

COURSE SYLLABUS

MATH 1030-005 Fall 2018

Introduction to Quantitative Reasoning (3 credits)

Lectures: TH 3:40-5:00 PM, BEH S 114

Instructor: Daniel Zavitz, LCB 326, zavitz@math.utah.edu

Office Hours: TBA

Textbook: *Using and Understanding Mathematics : A Quantitative Reasoning Approach*, by Jeffrey O. Bennett and William L. Briggs (custom edition for University of Utah, taken from the sixth edition)

Course Web Page: All course information and announcements will be posted on Canvas. It also contains material that may help you succeed in this course. I shall assume that you are keeping up to date with its contents.

Prerequisites: "C" or better in MATH 1010 (Intermediate Algebra) OR Accuplacer CLM score of 50 or better OR ACT Math score of 23 or better OR SAT Math score of 540 or better.

This means that you should be able to manipulate variable expressions, work with simple linear equations and graphs, work with fractions and exponents, and know the basic properties of simple geometric shapes.

(Note: Math 1030 does not satisfy a Math 1050 or Math 1090 prerequisite.)

Course Overview: This course will fulfill the Quantitative Reasoning Math QA, general education requirement for graduation.

This course addresses the following Essential Learning Outcomes: inquiry and analysis, critical thinking, written and oral communication, quantitative literacy, teamwork, and problem solving.

Math 1030 is an application-based course centered around the use of mathematics to model changes in the real world, and the effective communication of these mathematical ideas. The course is based on Chapters 1-4 and 8-10 (sec. A). You are expected to read each section that we cover.

At the end of the course a student should be able to:

- use Venn diagrams to examine relationships between sets and the validity of simple deductive arguments
- use an appropriate sentence to describe both the absolute and percent change in a given quantity and interpret such statements about the change
- use simple and compound units, making conversions when necessary, and develop accurate comparisons between units
- evaluate the impact of compound interest on simple financial decisions
- use the savings plan and loan formulas to calculate the payment amount into a savings plan when a certain financial goal needs to be achieved, to calculate the mortgage payment or interest paid over the life of the loan and discuss whether those results are realistic (or not), compare several loans with different interest rates in order to make financial decisions
- compare and illustrate the features of linear and exponential growth using practical examples
- determine simple areas, volumes, and explain the differential effect of scaling on perimeter, area, volume as well as some of the practical implications of scaling

Homework: Homework will be assigned weekly. Homeworks will be assigned on Tuesdays and collected the following Tuesday. All homework assignments and due dates will be posted on the course webpage.

Homeworks will be completed outside of class and all students must turn in their own homework assignments. The lowest two homework scores will be dropped. *No* late homeworks will be accepted. Paper copies of homeworks must be turned in; *no* homeworks will be accepted via email.

In-class Assignments: There will be in-class assignments every Thursday. In-class assignments will be graded for participation and effort. Two days of in-class assignments will be dropped (i.e. students may miss two days without penalty). There will be no makeups for in-class assignments.

Project: You will have 1 project to turn in. The project will be due the 14th week of classes. The exact date will be given during lecture. You will be given the list of topics approximately 8-9 weeks before the project is due, and you will work in groups of about 3 students on a topic that you select from the list. We will discuss the format and expectations for this project before you start working on it. Late projects will not be given full credit.

Exams: You will have in class exams. They will be closed book and closed notes. A calculator will be allowed for all exams. There will be no makeup exams. However, if the percentage earned on your final exam is higher than either of your midterm exams, I will replace one midterm score with the final.

Final Exam: (comprehensive/departmental) December 12, 2018 (Wednesday) 3:30-5:30 PM

Grading Policy: Your grade will be based on:

Homework	15%
In-Class Assignments	10%
Group Project	20%
Exams (2)	30% (15% each)
Final Exam	30%

Course Grades (Evaluation Methods and Criteria): Your final letter grade will be determined by your overall percentage as follows:

A	93% - 100%	B-	80% - 82.9%	D+	65% - 69.9%
A-	90% - 92.9%	C+	77% - 79.9%	D	60% - 64.9%
B+	87% - 89.9%	C	73% - 76.9%	D-	55% - 59.9%
B	83% - 86.9%	C-	70% - 72.9%	E	below 55%

Calculators: You will need a calculator for this course. A scientific calculator will be sufficient.

Other Policies and Resources

Math Tutoring Center: Do not hesitate to come to my office during office hours or by appointment to discuss a homework problem or any aspect of the course. Additionally, the T. Benny Rushing Mathematics Tutoring Center offers free tutoring. Beginning the second week of classes, tutoring will be available from 8am to 8pm Monday through Thursday and 8am to 6pm on Friday. If you want to hire an outsider tutor (for a fee), you can find a list of such people through the math department.

Veteran's Center: If you are a student veteran, the University of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: <http://veteranscenter.utah.edu/>. Please also let me know if you need any additional support in this class.

LGBT Resource Center: The University of Utah has an LGBT Resource Center on campus. They are located in Room 409 in the Olpin Union Building. Hours: M-F 8-5pm. You can visit their website to find more information about the support they can offer, a list of events through the center and links to

additional resources: <http://lgbt.utah.edu/>. Please also let me know if there is any additional support you need in this class.

The Americans with Disabilities Act: 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 this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

Addressing Sexual Misconduct:Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veterans status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801- 581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585- 2677(COPS).

This Syllabus Can Change: Depending on many factors during the semester, I reserve the right to change the class structure and this syllabus. If this occurs, you will be notified about these changes in lecture and an announcement on Canvas.

Important Dates:

Labor Day (NO CLASS) Monday, September 3
First Midterm **Friday, June 22**
Fall Break ... Sun.-Sun., October 7-14 Thanksgiving Break ... Thurs.-Sun.,
November 22-25 Classes End Thursday, December 6t
Course Final**December 12, 2018 (Wednesday) 3:30-5:30 PM**