

SYLLABUS - SPRING 2019

MATHEMATICS 1030

Introduction to Quantitative Reasoning (3 credits)

AEB 350

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

ISBN-13: 978-1-269-74850-6

A. The least expensive option for the book is to buy it through the Inclusive Access Program. If you (the student) decide you don't want the instant access to the course materials you will have the option to OPT OUT and will be refunded accordingly. Students still need to pay for the course materials cost along with their tuition, but once you OPT OUT during the first two weeks of class you will receive a full refund of the course material cost. You will then be responsible for obtaining your own course material/textbook for that course. Through the Inclusive Access Program, students will receive a digital copy of the book. The students' cost for math 1030 access is \$39.00.

B. If a student wishes to order a hard copy of the book, he/she can talk to Shane Girton (U of U Bookstore) and a copy of the book can be special ordered. The new copy of the custom version for the U of U is \$110.

C. A student 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>

The current cost for math 1030 book is \$41.99 through this website.

D. The book can be rented/purchased through a variety of vendors, such as eBay, Amazon or similar websites. The cost is usually more than the Inclusive Access cost and it changes daily.

NOTE: 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.

Instructor: Ryan Dickmann

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Quiz/exam solutions, grades, any reviews and other handouts will be posted on Canvas.

Video lectures are available through the Department of Mathematics.

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

Office hours: Tuesday 10:30 – 11:30 and Thursday 1-2

Prerequisites: 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 (sec. A). You are expected to read each section that we cover.

For every hour of lecture, the university suggests that you invest 2-3 hours of additional work (every week). This means that for this 3 credit hour class, 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 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 problems will be assigned for each section. Homework problems and due dates will be announced in class and online. All homework will be collected at the beginning of class. Late submissions will be accepted and given partial credit. I will drop the lowest 4 homework scores.

Quizzes: Quizzes will be given in class roughly every two weeks. The quiz problem will be very similar to the assigned homework problems. No make-up quizzes will be given, but I will drop the lowest 3 quiz scores.

Project: You will have one project to turn in. The project will be due at the end of the 12th week of the semester (Thursday April 4th) and turned in at the beginning of class. You will be given the list of potential topics about 8 weeks before the project is due, and you will work in groups of about 2-3 students on your selected topic. Format and expectations will be discussed later, but roughly your projects should take the form of a research paper with 3-5 pages per person.

Exams: You have two exams (50 minutes each). You MUST bring a valid ID to each exam. Missed exams will be excused only for emergencies. Scheduling problems with work or travel are not acceptable reasons to miss an exam. If you cannot take an exam on the assigned date for official reasons (athletics, military duty, religious obligations) you are expected to contact me with official documentation addressing the reason for the absence and arrange a time to retake the exam.

The first exam is tentatively scheduled for February 26st (Tuesday), and the second exam for April 11th (Thursday). Please plan ahead of time!

Final Exam (comprehensive/departmental): **April 25th (Thursday)**
3:30-5:30 pm

This date and time is assigned by the University of Utah scheduling office. You can view the Spring 2018 final exam schedule at (math 1030 is listed under the departmental finals):

<http://registrar.utah.edu/academic-calendars/final-exams-spring.php>

Students are not allowed to take early/late departmental final exam.

Grading Policy: Your grade will be based on:

Homework	7%
Quizzes	13%
Group Project	20%
Exams (2 exams)	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+	77% – 79.9%	D-	55% - 59.9%
A-	90% - 92.9%	C	73% – 76.9%	E	below 55%
B+	87% - 89.9%	C-	70% – 72.9%		
B	83% - 86.9%	D+	65% – 69.9%		
B-	80% - 82.9%	D	60% – 64.9%		

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.

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.

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, veteran’s 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).

Student Names and Personal Pronouns statement: Class rosters are provided to the instructor with the student’s legal name as well as “Preferred first name” (if previously entered by you in the Student Profile section of your CIS account). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, group projects, etc. Please advise me of any name or pronoun changes (and update CIS) so I can help create a learning environment in which you, your name, and your pronoun will be respected. If you need assistance getting your preferred name on your

UID card, please visit the LGBT Resource Center Room 409 in the Olpin Union Building, or email bpeacock@sa.utah.edu to schedule a time to drop by. The LGBT Resource Center hours are M-F 8am-5pm, and 8am-6pm on Tuesdays.

Wellness Statement: Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.

Important Dates:

- 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

All important dates can be seen at: <http://registrar.utah.edu/academic-calendars/spring2019.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: 8 am – 8 pm Monday-Thursday and 8 am – 6 pm on Friday. The tutoring center will open the second week of classes. Tutors are there to help you understand the material and help you solve problems, not to do the homework for you. Please be aware that there are many tutors with a variety of teaching styles and it may take you a few tries to find the tutor that works best with you.

Classroom Etiquette: Please turn off your cell phones while you are in class. During lectures, if your cell phone rings or you are texting, you will be asked to leave. During the exam/quiz if your cell phone rings/vibrates points will be deducted. I do not tolerate talking during lectures. If you have an emergency, you are more than welcome to step out to make a call or talk to someone.