

# MTH 132 – Precalculus with Science Applications

**Fall 2006**

## **Instructor Information**

Instructor : Dr. Joel Better

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Phone number : 66081

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Office hours : TF 12:00-1:00, MRF 2:00-3:00, W 3:00-4:00

## **Course Information**

Course title : Precalculus with Science Applications

Course number : MTH 132

Section : 102

Meets : MTWRF 11:00 – 11:50 in SH 511

Credit Hours : 5

Prerequisites : ACT 23 or SAT 540

## **Course Objectives**

On completion of MTH 132, students will:

- have developed the basic mathematical skills to solve applied problems from the physical, social, and life sciences. These skills include graphing elementary (rational, exponential, logarithmic, trigonometric) functions, interpreting these graphs, solving quadratic, exponential, logarithmic and trigonometric equations, solving rational inequalities and finally, solving systems of linear equations in three variables.
- be able to set up mathematical models to represent real world situations, again focusing on problems from the physical, social and life sciences.
- be ready for Calculus I.

Contents :

1. Graphs, functions and models (8/21 – 9/1)
2. Functions, equations and inequalities (9/5 – 9/15)
3. Polynomial and rational functions (9/19 – 9/29)
4. Exponential and logarithmic functions (10/2 – 10/13)
5. The trigonometric functions (10/17 – 10/24)
6. Trigonometric identities, inverse functions, and equations (10/25 – 11/3)
7. Applications of trigonometry (11/7 – 11/13)
8. Systems of equations and matrices (11/14 – 12/5)

## **Textbook**

Precalculus, Graphs and Models (Third edition). Bittinger, Beecher, Ellenbogen, Penna.

## **Assessment**

Homework sets will be handed out each Monday and will be due the following Monday in class. Late homework sets will not be accepted unless the student has what I feel is a legitimate excuse. You may receive help from me during office hours, however you are expected to work on these homework sets individually. There will be three in-class midterms (midterm 1: 9/18, midterm 2: 10/16, midterm 3: 11/6) and a final exam (\_\_\_). Each midterm will focus on the material covered since the previous midterm, the final will be comprehensive.

Class attendance will not be taken into consideration when computing the final grade, but it is highly recommended. Unless you have a valid excuse (see ...) you will be held responsible for any in-class announcements.

Grading system :   each midterm : 10 %  
                          homework : 40 %  
                          final exam : 30 %

The final grade will be calculated by means of a curve. Possible grades are (A, B, C, D and F, there will be no pluses and minuses)

## **Integrity policy**

Cheating on midterms and the final is a serious offence. Any student caught cheating will receive an F for the course. For more on academic dishonesty run a search for “academic dishonesty” on the Marshall homepage.