

NORTHWEST-SHOALS COMMUNITY COLLEGE

Specific Syllabus Fall Semester, 2007

Title of Course: MTH 112 – PreCalculus Algebra **Time:** 5:30-6:45 p.m.
Instructor: Thomas Newton **Phone Number:** 256-331-5455(Mailbox 6512)
Office: Shoals – Bdg. 122 **E-Mail Address:** tfnewton@yahoo.com
Web Site: www.nwscc.cc.al.us

Office Hours: MW 5:15-5:30 (Prior to each class session)

CLASS SCHEDULE

WEEK/DATE	TOPIC	ASSIGNMENTS
1 8/20	Orientation and Algebra Review	Sections A.1 – A.6
2 8/27	Functions and Their Graphs	Sections 1.1-1.3
3 9/3	Holiday (9/3) Functions and Their Graphs	Sections 1.4, 1.5
4 9/10	Functions and Their Graphs	Sections 1.6, 1.7
5 9/17	Functions and Their Graphs	Sections 1.8, 1.9
6 9/24	Exam 1 Polynomial & Rational Functions	Sections 2.1, 2.2
7 10/1	Polynomial & Rational Functions	Section 2.3
8 10/8	Polynomial & Rational Functions	Sections 2.4, 2.5
9 10/15	Polynomial & Rational Functions Exam 2	Sections 2.6, 2.7
10 10/22	Exponential and Logarithmic Functions	Sections 3.1, 3.2
11 10/29	Exponential and Logarithmic Functions	Sections 3.3, 3.4
12 11/5	Exam 3 Solving Systems	Sections 7.1, 7.2
13 11/12*	Holiday (11/12) Solving Systems	Sections 7.3, 7.4
14 11/19	(College Closed)	
15 11/26	Matrices and Determinants Sequences and Series	Section 8.1 Section 9.1
16 12/3	Binomial Theorem Exam 4	Section 9.5
17 12/10	Course Review	
	Comprehensive Final Exam	

*Last Day to Drop Class – 11/13

TITLE OF COURSE: Pre-Calculus Algebra (MTH 112)

DIVISION: Mathematics, Science, and Technology

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.

PREREQUISITE(S): All core mathematics courses in Alabama must have as a minimum prerequisite high school Algebra I, Geometry, and Algebra II with an appropriate mathematics placement score. An alternative to this is that the student should successfully pass with C or higher (S if taken as pass/fail) Intermediate College Algebra, MTH 100.

COREQUISITE(S): None

REQUIRED TEXTBOOK(S): Precalculus; 7th Edition; R. E. Larson and R. P. Hostetler with David C. Falvo, Houghton-Mifflin, 2007.

SUPPLIES: A scientific or graphing calculator is highly recommended.

GENERAL EDUCATION OBJECTIVE: All associate degree graduates should be able to use the mathematical concepts, notations, and manipulations needed in their field of study or occupation.

COURSE OBJECTIVE(S): Upon successfully completing Pre-Calculus Algebra, MTH 112, the student should be able to:

1. Solve linear, quadratic, and rational equations in one variable.
2. Solve quadratic inequalities in one variable.
3. Identify and graph basic functions (i.e. constant, identity, linear, absolute value, square root, quadratic, cubic, and reciprocal functions) and transform their graphs for related functions.
4. Determine domain and range for relations and functions; evaluate functions (including piecewise functions); find the inverse of a function; perform operations on functions (including composition).
5. Simplify and evaluate expressions containing complex numbers and their operations; find all zeros of higher degree polynomial functions and graph them; use a graph to determine estimations of zeros to solve practical applications.
6. Identify the domain and asymptotes for rational functions; graph rational functions on a Cartesian coordinate system.
7. Identify and evaluate logarithmic and exponential functions; solve equations containing logarithmic and/or exponential expressions; solve practical applications problems involving logarithms and/or exponentials.
8. Solve a system of equations or inequalities in two or three variables; develop and solve a system to find solutions for related application problems.
9. Apply the Binomial Theorem to expand binomials and find specific terms of a binomial expansion.

METHODS OF EVALUATION:

- Quiz//Homework: Homework will be assigned throughout the semester. Unannounced quizzes on homework content or previous instruction will be given. The quiz average will count the same as one regular test grade in computing the student's course average. **Without prior notification and formal documentation of required class absence, no make-up quiz/homework will be given.**
- Hourly Exams: There will be at least four hourly exams. Tentative dates for exams are noted on the day by day class schedule.
- Final Exam: There will be a comprehensive final exam whose score will be counted the same as 2 regular exams.

Grading: Average = (Quiz/Homework Avg. + Hourly Exams + Final Exam) ÷ 7
Scale

90-100	A		
80-89	B	I	Incomplete
70-79	C	W	Withdrawn
60-69	D	WP	Withdrawn Passing
≤59	F	WF	Withdrawn Failing

MAKE-UP EXAMINATIONS: Make-up examinations, as such, will not be given without prior notification by the student and formal documentation of required class absence. The grade on the final examination may be substituted for one missed examination. If more than one exam is missed, a grade of zero will be substituted for each subsequent missed exam.

ELECTRONIC DEVICE USE IN CLASS: Students are to turn off or silence electronic devices during class time. If there is an extenuating circumstance, the instructor is to be informed

ADA INFORMATION: It is the policy of Northwest-Shoals Community College to comply with the Americans with Disabilities (ADA) Act. Any student covered under this act needing and desiring reasonable accommodations for this class should notify Linda Waide at 331-5321. See NWSCC catalog for additional details.

ATTENDANCE POLICY: Class attendance is considered to be essential to the accomplishment of course objectives and excessive absences are discouraged. At no time should a student miss more than 20% of the class meetings for a course. These absences also include any absences accrued during late registration. Failure to adhere to the 20% policy may result in a failing grade based on academic performance.

WITHDRAWAL POLICY: A student who is unable to complete a course is expected to withdraw from that course by the end of 60% of class meetings. A student who withdraws by the date published in the schedule will receive a grade of "W" for the course. This withdrawal is done only by student request. The grade of "W" is allowed regardless of the student's grades to the point of withdrawal. After the designated date of class withdrawal, the approval of the Chief Instructional Officer is required prior to allowing a student to withdraw. The determination of "WP" (withdrawal passing) or "WF" (withdrawal failing) will be made by the instructor for the course and is based on the student's grades to the point of withdrawal. Students receiving financial aid should consider the impact of their withdrawal on their financial aid status before withdrawal from a course. **Withdrawal from a class will not be approved after final exams begin.**