MA 115: Precalculus—Fall 2013 (Dual Enrollment course)
Steven H. Annelin, Adjunct Professor: Northern Michigan University

Textbook

The (required) textbook we will use for this course is *Precalculus - Mathematics for Calculus* by J. Stewart, L. Redlin, and S. Watson. I will use the Fifth Edition, which is available at the University Bookstore. Other editions will be very similar, but the exercises will occasionally differ. If you have a different edition, find a friend with the fifth edition to make sure the exercises you work match your friend's. This is an excellent text and is carefully written with clear explanations.

Class

Class will be held in **Westwood High School, Room 102**, unless otherwise noted, at the following days & times.

- Math 115- Monday, Tuesday, **Wednesday**, Thursday from 2:05-2:55 p.m.

The days in **bold** above will be **lab & discussion** days, and you will usually be active these days. **Your daily attendance is required.** I will record attendance and you are expected to come to class daily, to pay attention to and participate in the class discussion.

Office Hours

- Friday: 2:00-3:00 p.m.

Grading

- Homework 15%
- Team Quizzes 10%
- Exams 50%
- Final 25%

Homework

Homework will be collected every Monday before the beginning of class, and only problems/exercises that have an * by them will be counted towards your homework score.
Quizzes

Team quizzes will be given on a bi-weekly basis and will usually be given on Wednesdays. Teams will be chosen randomly before each quiz. Each team will submit a copy of the quiz to be evaluated.

Exams

- Exam 1 – Thursday, September 19
- Exam 2 – Thursday, October 17
- Exam 3 – Thursday, November 14
- Final – Thursday of Exam Week for NMU

Make sure you are available to take the scheduled exams at the listed dates and times. Exceptions will only be accepted in case of conflicts and will need to be approved in advance.

Prerequisites

You need a B- or better in MA 104 or satisfactory score on the Math Placement Exam. Dual enrollment students should have successfully completed Algebra 2 with a B- or better and should have a satisfactory score on the Math Placement Exam.

Calculators

Calculators are allowed on all homework, quizzes and exams. Unless otherwise notified, you are not allowed to have any information saved in your calculators during quizzes and exams.

Electronic Devices

In order to promote a positive classroom experience, I request that you DO NOT use any electronic devices during class. Please make sure you leave your cell phone in your locker, or turn it OFF upon entering the room.

Course Description

The first two weeks of the course we will learn some fundamental concepts and how they are used. It is very important to get a firm grasp on the fundamentals. We will cover the first 7 chapters of the textbook and possibly other topics if time permits. A tentative schedule of the topics covered during the semester is given below. The schedule and content may be modified as needed.

Chapter 1—Fundamentals: Weeks 1 and 2

- Real numbers and Properties of Real Numbers
- Algebraic expressions
- Coordinate geometry
- Modeling using equations

Chapter 2—Functions: Weeks 3 and 4

- Functions and their graphs
- Functions and their inverses
- Visualizing Functions and Modeling data
Chapter 3—Families of Functions: Weeks 5 and 6

- Polynomial
- Rational
- Zeros of Polynomial Functions
- Mathematical Modeling

Chapter 4—Exponential and Logarithmic Functions: Weeks 9 and 10

- Exponential Functions
- Logarithmic Functions
- Laws of Logarithms
- Modeling with Exponential and Logarithmic Functions

Chapter 5—Trig Functions of Real Numbers: Weeks 11 and 12

- Unit Circle
- Trig Functions of Real Numbers
- Trigonometric graphs

Chapter 6—Trig Functions of Angles: Weeks 13 and 14

- Angle Measure
- Right Angle Trigonometry
- Trigonometric functions of angles
- Law of Sines and Law of Cosines

Chapter 7—Analytic Trigonometry: Weeks 15 and 16

- Trig Identities & Formulae
- Problem Solving

Natural Sciences Requirement

This course satisfies the Foundation of Natural Sciences/Mathematics requirement. Students who complete this course should be able to demonstrate a basic understanding of mathematical logic; use mathematics to solve scientific or mathematical problems in college classes; express relationships in the symbolic language of mathematics; and appreciate the role of mathematics in analyzing natural phenomena.

University Policies

Academic Honesty: Cheating is not only unethical and pathetic, but is a violation of the Northern Michigan University Student Code and University Policy and grounds for your dismissal from the University.

Discrimination & Harassment: Northern Michigan University does not unlawfully discriminate on the basis of race, color, religion, national origin, gender, age, height, weight, marital status, handicap/disability, sexual orientation or veteran status. If you have a civil rights inquiry, contact the Affirmative Action Office at 906-227-2420.
Americans with Disabilities Act Statement: The University seeks to provide equal access to its programs, services and activities for people with disabilities. If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Dean of Students Office at 2001 C. B. Hedgcock Building (227-1700). at 906-227-1700 as soon as possible. Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and University guidelines.

The Registrar: Withdrawing from any course or any matters relating to registration are the responsibility of the student. For more information regarding this topic, check out the Registrars Website.