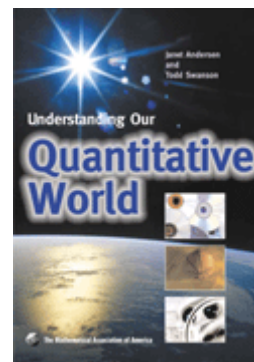


Understanding Our Quantitative World

GEMS 100-01B

CRN 10908

Spring 2008



Professor: Todd Swanson

Class time/Location: M and W 11:00-12:50, SciCtr 1014

Office/Phone: VWF 211, X7679

Email: swansont@hope.edu

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

Text: *Understanding our Quantitative World* by Andersen and Swanson

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 through the Academic Support Center. They run help sessions for all types of introductory mathematics courses, which they call the Mathematics Lab. It is open 6:00-8:00 p.m. on Sunday and 7:30-9:30 p.m. on Monday through Thursday in VZN 274.

Calculator: A TI-83 or TI-84 graphing calculator is required and you will need to bring it to class. Detailed instructions for using a TI-83 will be given in the text and in class. Many of the activities we do in class will also use a CBL (Calculator Based Laboratory) and a CBR (Calculator Based Ranger). These will work best with a TI-83 or TI-84.

Curriculum: The goal of this course is to show how mathematics is used effectively every day in the world around us. Very little time will be spent lecturing in class; instead, you will be given daily reading assignments to prepare you for class and we will spend much of our class time going through activities. (See attached schedule.) Great effort was taken to make a readable text. You will be expected to complete each reading assignment *before the class meets*, including the reading homework questions. Class time will then be spent working through the group activities. We will be looking at how various types of simple mathematical functions can be used to describe things going on in our world. We will also be looking at how statistics and probability can be used effectively.

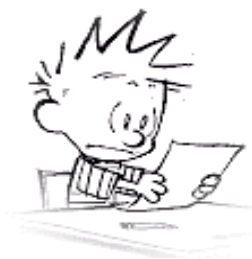
Reading Questions and Quizzes: After reading each section, you are to complete a set of reading questions. You will be given quizzes with questions that are based on the reading questions. Answers to the reading questions are available on my webpage.

Group Assignments: Our class time will be primarily spent on group assignments. Each group assignment will consist of a number of investigations that incorporate media sources and calculator technology. These assignments will use the mathematical concepts you have read about in preparing for class. You will turn in one set of solutions per group.

Attendance: Because of the importance of group work and class participation, attendance is extremely important. Your group is counting on you! Please don't let the other members of your group down. If you are absent, you may still turn in any assignment due. However, you will be responsible for completing any group work done that day on your own.

Grading: There will be 11 quizzes; each worth 10 points. I will not give make up quizzes, but will drop your lowest two scores. We will have 11 group assignments; each worth 10 points. I will drop your lowest group assignment score. This semester, I am also including a 20 point geometry assignment. The first test will cover chapters 1-5 and 7 and the second test will cover chapters 8-13 and the geometry assignment. Each test is worth 100 points. To help you prepare for the tests, I have posted copies of old tests, test reviews, and sections summaries on my webpage. A point distribution is as follows:

Group Assignments:	130 points
Quizzes:	90 points
Tests:	200 points
Total:	420 points



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.

Tentative Schedule

Monday, March 3

- Intro to course
- 1: Functions Activities 2 and 3
- HW: Do the reading questions in 2: Graphs

Wednesday, March 5

- Quiz over 1: Functions and 2: Graphs
- 2: Graphs Activities 1, 7, 8, and 9
- HW: Do the reading questions in 3: Applications of Graphs

Monday, March 10

- Quiz over 3: Applications of Graphs
- 3: App. of Graphs Act. 1, 3, and handout
- HW: Do the reading questions in 4: Displaying Data

Wednesday, March 12

- Quiz over 4: Displaying Data • 4: Displaying Data Activities 2, 3(new graph), 4 , 5
- HW: Do the reading questions in 5: Describing Data

Monday, March 24

- Quiz over 4: Describing Data • 5: Describing Data Act. 2, 3, 4, and 5
- HW: Do the reading questions in 7: Linear Functions

Wednesday, March 26

- Quiz over 7: Linear Functions • 7: Linear Functions Act. 1, 2 and 3
- HW: Prepare for Test 1

Monday, March 31

- Test 1
- HW: Do the reading questions in 8: Regression and Correlation

Wednesday, April 2

- Quiz over 8: Regression & Correlation • 8: Reg. & Corr. Act. 1, 2, 3, and 5
- HW: Do the reading questions in 9: Exponential Functions

Monday, April 7

- Quiz over 9: Exponential Functions • 9: Exp. Fun. Act. 1, 2, 6, and 8
- HW: Geometry Exploration

Wednesday, April 9

- Geometry Exploration
- HW: Do the reading questions in 10: Logarithmic Functions

Monday, April 14

- Quiz over 10: Logarithmic Functions • 10: Log. Fun. Act. 1, 2, and 3
- HW: Do the reading questions in 11: Periodic Functions

Wednesday, April 16

- Quiz over 11: Periodic Functions • 11: Periodic Fun. Act. 1, 2, and 4
- HW: Do the reading questions in 12: Power Functions

Monday, April 21

- Quiz over 12: Power Functions • 12: Power Fun. Act. 1, 5, and 6
- HW: Do the reading questions in 13: Probability

Wednesday, April 23

- Quiz over 13: Probability • 13: Probability Act. 3, 4, and 6
- HW: Prepare for Test 2

Tuesday, April 29 • Test 2 @ 2:00 p.m.