  7. Spatial relationships.
  8. Standard mathematics vocabulary and symbols, and demonstrate the ability to use the language and symbols of mathematics accurately in communication.

9. Use fundamental mathematical operations, algorithms, and measurements.
10. Present and interpret data in graphical form.
11. Select or create appropriate mathematical models to solve problems in mathematics and in other disciplines and integrate problem solving strategies learned in mathematics into the solution of problems encountered in daily living.

G. Course Content:

Algebra review including factoring, rational expressions, rational exponents, and radicals.

1. Linear and quadratic equations and inequalities, and their applications.
2. Relations and their graphs including linear relations, the parabola, the circle, and inequalities.
3. Functions, algebra of functions, graphing basic functions and their variations, inverse functions, exponential and logarithmic functions.
4. Polynomial and rational functions including graphing, polynomial division, rational zeros and real zeros of polynomial functions.
5. Systems of equations and inequalities including solution of two and three variable linear systems of equations, solution of linear systems by matrices, nonlinear systems of equations, and systems of inequalities.

### **III. TEXTBOOK AND SOFTWARE**

A. Textbook: *Algebra & Trigonometry* by Blitzer, 5th ed.

NOTE: The homework will be done on the computer, using the MyMathLab (MML) software. The MML software is REQUIRED for this class. The text is included as an electronic version in the MyMathLab subscription. YOU DO NOT NEED TO PURCHASE A BOOK SEPARATELY unless you want the print version.

B. Software: MyMathLab (Standalone access code)

C. Calculator Policy: You will need a simple scientific calculator for this course. Any calculator capable of graphing will not be allowed. You are not allowed to use your cell phone for a calculator.

### **IV. ATTENDANCE POLICY**

Regular and punctual attendance at all classes is expected of all students. Whenever a student's cumulative absences for any reason—excused or unexcused—exceed the equivalent of three weeks of scheduled classes, no credit may be earned for the course. The student will either withdraw from the course or receive an F for the course grade. Any exceptions to this policy will be in accordance with university policy.

### **V. \*FINAL EXAM**

Include date, time, and location.

The final exam is a COMPREHENSIVE, multiple-choice departmental exam.

The departmental final exam will count 25% of the final grade.

**VI. 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%

**VII. \*GRADING PLAN**

Include information on the number and type of evaluation methods (exams, quizzes, labs, homework, papers, etc.) with point or percentage values for each.

**VIII. \*GENERAL COMMENTS BY INSTRUCTOR**

Include other relevant class information and policies.

## **IX. UNIVERSITY POLICIES**

**A. Academic Honesty:** Students of the university academic community are expected to adhere to commonly accepted standards of academic honesty. Allegations of academic dishonesty can reflect poorly on the scholarly reputation of the University including students, faculty and graduates. Individuals who elect to commit acts of academic dishonesty such as cheating, plagiarism, or misrepresentation will be subject to appropriate disciplinary action in accordance with university policy.

Incidents of possible student academic dishonesty will be addressed in accordance with the following guidelines:

1. The instructor is responsible for investigating and documenting any incident of alleged academic dishonesty that occurs under the instructor's purview.
2. If the instructor finds the allegation of academic dishonesty to have merit, then the instructor, after a documented conference with the student, will develop a plan for disciplinary action. If the student agrees to this plan, then both instructor and student will sign the agreement. The faculty member will forward a copy of the signed agreement to the Office of Student Conduct for record-keeping purposes.
3. If the student disagrees with the instructor's proposed plan for disciplinary action and wishes to take further action, he/she is responsible for scheduling a meeting with the chair of the department where the course is housed to appeal the proposed disciplinary plan. The department chair shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. If a resolution is reached, the disposition of the case will be forwarded to the Office of Student Conduct. If a resolution at the departmental level is not reached and the student wishes to take further action, he/she is responsible for scheduling a meeting with the dean of the college where the course is housed to appeal the proposed disciplinary plan. The college dean shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. If a resolution is reached, the disposition of the case will be forwarded to the Office of Student Conduct. If a resolution at the college level is not reached and the student wishes to take further action, he/she is responsible for scheduling a meeting with the Vice President for Academic Affairs and Provost (VPAA/P) to appeal the proposed disciplinary plan. The VPAA/P shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. After reviewing all documentation, the VPAA/P may, at his/her discretion, choose either to affirm the proposed action, to refer the case to the Office of Student Conduct for further review, or to dismiss the matter depending on the merits of the case. The final disposition of the case will be disseminated to appropriate parties, including the Office of Student Conduct.
4. If a student is allowed academic progression but demonstrates a repeated pattern of academic dishonesty, the VPAA/P may, after consultation with the Office of Student Conduct, assign additional penalties to the student, including removal from the University.

## **B. Communication:**

The official method of communication at UNA is UNA portal, with emphasis placed on University email.

## **C. Disability Accommodations:**

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Amendment Act of 2008, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact Disability Support Services to initiate the process to develop an accommodation plan. This accommodation plan will not be applied retroactively. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Disability Support Services (256-765-4214).

## **D. Title IX:**

The University of North Alabama has an expectation of mutual respect. Students, staff, administrators, and faculty are entitled to a working environment and educational environment free of discriminatory harassment. This includes sexual violence, sexual harassment, domestic and intimate partner violence, stalking, gender-based discrimination, discrimination against pregnant and parenting students, and gender-based bullying and hazing.

**Faculty and staff are required by federal law to report any observations of harassment (including online harassment) as well as any notice given by students or colleagues of any of the behaviors noted above.** Retaliation against any person who reports discrimination or harassment is also prohibited. UNA's policies and regulations covering discrimination and harassment may be accessed at [www.una.edu/titleix](http://www.una.edu/titleix). If you have experienced or observed discrimination or harassment, confidential reporting resources can be found on the website or you may make a formal complaint by contacting the Title IX Coordinator at 256-765-4223.