

Math 79 Quantitative Reasoning Course Syllabus

Instructor: Dr. Fred Park

Course Description

This is a semester long course in quantitative reasoning. This course is designed to help students develop their ability to create, analyze, and communicate quantitative and scientific arguments. It will emphasize critical thinking and problem-solving skills while also giving students practice in computation and symbolic manipulation. Topics to be covered include elementary linear equations, polynomial modeling, working with and understanding graphs and graphical presentations, and elementary probability and statistics. Some basic computer programming will be used for computations and visualization. These topics will be presented in the context of applications and models from various disciplines. (Not open to those who have had 81, 85, 139A, or 141A.) Prerequisite: Math 74 or sufficient score on Math Placement Exam. One semester, 3 credits.

Instructor Information

Instructor: Dr. Fred Park
email: fepark@whittier.edu
webpage: www.fredpark.com
Office: Wardman Hall 207
Phone: 562-907-4200, ext. 4880
OH's: MWF 3:30-5:00 pm or by Appointment

Course Information

Times and Location: MWF 1:30-2:20 MWF DH 118
Textbook: "A Mathematical View of Our World" by Harold Parks, Gary Musser, Lynn Trimpe, Vikki Maurer, Roger Maurer

Additional items needed:

1. A small stapler and staples.
2. Texas Instruments TI-30X IIS 2-Line Scientific Calculator. (roughly \$13 on amazon.com etc.)

Course Breakdown

Scheme #1:

- HW 15%
- Class Presentation 5%
- MT #1 20%
- MT #2 20%
- Final 40%

Scheme #2

(Emergencies Only!!):

- HW 15%
- Class Presentation 5%
- One Midterm 20%
- Final 60%

No makeup exams whatsoever. I highly recommend you taking both midterm exams since scheme #2 is only for emergencies. I will automatically take the higher of both schemes at the end of the course when determining your final grade.

Final Course Evaluations

Final Evaluations: 1% total bump in course grade. For example if your final total course average from the higher of scheme #1 and #2 is an 89% total (B+ grade), your final average gets bumped to 90% (Now an A- grade). I highly recommend that everyone does the final course evaluations.

Grading Scale

In this course, I will utilize an A-F scale with +/- grading. The percentage breakdowns based on the highest average from scheme #1 and #2 above are as follows:

- 90-100% A Range
- 80-89.9% B Range
- 68-79.9% C Range
- 58-67.9% D Range

The minimum grading guidelines in terms of percentage of the class are as follows:

- 20% of the class will be in the A Range
- 30% of the class will be in the B Range
- 35% of the class will be in the C Range
- 15% of the class will be in the D/F range

To obtain an “A” grade in my course, you will have to work very hard. In general, there are no easy “A’s” in my courses or in the Math Department. There have been cases when no “A” grades have been awarded in math courses as well.

Exam Dates

The exam dates are set in stone and will not change. Please write these down in your scheduler ASAP.

- MT #1: Fri October 9th from 1:30-2:20 PM in DH 118
- MT #2: Fri November 13th from 1:30-2:20 PM in DH 118
- Final: Weds December 16th from 1-3 PM in DH 118

Homework

HW is due at the beginning of class each Weds no later than 1:35 PM. No HW will be accepted after the 1:35 PM deadline. Please do not walk up and attempt to turn your assignment into the front of class after the 1:35 PM deadline since it will not be accepted. Moreover, such action would be deemed as disruptive to the class.

There are 10 assignments total. You are allowed to drop 2 of the assignments. Please make sure to keep up with the homework after each lecture. Some of the HW problems will be pencil and paper problem solving while others will be more in depth project related that can take up to 2 weeks to finish.

Class Presentation

You will need to present one problem to the class detailing how it is solved. More details from Instructor later in the semester.

Computer Labs

This course will involve some computer work with Matlab, a high level programming language and industry standard in science and engineering. The class will be a Bring Your Own Device (BYOD) in regard to computers. If you have a laptop with wifi, you will be able to access the software from any location on campus. If you do not have a laptop, you can borrow one from library. I will specify days for you to bring in your computer.

Class Attendance

Class attendance is mandatory! If you will miss more than 2 total lectures (unexcused) throughout the course, your final grade will drop 1/2 letter grade for each absence past the 2 allowed. For example:

- 3 unexcused absences: You drop 1/2 letter grade. e.g. your B- grade now becomes a C+.
- 4 unexcused absences: You drop 1 full letter grade. e.g. your B- grade now becomes a C-.
- 5 unexcused absences: You drop 1-1/2 letter grades. e.g. your B- grade now becomes a D+.

Valid excuses include a doctors note, emergency (documented), or sports related travel. For sports travel, you must bring in the necessary forms ahead of time for me to sign or else your absence will be counted towards the two allowed.

Active Learning

Active learning will be a large component of the class time. You will be required to work in groups, challenged to think, and work problems out in class on a regular basis. There will be a 50/50 split between lecture and group work. Active learning exercises will be graded and required to be turned in. This includes both group work and individual work. There will also be quizzes throughout the semester. You may drop only 1 graded active learning exercise or quiz. No make up quizzes or exercises whatsoever under any circumstances.

Study Time and Class Expectations

For every 1 hour of lecture you should be studying 3 hours outside of class. That is at least 9 hours a week outside of class of studying and HW. Math is a difficult and time consuming subject. Please keep up with the work and do not 'Cram' for any exams or HW deadlines since this usually results in very poor results. I recommend at least 12 hours a week of study outside the classroom for this course. The skills you will obtain are well worth the time and effort, especially in this quantitative age we now live in.

Cheating

Cheating will absolutely not be tolerated in any way, shape, or form in this course!! I have not had any issues in the past and do not plan on starting. Cheating in any form will be recorded and the student will be sent to the Dean. Cheating has far reaching consequences that can affect your future career path. Quite simply put: Don't Do It!

Group Work

I encourage group work and you may work together. But you must have your own write ups of your HW and only if you completely understand the problem being solved.

Disruptive Behavior

Disruptive behavior will absolutely not be tolerated in any way, shape, or form in this class! This includes cell phone use (talking, texting, email, etc), computer use unrelated to the course, internet browsing, talking, chatting, or any other general disruptions. If you are being disruptive in class to the instructor and/or your fellow students, you will be asked to leave. I will not allow any disruptions to compromise the learning environment whatsoever.