Precalculus - Math 2312.42d,43d
Course Syllabus: Spring 2018

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	7:45-8:05 1:25-2:10	7:45-8:05 1:25-2:10	7:45-8:05 1:25-2:10	7:45-8:05 1:25-2:10	7:45-8:05 1:25-2:10	N/A

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 is a standard first course in functional analysis with algebra, geometry, and geometric interpretations. Topics include the straight line, conics, translations, rotations, parametric equations, vectors, polar coordinates, and some curve sketching.

Prerequisite: MATH 1316 or equivalent

Required Textbook(s):
Sullivan/Sullivan, Precalculus Concepts through Functions – A Right Triangle Approach to Trigonometry, 3rd Edition, 2015
Publisher: Pearson, Boston, MA
ISBN Number: 13: 978-032193105-4
Note: The NTCC Bookstore link is at www.ntcc.edu.

Recommended Reading(s):
None

Student Learning Outcomes:

Upon successful completion of this course, students will

2312.1 Demonstrate an understanding and knowledge of the properties of functions.

2312.2 Recognize and apply algebraic and transcendental functions and to solve related equations both algebraically and graphically.

2312.3 Identify intervals of increasing, decreasing, or constant; estimate relative maxima and minima.

2312.4 Sketch algebraic curves with vertical, horizontal, and slant asymptotes and apply these graphs to ideas of continuity.

2312.5 Determine the standard equation of a conic with given conditions and solve applied problems involving a conic.

2312.6 Solve applied problems with parametric forms, polar coordinates, vectors, and modeling.

SCANS Skills:
N/A

Course Outline:

Chapter 1 Functions
    1.1 Functions (Optional)
    1.2 The Graph of a Function (Optional)
    1.3 Properties of Functions
    1.4 Library of Functions; Piecewise-defined Functions
    1.5 Graphing Techniques: Transformations
    1.6 Mathematical Models; Building Functions (Optional)
    1.7 Building Mathematical Models Using Variation

Chapter 2 Linear and Quadratic Functions
    2.1 Properties of Linear functions and Linear Models
    2.2 Building Linear Models from Data (Optional)
    2.3 Quadratic Functions and Their Zeros (Optional)
    2.4 Properties of Quadratic Functions
    2.5 Inequalities Involving Quadratic Functions
    2.6 Building Quadratic Models from Verbal Descriptions and from Data (Optional)
    2.7 Complex Zeros of a Quadratic Function
    2.8 Equations and Inequalities Involving the Absolute Value Function (Optional)

Chapter 3 Polynomial and Rational Functions
    3.1 Polynomial Functions and Models
    3.2 Properties of Rational Functions
    3.3 The Graph of a Rational Function
    3.4 Polynomial and Rational Inequalities (Optional)
    3.5 The Real Zeros of a Polynomial Functions
    3.6 Complex Zeros; Fundamental Theorem of Algebra

Chapter 4 Exponential and Logarithmic Functions
    4.1 Composite Functions (Optional)
    4.2 One-to-One Functions; Inverse Functions
    4.3 Exponential Functions
    4.4 Logarithmic Functions
    4.5 Properties of Logarithms
    4.6 Logarithmic and Exponential Equations

Chapter 8 Polar Coordinates; Vectors
     8.1 Polar Coordinates
     8.2 Polar Equations and Graphs
     8.4 Vectors

Chapter 9 Analytic Geometry
     9.1 Conics
     9.2 The Parabola
     9.3 The Ellipse
     9.4 The Hyperbola
     9.7 Plane Curves and Parametric Equations

Evaluation/Grading Policy:
        Average of tests   60%
        Daily/Homework   20%
        Final Exam   20%

        "A"   90-100
        "B"   80-89
        "C"   70-79
        "D"   60-69
        "F"   below 60
      There will be no exemptions from the college final.

Other Course Requirements
A graphing calculator will be required for this class.

Student Responsibilities/Expectations:
I.   Information

Please remember that this is a college course being offered on the high school campus. Since this is a college course I am not allowed to give any information to a parent without the written consent of the student. This class is governed by the Vice President for Instructional Services at Northeast Texas Community College. Any problems with the class should be directed to the college not the high school. Mount Pleasant ISD employees shall not influence the grading policies, procedures or other academic policies of this class. In a dual credit environment high school students are expected to behave as college students.

II.   Attendance

Regular and punctual attendance at all classes is expected and necessary for successful completion of course work. Attendance rules for Mount Pleasant High School must be met. Students are expected to take exams and complete assignments as scheduled. No late work is accepted. Any unexcused absence from a test will result in a 0 on the test.

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 whenhe 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 toobtain information concerning the child's college records without the written consent of thestudent. 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.

Other Course Policies:
There will be no cell phone usage in the classroom. Students will be warned if caught using a phone during class. A student will be removed from class if the disruption continues.

The college's official means of communication is via your campus email address. I will use your campus email address, Blackboard, and MyMathLab to communicate with you outside of class. Make sure you keep your campus email cleaned out and below the limit so you can receive important messages.