Course Syllabus
Mathematics 1030, Section 04, Spring 2016
Introduction to Quantitative Reasoning

Instructor: Sabine Lang
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Class Hours: TH 3:40 PM - 5:00 PM, LCB 225

Office Hours: Tuesday 2:30 PM - 3:30 PM, Thursday 5:00 PM - 6:00 PM, 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) ISBN-10: 1-269-74850-5 ISBN-13: 978-1-269-74850-6

Webpage: All information concerning this class will be posted on the Canvas webpage of the class. Any important information will be given in class and on the Canvas webpage. You are responsible for checking the webpage on a regular basis (you can have the communication from Canvas forwarded to your email address if necessary).

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: 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: There will be homework assigned during the semester, approximately every other week. They may be graded partially for correctness or only for completness, it will be clearly stated on each exercise sheet. Homework and due dates will be posted on Canvas, and communicated to you in class. No late homework will be accepted, you will get a score of zero for the homework that you do not turn in, but I will drop the lowest homework. You can work with others on the homerwork, but your final write-up must be your own. You must write your name and student ID on each homework that you turn in.

Quizzes: There will be quizzes during the semester, approximately every other week and covering the material seen in class until that day. I will let you know in advance that there will be a quiz, and post it on Canvas. No make-up quizzes will be given, you will get a score of zero for the quizzes that you miss, but I will drop the lowest quiz.

Project: You will have one project to turn in. This will be due the 14th week of classes. Exact date will be written in your daily schedule of lectures. You will be given the list of topics approximately on the 5th or 6th week of class, 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 the project before you start working on it. Late project will not be given full credit.

Mid-term exams: You will have two mid-term exams. 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. It is your responsibility to promptly make arrangements with me to make up the test. I reserve the right to make alternate exams more difficult than the scheduled exam.

Final: The **final exam** will be comprehensive/departmental.

Grading Policy: Your grade will be based on:

Homework	10 %
Quizzes	10 %
Project	20 %
Mid-term exams	30% (15% each)
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. Graphing or programmable calculator will not be allowed on exams.

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 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.

Classroom Etiquette: Please turn off your cell phones while you are in class. The use of computers is not allowed in the classroom. I will expect respectful behavior in my classroom. If I think that your behavior is disrespectful or distracting, I will ask you to leave the class.

Cheating: If you cheat on any homework, quiz, project or exam, I will give you a grade of zero for that work. Depending on the severity of the cheating, I may decide to fail you from the class. In all cases, I will report the incident to the Dean of Students, and to the International Students Office in the case of an international student.

Some important dates for this class:

11 January	First day of classes
22 January	Last day to drop (delete) classes
23 February	First mid-term exam (in class)
13-20 March	Spring break
1 April	Last day to withdraw from classes
12 April	Second mid-term exam (in class)
26 April	Last day of this class
2 May 3:30 PM – 5:30 PM	Final exam

Disclaimer: This syllabus may change during the semester. If I do any modification to this syllabus, I will let you know in class and post the new syllabus on the Canvas webpage.