

SYLLABUS – Spring 2020

MATHEMATICS 1030

Introduction to Quantitative Reasoning(3 credits)

Class Hours: Tues, Thurs 09:10 am– 10:30am Jan 7th – April 21st

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 you 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: Thuong Nguyen

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: Before or after the class (Tue, Thu: 8:00am-9:00am or 11h00 am – 12h00 am at my office JWB 332)

Prerequisites: Prerequisites: "C" or better in MATH 980 (Algebra for College Success) or Math 1010 (Intermediate Algebra) OR Accuplacer EA (taken before Jan 24th, 2019) score of 60 or better or Next Generation Accuplacer (taken after Jan 30, 2019) QAS at least 250 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 class meets for 6 hours every week and you will need to put in 12-18 additional hours of 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 are assigned for each section. Homework will not be collected, but I strongly recommend that you do these problems. I will be answering homework questions at the beginning of each class (whenever possible).

Quizzes: Approximately every 2 weeks there will be a quiz. The quiz problems will be very similar to the textbook examples/problems and examples that we have done in class; or the assigned suggested homework problems. No make-up quizzes will be given, but the lowest 2 quiz grades will be dropped at the end of the semester for all students.

I can only provide a make-up quiz for University excused absences (band, debate, student government, intercollegiate athletics, etc.) or military duty with an official documentation addressing the reason for absence.

Project: You will have 1 project to turn in. The project will be due on Thursday, 12th week of the semester, April 2nd, 2020 (due at the beginning of lecture). You will be given the list of topics about 8 weeks before the project is due, and you will work in groups (that you form) of about 2-3 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 accepted with penalty or 3 points for each time the class meets, and the group does not turn in the project. (If it is turned in on Tuesday, April 7th, 3 points are deducted; if it is turned in on Wednesday, April 8th, 6 points are deducted, etc.)

Midterm: You will have 2 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 personal or family crisis that will prevent you from attending. Except under extremely unusual circumstances, you must inform me at least 5 days in advance of the missed test, and you must take the make-up exam prior to the actual exam date. University excused absences (band, debate, student government, intercollegiate athletics, etc.), military duty or religious obligations are excused with an official documentation addressing the reason for absence. You are expected to promptly make arrangements with me to make up the test. Vacation or work schedule are not considered to be excused absences.

The first exam is scheduled for February 18th (Tuesday) and the second exam is scheduled for April 7th (Tuesday). Please plan ahead of time.

I might request a larger classroom for the exams, but I can only do that a few weeks before the exam. I will make an announcement in class (well in advance) and on Canvas regarding the location of your exams..

NOTE: Students with planned/approved absences when quizzes or exams are given must take alternate quizzes or assignments BEFORE they go. Usually, these will be taken at the Exam Services at the Marriott Library. This center is typically open from 9am-5pm Monday-Friday, from 9am-8pm on Thursday and from 9:30am-1:30pm on Saturday, but the hours will vary week to week. It is students' responsibility to check the center's hours Students must register for a time-slot to take their quiz or exam.

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Location: Marriott Library, Room 1704

Phone: 801-581-6112 (option 3)

Website: <https://testingcenter.utah.edu/>

If it is convenient for both the student and instructor, other times and locations can also be used for makeup quizzes and exams.

Final Exam: Wednesday, April 29, 2020, 10:30 am – 12:30 pm

This date and time is assigned by the Univeristy of Utah scheduling office.

<https://registrar.utah.edu/academic-calendars/final-exams-summer.php>

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

Grading Policy:

Your grade will be based on:

| | |
|------------------|----------------|
| Quizzes (5 best) | 20% |
| 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: All important dates can be seen at: <http://registrar.utah.edu/academic-calendars/summer2019.php>

- last day to add without a permission code – Friday, January 10th
- last day to add, drop (delete), elect CR/NC, or audit classes – Friday, January 17th
- last day to withdraw from classes – Friday, March 6th

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 Summer 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 cells 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 (5 points from on the quiz and 10 points on the exam) 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.