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Course Syllabus
MATH 1030, Section 090, Spring 2019
Introduction to Quantitative Reasoning

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Instructor Information:
Instructor: Huachen Chen
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Communication: You may contact me by e-mail or through Canvas-mail. When e-mailing, please include "1030" in the subject line. All announcements for the course will either be posted in quiz format on the Canvas website (these are graded) or sent by Canvas-mail.

Office Hours:

    In-person office hours: Monday from 1:00 to 2:00 pm, JWB 129.

    Online office hours: during January, Monday 7:30 pm - 8:30 pm, through the Canvas "conference" feature. After January, depending on attendance, hours and format may be changed and will be announced.

    No appointment is necessary to come to office hours. If the office hour times are inconvenient, please contact me to set up an appointment.

Course Objectives: 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

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. *Important Note*: The mathematics department DOES enforce prerequisites for all undergraduate courses. If you were able to register for this class based on your enrollment in the prerequisite course last semester and you did not receive the minimum grade in that course to enter this class, then you will be dropped from this class on Friday of the first week of classes. If you are in this situation, it is in your best interest to drop yourself from this class and enroll in a class for which you have the prerequisites before you are forcibly dropped.

Text: ISBN-10: 1-269-74850-5 ISBN-13: 978-1-269-74850-6 Using & Understanding Mathematics, A Quantitative Reasoning Approach, by Bennett and Briggs, Custom edition for University of Utah (taken from 6th edition)
* Either 6th edition of the full text or custom 3rd edition is fine.

    This textbook has been in print for many years. Cheaper copies can often be found online.

Online Homework System: We will be using an online homework system provided by the publisher of our textbook. Details about getting access to the system will be announced.

Technology: Some of the course work can be done without a calculator (if you are curious about a particular problem, just ask). However, in order to focus on algebra and not arithmetic, four-function and scientific calculators are allowed, both for homework and exams. On exams, calculators on phones and graphing calculators are NOT allowed.

Help: Contacting me by my e-mail, coming into office hours, or setting up an appointment is the first way to get help. I am happy to talk about individual problems, mathematical concepts, or help you make a study/learning plan. Please seek help early in the term.

You can also get tutoring through the following:

- Math Tutoring Center (drop-in tutoring and computer lab). This is free to all students. It is in the underground passage between JWB and LCB, Room 155. See http://www.math.utah.edu/ugrad/mathcenter.html for hours.

- Private Tutoring: University Tutoring Services, 330 SSB (they offer inexpensive tutoring). There is also a list of tutors at the Math Department office in JWB 233.

Structure of Class: This is an online course, but still an intense course. According to the University of Utah, a 3-unit course should have about 3 hours of lecture and 6 hours of outside study/homework time. This means that our online course, will take the average student about 9-10 hours per week. Some students will be able to get by on less, and some students will need more.

Each week, we cover specific sections. You can choose when you work on the material in the week (as long as you meet deadlines), but you can't complete the course at your own pace. There is weekly online homework and weekly online quizzes. All materials can be found in the modules on Canvas, except the weekly homework. There will be two midterms, which you will take at the testing center or with a proctor.

Here is a breakdown of the components in the course and what they are worth.

- **Reading Announcements on Canvas**. Course documents and announcements are given in quiz format and have a short quiz about the content at the end. These "quizzes" begin with "A:..." Completing these is worth 2% of your grade. Suggested due dates are shown, but these can be completed at any time.

- **Reading from your text book**.

- **Watching the video lectures.** They are available through the modules or in both streamable and downloadable versions at http://www.math.utah.edu/lectures/math1030.html

- **Working through the assigned textbook problems** These are not graded, but help students build a foundation for doing the more challenging WeBWork problems. And, they also prepare students for exams.

- **Graded homework problems** online, due Monday nights at 11:59 pm; are worth 10% of grade; the lowest three scores will be dropped in the grade calculation.

- **Feedback Quizzes:** Feedback Quizzes: These are given weekly on Canvas; the time limit is 10-30 minutes and there is no pausing; quizzes can be begun between Friday morning and must be submitted by 11:59 pm on Tuesday. They are worth 10When you finish a quiz, all you will see is your score. On Wednesday mornings, the quiz will be unlocked so that you can see your answers and the Canvas key answers. Solutions will also be posted.

- **Project:** The project assignment will be posted by the second week of classes and due on Wednesday, August 3rd. There are absolutely no extensions of the deadline for any reason. The project is worth 18% of your grade. This project is intended to be an in-depth exercise implementing some of the mathematics of the course that will benefit you in your future career.

- **Exams:** There are two midterm exams, worth 15% each. You must schedule Exam 1 and 2 at: http://tlt.utah.edu/uonli on Students link). Exams will be administered at the Uonline testing center (in the Marriot Library), at a satellite testing center (in Sandy) or if you are out of area, or with a proctor that you set up and register with Uonline. There will be practice material provided prior to each exam. You are allowed a scientific calculator on exams.

- **Final Exam :** The final is comprehensive and worth 30% of your grade. The date and time for Spring 2019 is April 25th (Thursday) 3:30-5:30 pm.

- **Pre-test**: There is a pre-test which can be taken in Week 1 or 2 of the semester. The pre-test is optional, and you are not graded based on your performance. We use your pre-test, in conjunction with the final, to measure what you learn in this course. If you take it, it will count as a quiz on which you earn 100%. If you do not take it, then you will get a 0 for it, but your three lowest quiz grades will be dropped to mitigate the effect of this. You will need to register for it with http://tlt.utah.edu/uonlinecenter/ (click on Students link), just as you would for an exam.

- **Extra Credit**: Extra credit, worth up to 5% or more of your course grade, can be earned for participating in online discussions (by asking or answering questions with significant mathematical content), comparing textbook and WebWork problems, or spotting errors in course materials.

Grading Policy: Your grade will be based on:

Online Homework	10%
Feedback Quizzes	10%
Announcement Quizzes	2%
Group Project	18%
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%

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.

Important Dates:

Weekly Due Dates:

- Online Homework due each Monday at 11:59pm

- Online Quiz each Friday-Tuesday; due Tuesday at 11:59pm, except for the first week and exam weeks.

Exams (Schedule at a time between the dates below):

- Pretest: Week 1 or 27

- Exam 1: Week 6

- Exam 2: Week 12

- Final: Common Final : April 25th (Thursday) 3:30-5:30 pm (Alternative Final : Reading day at your proctored testing center)

Other dates:

- Project Due Date: Friday, April 19th

- last day to add without a permission code Friday, January 11th

- last day to add, drop (delete), elect CR/NC, or audit classes Friday, January 18th

- last day to withdraw from classes Friday, March 8th

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

- 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.