

**MATHEMATICS 1030-090****Introduction to Quantitative Reasoning (3 credits)****INSTRUCTOR INFORMATION:**

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**COMMUNICATION:** You may contact me by e-mail or through Canvas-mail. When e-mailing, please include "math 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:** Mondays 11:00-12:00 pm, Wednesdays 2:00-3:00 pm, or by appointment. There will also be an online office hour. The time of the weekly online office hour will be announced by the start of the second week of classes.

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:**

Upon successful completion of this course, a student should be able to:

1. Use Venn diagrams to examine relationships between sets and the validity of simple deductive arguments.
2. Use an appropriate sentence to describe both the absolute and percent change in a given quantity and interpret such statements about the change.
3. Use simple and compound units, making conversions when necessary, and develop accurate comparisons between units.
4. Evaluate the impact of compound interest on simple financial decisions.
5. 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.
6. Compare and illustrate the features of linear and exponential growth using practical examples.
7. 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:** "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.)

*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: 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. An email will go out to all math 1030 students prior to the first day of class with information on what Inclusive Access is and instructions on how to access the digital course materials. 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.

### **ONLINE MATERIALS:**

Materials for this course can be found on TWO websites:

- Canvas <https://utah.instructure.com/> Since you are taking this quiz, you have found this site. It is a good idea to save this address, so that you can get to Canvas without going through CIS. Usually once or twice a term, CIS goes down, so the alternative access is useful.
- WebWork **website**

### **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 (Update: Graphing calculators are allowed, too.). On exams, calculators on phones 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.

If you have a question about a WebWork problem, you can contact me through WebWork (good if it's a formatting question) or look/post in the Canvas discussion board (good for content questions/ calculation issues).

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 155B. See <http://www.math.utah.edu/ugrad/mathcenter.html> ([Links to an external site.](#))[Links to an external site.](#) 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.

## THE STRUCTURE OF THE COURSE

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 6-9 hours of outside study/homework time. This means that our online course will take the average student about 9-12 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, which is found at WeBWorK. There will be two midterms, which you will take at the testing center or with a proctor. At the end of the semester, there is a comprehensive final exam.** All the Math 1030 students are given the same exam at the same time. If you cannot take the exam at that time, you can arrange to take an alternate exam earlier.

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 4% of your grade.** Suggested due dates are shown, but these can be completed at any time before the last day of school.
- **Reading** from your **text book.** See my comments on the textbook here: [A: Textbook](#)
- **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> ([Links to an external site.](#))[Links to an external site.](#) (It's good to save this address, in case Canvas is down)
- 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 on WeBWorK,** due Monday nights at 11:59 pm; **worth 10% of grade; the two lowest scores will be dropped in the grade calculation in the last week of class.** See my comments on Webwork problems here: [A: WeBWorK.](#)

**You will have access to Webwork when you enter Canvas. The scores will be automatically transferred on Canvas.**

- **Feedback Quizzes:** These are posted weekly on Canvas; these are take home quizzes; you need to take them between 1 am on Friday and must be submitted by 11:59 pm on Tuesday. They need to be submitted on Canvas as a pdf file. **They are worth 14% of the grade; the two lowest quiz scores will be dropped in the grade calculation in the last teaching week of the semester.** The answers and the rubric will be posted on canvas. It may take the grader between 1-2 weeks to grade them due to a large online class. The scores will be posted on Canvas. Find out more information about quizzes here: [A: Quizzes](#)
- No make-up feedback quizzes will be given, but the lowest 2 quiz grades will be dropped at the end of the semester.
- **Project:** The project assignment will be posted by the second week of classes and due on Monday, November 19. There are absolutely no extensions of the deadline for any reason. **The project is worth 12% 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 adult life. The project could be completed as a group or individual. I will have a survey quiz to identify the preferred topics and the way you want to complete the project. The projects need to be submitted on Canvas as a pdf file. The rubric and the scores will be available on Canvas.
- **Exams: There are two midterm exams, worth 15% each.** You must schedule Exam 1 and 2 using SmarterProctoring (click on Schedule Exams in canvas). Exams will be administered at the Uonline testing center (in the Marriott Library), at a satellite testing center (in Sandy), or, if you are out of area, 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. Graphing calculators or cell phones are not allowed on exams.). More information about exams, including how to set up a proctor, can be found here [A: Exams](#)
- **Common Final: The final is comprehensive and worth 30% of your grade.** All the students of Math 1030 at the University of Utah take the same common final. **The date is Wednesday, December 12, from 3:30-5:30 pm. It will be on the main campus. The exact room will be announced later in the term and communicated to you through the course announcements.** If you are unable to be at the common final, due to the time or location, or you are an out of area student, you can arrange to take the exam at the testing center at a day/time EARLIER than the common final.
- **Pretest: There is a pretest which can be taken in either Week 2 or Week 3 of the semester. The pretest is optional, and you are not graded based on your performance.** We use your pretest, 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 SmarterProctoring, just as you would for an exam. More information about the Pretest can be found here: [A: Pretest](#)

- **Extra Credit:** There are ongoing extra credit opportunities throughout the semester. Details can be found here: [A: Extra Credit](#). The last day for all extra credit opportunities is the last day of class.

## IS ONLINE RIGHT FOR YOU?

Before committing to this course, consider whether the online format matches your learning style. To aid in this, please look at: [A: Online?](#)

## DATES

### Weekly Due Dates:

- WebWork HW due each Monday at 11:59pm
- Take home Quizzes each Friday (the Quiz will be uploaded on Canvas; you need to type/write the answers and upload the paper back to Canvas) by Tuesday; they are due Tuesdays at 11:59pm, including exam weeks.

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

- Pretest: Week 2 : August 27 to September 1
- Exam 1: Week 6: September 24 to September 29
- Exam 2: Week 12: November 12 to November 17
- Final: There are two options:
  - Departmental Final (on-campus, location TBA): Wednesday, December 12, 3:30-5:30 pm
  - Alternate Final (for those who aren't local, or can't make the departmental final): December 8 to December 10

## Project

- Project Due Date: Monday, November 19.

### Other Important Dates:

- last day to add without a permission code – Friday, August 24<sup>th</sup>,
- last day to add, drop (delete), elect CR/NC, or audit classes – Friday, August 31<sup>st</sup>
- last day to withdraw from classes – Friday, October 19<sup>th</sup>

All important dates can be seen at: <http://registrar.utah.edu/academic-calendars/fall2018.php>

## **Course Grades (Evaluation methods and criteria):**

**Your final letter grade will be determined by your overall percentage as follows:**

<b>A</b>	<b>93% - 100%</b>	<b>C+</b>	<b>77% – 79.9%</b>	<b>D-</b>	<b>55% - 59.9%</b>
<b>A-</b>	<b>90% - 92.9%</b>	<b>C</b>	<b>73% – 76.9%</b>	<b>E</b>	<b>below 55%</b>
<b>B+</b>	<b>87% - 89.9%</b>	<b>C-</b>	<b>70% – 72.9%</b>		
<b>B</b>	<b>83% - 86.9%</b>	<b>D+</b>	<b>65% – 69.9%</b>		
<b>B-</b>	<b>80% - 82.9%</b>	<b>D</b>	<b>60% – 64.9%</b>		

### **Grades are calculated as follows:**

Announcements Quizzes (4%)

Feedback Quizzes (14%)

WebWork (10%)

Project (12%)

Midterms (30%)

Final (30%).

A score of 73% is required for a C, and 50% is required to earn a D- (which is the lowest grade that the U of U considers as "passing" for credit). You should monitor your course grade throughout the semester by looking at "Grades" in Canvas. At the end of the semester, the "current grade", not the "final grade" is used to determine the course letter grade.

### **LATE POLICY:**

Unexpected events arise – you get sick, called into work, have computer or Internet problems, get back late from a trip, etc. In order to provide you with a buffer and have a policy that is manageable to implement for a large class, the two lowest HW and quiz scores will be dropped (in the last week of the term).

There are no late or make-up quizzes. There will be a weekly quiz that will be uploaded on Canvas. You can type/write the answers to problems and upload the quiz back on Canvas (a pdf file is preferred).

If there is a BIG, UNANTICIPATED circumstance beyond your control that prevents you from taking a quiz or exam, or completing your homework, please contact me in a timely manner with documentation by a third party (for example, a Dr.'s note) and we will discuss options.

**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. Please contact me at the beginning of the semester to discuss any such accommodations for the course.

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).

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 UIDcard, please visit the LGBT Resource Center Room 409 in the Olpin Union Building, or email [bpeacock@sa.utah.edu](mailto: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.