

A Study of Functions

MATH 123 - CRN 10920

Spring 2008

Professor: Todd Swanson

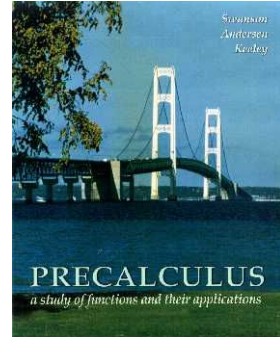
Class time/Location: MWRF 2:00-2:50 p.m., VZN 297

Office/Phone: VWF 211, X7679

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Web Page: www.math.hope.edu/swanson

Text: *Precalculus: A Study of Functions and their Applications*, by Swanson, Andersen, & Keeley



Office Hours: I have scheduled office hours 10:00-11:00 a.m. on Mondays and Wednesdays and 1:00-2:00 p.m. on Thursdays and Fridays. However, when I am in my office, my door is always open and you are welcomed to come see me. You can check my class schedule on my web page.

Additional Help: Besides seeking help from me, help for this course is available at the Mathematics Lab. This is a drop-in help center staffed my Hope students. It is scheduled to be open from 7:30-9:30 p.m., Monday through Thursday and 6:00-8:00 p.m. on Sunday in VZN 274.

Calculator: The graphical representation of a function is very important and will be used extensively in this course. Because of this, a graphing calculator is required. I will be using the TI-84 in class. It is highly recommended that you have a TI-82, TI-83, or TI-84. Other calculators will work if you are comfortable working with another particular model.



Curriculum: In this course we will look at a number of different types of functions. We will study polynomial, rational, exponential, logarithmic, and trigonometric functions. We will look at them in symbolic, numerical, and graphical representations, and make connections between each of these representations. In addition to this, we will learn how to verbally describe functions in their abstract form as well as in applications. Below is a tentative week by week syllabus of the chapters of our text and topics we will cover. I will adjust this schedule depending upon the needs of the class.

Weeks 1 & 2: Chapter 1 - An Introduction to Functions

Weeks 3 & 4: Chapter 2 - Families of Functions

Weeks 5 & 6: Chapter 3 - New Functions from Old

Weeks 7 & 8: Chapter 4 - Polynomial and Rational Functions

Weeks 9 & 10: Chapter 5 - Trigonometric Functions

Weeks 11 & 12: Chapter 6 - Applications of Trigonometric Functions

Weeks 13 & 14: Chapter 7 - Solving Equations and Fitting Functions to Data

Week 15: Chapters 8 & 9 - Limits and Additional Topics

Reading Questions: We have written the textbook with the intention that it is read by students. To help you with this task, reading questions are included throughout the text. In preparing for our class discussions and activities, I will assume the text has been read and the reading questions have been answered.



Exercises: Although the exercises will not be collected and graded, completing them on a regular basis is very important. You will be expected to complete these assignments and they will be reviewed in class. These problems will be emphasized in test questions.

Quizzes: Throughout the semester you will be given a number of announced quizzes. These will be short and designed to take up just a few minutes of class time. They will be based on the reading questions and the exercises.

Investigations: Investigations are included in every section of the text. These problems are more in-depth than a homework exercise. Some investigations will be assigned and graded. Most often, I will allow you to work in groups on these assignments.

Projects: We will be working on three projects throughout the semester. Most of these will be applications of mathematics that give you a chance to discover, learn, and explain mathematical concepts. They will be completed in groups both in and out of class. These are an integral part of the course and you will be tested on this material.

Grading: A point distribution is as follows:

Hour Tests (3) 300 points
Final (Comprehensive) - 100 points
Investigations and Quizzes - \approx 125 points
Projects - 75 points

The tests will be given on the following dates:

Test 1 – Friday, February 1
Test 2 – Friday, March 7
Test 3 – Friday, April 11
Final Exam – Tuesday, April 29 at 8:00 am



Each graded piece of work will be assigned a specific number of points. The final grade will be determined simply by your percentage of the total points accumulated during the semester according to the following scale: 0-59%=F; 60-62%=D-; 63-66%=D; 67-69%=D+; 70-72%=C-; 73-76%=C; 77-79%=C+; 80-82%=B-; 83-86%=B; 87-89%=B+; 90-92%=A-; 93-100%=A.