Math 1010 - 0? Intermediate Algebra (4 cr)

Semester/Year Syllabus

Instructor:
Class meetings:
Office Hours:
Office Location:
E-mail address:
Website:
Required Materials:

- Turning Technologies NXT Response Card
- Math 1010 Course Packet, available at the bookstore.

Course Description: In the year 2014, computational efficiency is no longer a priority in basic mathematics courses. Rather, we now need creative problem-solvers to lead the next generation. We focus on conceptual understanding and thorough written communication, in the context of problem-solving. You are expected to understand *why* one mathematical statement follows from another and *how* to represent mathematical concepts in various ways, effectively communicating your arguments within the culture of mathematics. We take a problem-solving approach to foster creativity. It is expected that you embrace confusion as wonder: an opportunity to be creative and logical. Successfully completing this course means having the ability to ponder about a problem you encounter, make a plan for solving the problem, execute the plan, and then reflect. We will describe, represent and analyze patterns throughout the course. We will model the problems we encounter using linear, quadratic and exponential functions and are going to investigate properties of those functions that allow us to predict future behavior.

Course objectives: At the end of the course, the student will be

1. Willing to engage with problems which are unfamiliar to them and to which the solutions or paths to solutions are not immediately obvious.
2. Extract relationships between quantities and describe them in different ways: tables, expressions, graphs, words, and can translate between these representations in order to answer questions most efficiently.
3. Answer questions about quantities given relationships between two or more by solving equations, algebraically, using tables, graphs or approximating.
4. Understand the connections between solving equations and inverse functions.
5. Understand how different growth patterns influence shape of the graph.
6. Recognize linear, exponential and polynomial from verbal descriptions, tables, and graphs.

Teaching and Learning Methods:

- **In class**: The course packet contains questions that will motivate the content for this course. You can expect to:
  - to work with your partner(s) on the problems in class,
  - to have whole class discussion and short lectures on pertinent material,
  - to respond individually or as a working group to clicker questions,
  - to engage in short writing sessions and quizzes.

  These activities are organized for your benefit. Work in class is meant to train you to become better problem solvers, inform you how will you are understanding the material, and to inform me what we need to focus on. You are required to be in class, and engage actively to maximize the benefits of class work. If you prefer to work in your own time, we recommend taking an online class that allows this flexibility.

- **After Class**: There will be two types of homework:
  - Weekly assignments that are not collected. These questions review material from class and will help you form a mastery of core concepts. It is expected that you work on these questions and ask questions in class or in office hours. Weekly quizzes will be constructed from the assigned questions, to ensure you are making progress.
  - Frequent written homework will be assigned and collected. Some longer more challenging assignments will be group projects.
  - You should spend time reviewing material in class and clearing up any misconceptions, working on problems we did not answer as a group, and coming up with your own questions. Studying 5 hours each week (on top of homework) is much more productive than cramming the week of the final.

Evaluation Methods and Criteria: Semester grades will be calculated as follows:

Participation	10%	Clickers
Quizzes	15%	Weekly
Written Homework	15%	Frequent
Midterms	30%	Three total
Final Exam	30%	**You have to take the final to pass the course!**

Additional support: This course is designed to challenge students. You may require additional support:

- Come to my office hours. This time is scheduled for you to come and ask questions on any of the material covered in class/homework/exams or any mathematical inquiry you may have.
- The math department offers free drop-in tutoring for students enrolled in this class. The center is located underneath the walkway between LCB and JWB and can be accessed by entering either building. They are open Monday - Thursday 8 AM - 8 PM and Friday 8 AM - 6 PM. I highly recommend taking advantage of this service.
- A list of private tutors is available from the Math Department office.

Schedule of Topics and Due Dates:

Drop Date	January 15
Exam 1	January 31
Withdraw Date	February 28
Exam 2	February 28
Exam 3	April 4
Final Exam	Thursday, April 24 3:30 - 5:30

Accommodations: The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services. (www.hr.utah.edu/oeo/ada/guide/faculty/)

Faculty and Student Responsibilities:

1. You may take an alternate exam if you talk to me about it first and explain the extenuating circumstances that make it necessary. It is your responsibility to communicate with me as soon as is possible, before the exam occurs. Talking to me after the exam is too late.
2. In an effort to create a vibrant learning community, cell phones and other electronic devices will not be allowed in class.
3. You will be allowed a scientific calculator on all exams. A graphing calculator will not be allowed on exams. In class, you are welcome to work on a graphing calculator. You may not use a cell phone calculator.
4. The syllabus is not a legally binding contract. The instructor reserves the right to change any portion of the syllabus provided you are given enough notice.