

Course Syllabus
MATH 1030, Section 01, Spring 2016
Introduction to Quantitative Reasoning

Instructor: Anna Nelson
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Class Hours: TH 9:10 - 10:30, SW 137

Office Hours: 1-3PM Wednesday or by appointment

Text: *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)

Prerequisites: A "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: This course will fulfill the Quantitative Reasoning – Math QA requirement for graduation.

Math 1030 is an application-based course centered around the use of mathematics to model changes in the world, and the effective communication of these mathematical ideas. The course is based on Chapters 1-4, 8,9, and Chapter 10 (sec. A). You are expected to read each section that we cover. At the end of the course you 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, make conversions when necessary, and develop 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 the 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 facilitate 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 is assigned roughly every three class periods. *Late homework will not be accepted.* Homework will be graded based on both completion and correctness but I care much more about how you arrived at an answer rather than the answer itself.

Quiz: Quizzes will be given roughly every two weeks. The problems on the quizzes will be similar to the assigned homework questions. *No make-up quizzes will be given*, but your two lowest scores will be dropped at the end of the semester.

Group Project: There will be one group project due during the last week of class (4/26). The objective of the project is to clearly describe, understand and communicate real world models using mathematics. More information about topics, format and expectations will be given roughly 8-9 weeks before the project is due.

Exams: You will have two mid-term exams (50 minutes each). You **MUST** bring a valid ID to the exam. Absence from an exam will be excused only if you can provide verifiable and convincing evidence that you have a significant illness or serious family crisis that will prevent you from attending. Except under extremely unusual circumstances, you must inform me in advance of the missed test. You are expected to promptly make arrangements with me to make up the test.

Final Exam: There will be a *comprehensive* departmental final exam. The final exam is on Monday, May 2nd, 3:30-5:30 PM

Grading Policy: Your grade will be based on:

Homework	10%
Quizzes	10%
Group Project	20%
Exam 1	15%
Exam 2	15%
Final Exam	30%

Grades (Evaluation and criteria): Final letter grades will be determined by 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.

ADA Statement: 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.

Tutoring: The Rushing Math Center offers free drop-in tutoring, a computer lab, and study 2 areas for undergraduates. The Rushing Student Center is adjacent to the LCB and JWB. The hours for the Fall semester are: 8 am – 8 pm Monday to Thursday and 8 am – 6 pm on Friday. The tutoring center will open the second week of classes.

Some important dates for this class:

January 11	First day of classes
January 22	Last day to drop (delete) classes
February 25	First mid-term exam (in class)
March 4	Last day to withdraw from classes
March 13–20	Spring break
April 14	Second mid-term exam (in class)
April 26	Last day of this class
May 2	Final examination

Class policies:

- I reserve the right to modify the class structure and syllabus at any time but I will notify you if and when any changes are made
- Please silence your technology at the start of class. If you are repeatedly disrupting the learning environment, you will be asked to leave.
- If an emergency arises that prevents your from making it to an exam or turning in a homework it is your responsibility to communicate that information to me as soon as possible. I will do my best to accommodate any situation that comes up.
- If you are struggling with a concept please come talk to me or visit the tutoring center as soon as possible. I am more than happy to meet with you outside of my office hours if my schedule permits it.
- I encourage you to work with others on the homework but anything that you turn in must be your own work.
- Regrade requests can only be made the class after the homework/quiz/exam was returned and in writing with an explanation why more credit is due.