



## College Algebra - Math 1314.089

Course Syllabus: Summer II 2018

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“Northeast Texas Community College exists to provide responsible, exemplary learning opportunities.”

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
						3:30-4:30 pm

*The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.*

**Catalog Course Description (include prerequisites):** This course covers the development of the complex number system, solutions of quadratic equations and systems involving quadratics, relations, functions, inverses, ratio, proportion, and variation, theory of equations, progressions, matrices, exponential and logarithmic functions, permutations, combinations, and probability as time permits. Prerequisite: MATH 0305 or its equivalent or an appropriate placement score.

**Required Textbook(s):**

In an effort to save students money, your course materials are delivered through Exclusive Access. You have already paid for your course materials with your tuition and fees. Below is the required course materials:

0-321-19991-X PEARSON/DIGITAL TEXT W/MYMATHLAB

To access your course materials, click on the Course Materials Access link within the Start Here folder on Blackboard.

For additional information on Exclusive Access, please access the textbook information provided on the portal (student tab, click on Academics then Textbooks.)

**Recommended Reading(s):**

None

**Student Learning Outcomes:**

Upon successful completion of this course, students will

1314.1 Demonstrate understanding and knowledge of properties of functions, which include domain and range, operations, compositions, and inverses.

1314.2 Recognize and apply polynomial, rational, radical, exponential, and logarithmic functions and solve related equations.

1314.3 Apply graphing techniques of transformations and combinations to common algebraic functions.

1314.4 Use linear mathematical models to problem-solve.

1314.5 Evaluate all roots of higher degree polynomial functions.

1314.6 Recognize, solve and apply systems of linear equations using matrices.

### **Core Curriculum Purpose and Objectives:**

Through the core curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world; develop principles of personal and social responsibility for living in a diverse world; and advance intellectual and practical skills that are essential for all learning.

Courses in the foundation area of mathematics focus on quantitative literacy in logic, patterns, and relationships. In addition, these courses involve the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experience.

### **College Student Learning Outcomes:**

#### Critical Thinking Skills

**CT.1** Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

#### Communication Skills

**CS.1** Students will effectively develop, interpret and express ideas through written communication.

#### Empirical and Quantitative Skills

**EQS.1** Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical form

**EQS.2** Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

**EQS.3** Students will draw informed conclusions from numerical data or observable facts that are accurate, complete, and relevant to the investigation.

**SCANS Skills:**

N/A

**Course Outline:**

- I. Equations and Inequalities
  - A. Linear Equations and Rational Equations
  - B. Quadratic Equations
  - C. Models and Applications
  
- II. Functions and Graphs
  - A. Linear Functions and Slope
  - B. Transformations of Functions
  - C. Combinations of Functions
  - D. Inverse Functions
  - E. Distance and Midpoint Formulas; Circles
  
- III. Polynomial and Rational Functions
  - A. Quadratic Functions
  - B. Polynomial Functions and Their Graphs
  - C. Zeros of Polynomial Functions
  - D. Modeling Using Variation
  
- IV. Exponential and Logarithmic Functions
  - A. Exponential Functions
  - B. Logarithmic Functions
  - C. Properties of Logarithms
  - D. Exponential and Logarithmic Equations
  - E. Exponential Growth and Decay
  
- V. Systems of Equations and Inequalities
  - A. Systems of Linear Equations in Two Variables
  - B. Systems of Linear Equations in Three Variables
  
- VI. Matrices and Determinants
  - A. Matrix Solutions to Linear Systems
  - B. Inconsistent and Dependent Systems and Their Applications
  - C. Matrix Operations and Their Applications

### Evaluation/Grading Policy:

Exam 1	10%
Exam 2 (Proctored)	15%
Exam 3	10%
Exam 4 (Proctored)	15%
Homework Assignments	30 %
Final Exam (Proctored)	20 %
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TOTAL	100 %

"A" - 90%

"B" - 80%

"C" - 70%

"D" - 60%

"F" - Below 60%

### Homework:

- All homework assignments will be found on MyMathLab (MML).
- Due dates for all assignments can be found on the calendar at the top of the MML course home page. You will need to scroll through the calendar to see all due dates in MML.
- Homework problems have an unlimited number of attempts. You may re-work the problem as many times as necessary to learn the concept and get the problem correct. However, be aware that the computer will generate a new problem for each attempt.
- The last grade earned for each homework assignment will be posted for the assignment's final grade.
- There are no make-up assignments.
- Any assignment not submitted will receive a grade of zero.

### Exams:

- All exams are online on MML; however, 3 of the exams must be taken in a proctored location. See information below. Each one will be available on the website at scheduled times.
- Due dates for all exams can be found on the calendar at the top of the MML course home page. You will need to scroll through the calendar to see all due dates. Exam dates may also be found on blackboard.
- Only one attempt per question is allowed on exams.
- I will allow **one** make-up exam if requested for Exam 1, Exam 2, **or** Exam 3 during the semester. However, a makeup exam must be proctored, and you will receive the grade for that exam, even if it is lower than the first exam. There are no make-up exams for Exam 4 or the Final Exam.
- Any exam not submitted will receive a grade of zero.
- The second exam, fourth exam, and comprehensive final exam must be proctored in an approved Testing Center. For proctored exams, students will need to inform me, prior to the exam, of the Testing Center they wish to use.
  - **Proctored Exams:** There are two ways to take a proctored exam:
    - 1) Testing Center on NTCC Main Campus—students may take a proctored exam at this location. It is the student's responsibility to make sure that he/she is aware of the Testing Center Hours of Operation.

- 2) Testing Center at another educational institution—students not living in the Mt. Pleasant area may use another Testing Center, but it must be approved by me in advance. Please note that some testing centers charge a fee to proctor an exam, and some centers require several days advance notice and an appointment.

Students will need to provide me with the name of the educational institution, the name of the person who will proctor the exam, the phone number of that person, and the business email for that person. This must be done AND approved at least three days in advance of the exam. It is the student's responsibility to make sure that he/she is aware of the Testing Center Hours of Operation and policies for the testing center.

### **Other Course Requirements**

TI-83 Plus Graphing Calculator or equivalent (No Cell Phone Calculator will be allowed)

MyMathLab Access Code and ebook

Note: The NTCC Bookstore link is at [www.ntcc.edu](http://www.ntcc.edu)

### **Student Responsibilities/Expectations:**

Attendance:

Students are expected to check in to the class daily on Blackboard and MyMathLab to find the assignments and communications from the instructor. Students are also expected to check their email daily in case there is a communication from the instructor that needs a timely response.

Email: Students are expected to monitor their email regularly (daily) to check for important announcements. You must put your correct email address in MyMathLab in order to receive my communications.

### **NTCC Academic Honesty Statement:**

"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

### **Academic Ethics:**

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit.

Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

### **ADA Statement:**

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to arrange an appointment with a College counselor to obtain a Request for Accommodations form. For more information, please refer to the NTCC Catalog or Student Handbook.

**Family Educational Rights and Privacy Act (FERPA):**

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

**6 Drop Rule:**

Students who enrolled in Texas public institutions of higher education as first-time college students during the Fall 2007 term or later are subject to section 51.907 of the Texas Education Code, which states that an institution of higher education may not permit a student to drop (withdraw with a grade of "W") from more than six courses. This six-course limit includes courses that a transfer student has previously dropped at other Texas public institutions of higher education if they fall under the law. Students should be sure they fully understand this drop limit before they drop a course. Please visit the admissions office or counseling/advising center for additional information and assistance."