Math 1030-002 Syllabus - Quantitative Reasoning - Fall 2017

Lectures:	MWF 08:35am-09:25am at JFB B-1
Instructor:	Yen-An Chen
Office:	JWB 321
Email:	yachen (at) math (dot) utah (dot) edu
Course Webpage:	CANVAS on CIS (http://cis.utah.edu)
Office hours:	TBD or by appointment

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) ISBN-10: 1-269-74850-5 or ISBN-13: 978-1-269-74850-6.
Either the 6th edition of the full text or the custom 3rd edition is fine.

The hardcopy of the textbook can be purchased at the Campus Bookstore or UCampus Store (online).

> http://www.campusstore.utah.edu/utah/SelectTermDept.aspx

Once you select the course number, you will be presented with a choice to buy the book from the bookstore or other non-bookstore vendors (on the bottom of the page). You can choose to rent the book (180-day rental) or buy eTextbook at the following website:

> https://www.vitalsource.com/products/
> using-and-understanding-mathematics-a-jeffrey-o-bennett-v9780321912343

Before you purchase the textbook please make sure that Math 1030 is a good fit for you and you are not planning to withdraw from the class. Some vendors will not allow you to return the book for a refund if you decide to withdraw. Please read all policies associated with the return/refund before you purchase and pay for the book.

Video lectures are available through the Departmant of Mathematics.

> http://www.math.utah.edu/lectures/math1030.html

Calculators: You will need a calculator for this course. A scientific calculator will be sufficient. You are required to bring the calculator to every lecture/exam since I do not provide the calculator for students. You are not allowed to use your cell phone as a calculator.

Updates: Topics covered and assignments will be posted on CANVAS. You are responsible for checking it periodically.

Prerequisites: "C" or better in MATH 980 (Algebra for College Success) or Math 1010 (Intermediate Algebra) OR Accuplacer EA score of 60 or better OR ACT Math score of 19 or better OR SAT Math score of 500 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 objectives: Math 1030 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, 8,9, and Chapter 10 (sect. A). You are expected to read each section that we cover.

For every hour of lecture, the university requires/suggests that you invest 2-3 hours of additional work (every week). For this 3 credit hour class, it means that you need to put in 6-9 hours of additional work on a weekly basis.

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 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 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 problems are assigned weekly. The homework will NOT be graded/collected but it is strongly recommended that you do these problems.

Quizzes: Approximately every 2 weeks there will be a quiz covering the material that we have done. The tentative time is at the *beginning* of Wednesday class. It is a short quiz taking roughly 10-15 minutes. The problems will be very similar to the text or examples that we have done in class; or the assigned suggested homework problems. No make-up quizzes will be given, but the lowest 2 (or 3) quiz grades will be dropped at the end of the semester.

Project: You will have 1 project to turn in. The project will be due at the *beginning* of the lecture on November 17th (Friday). Project topics will be posted on CANVAS approximately 8 weeks before the due date. You will work in groups 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 are not accepted.

Exams: You will have 2 exams (50 minutes each). The tentative dates are October 2nd (Monday) and November 20th (Monday). 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 (comprehensive/departmental): December 12th (Tuesday) 3:30-5:30 pm.

This date and time is assigned by the Univeristy of Utah scheduling office. You can view the Fall 2017 final exam schedule at (math 1030 is listed under the departmental finals):

    http://registrar.utah.edu/academic-calendars/final-exams-fall.php

The final exam will be in our classroom. If there is a location change, the scheduling office will let me know in advance and I will make an announcement in class during the last few weeks of the semester.

Students are not allowed to take early/late departmental final exam. Please do not schedule your trip before this date, or do not ask me to give you extra time to study.

Grading policy: Your grade will be based on:

Quizzes (4 best)	20%
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%	C	73% - 76.9%
A–	90% - 92.9%	C–	70% - 72.9%
B+	87% - 89.9%	D+	65% - 69.9%
B	83% - 86.9%	D	60% - 64.9%
B–	80% - 82.9%	D–	55% - 59.9%
C+	77% - 79.9%	E	below 55%

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.

Important Dates:

- last day to add without a permission code - Friday, August 25th

- last day to add, drop, audit, or elect CR/NC - Friday, September 1st

- last day to withdraw from classes - Friday, October 20th

All important dates can be seen at: `http://registrar.utah.edu/academic-calendars/fall2017.php`

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/Spring semester are: 8am - 8pm Monday-Thursday and 8am - 6pm on Friday. The tutoring center will open the second week of classes. For more information, consult the website

`http://www.math.utah.edu/ugrad/mathcenter.html`