

MATH 1030-1

Spring 1999

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Office Hours: MW 9:45-11:30am or by appointment.

Class Schedule: MWF 7:30-8:20am in JFB 102.

Students: Math 1030 is designed for students who seek to meet the mathematics requirements for a B.S. degree or for students whose further study of mathematics will be limited to statistics. This course does not satisfy a Math 1050 or 1090 prerequisite for another course.

Prerequisites: Math 1010, Intermediate Algebra or equivalent. You should have a working knowledge of basic algebra and geometry concepts covered in that class, that is 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.

On the first day of classes, a short “diagnostic test” will be handed out. I strongly encourage you to take this test by yourself and determine whether or not you feel comfortable with this necessary background material. Please talk to me during the first week if you are having any trouble with it. The first quiz (given on Friday January 15) will cover only material from intermediate algebra and the diagnostic test.

Text: *Using and Understanding Mathematics, a Quantitative Reasoning Approach*, Bennett and Briggs, Addison-Wesley, 1998

Course Content: In this course we will consider how mathematics is used to examine problems and questions that arise in such areas as the Social and Behavioral Sciences, Business, and the Liberal Arts. The topics covered focus on measuring, describing and predicting change. We begin by looking at the correct use of numbers and percentages in measurement and estimation questions, followed by the use of scientific notation and work with different systems of units. We consider financial mathematics related to loans and investments and examine the properties of linear and exponential growth along with the use of these models to describe change in populations, drug metabolism, inflation and radioactive decay. Finally we study the effect of scaling on perimeter, area and volume and the practical implications of size on pressure, heating/cooling, et cetera. To refer to the text, this corresponds to Chapters 3-7 and Chapter 10, Sec. A.

Quizzes : Quizzes will be given every other Friday. The first quiz will be on Friday January 15 on the basis of the diagnostic test and of Intermediate Algebra. Some of the quizzes (perhaps every other quiz) may be take-home. The take home quizzes will be due on the next Monday. *No late work will be accepted.* To allow for unforeseen circumstances and/or individual problems, the two lowest quizzes will be dropped. Therefore, no make-up quizzes will be given. The quizzes will be based on class discussion and homework.

Homework Homework will be given on a regular basis. Homework won't be collected but it is very important that you do it: it is designed to help you prepare for the quizzes and the exams.

Projects: Two *group* projects will be assigned throughout the semester. The first one will be due March 1st, and the second one April 19. Each group of 3 or 4 people will select their project from an approved list handed out in class. As you choose your partners, be aware that in addition to the class time devoted to the discussion of your project, you should also plan to meet outside the classroom a couple of times. Further information will be given along with the first set of projects.

Exams and Grades: There will be a midterm and a comprehensive final exam. Midterm will be 50 minutes long and will be held on Friday March 12 (note that it's just before the spring break, so don't plan to take a plane ticket before). Final exam will be held on Thursday May 6, 7:30-9:30am. The final grade will be calculated according to the following distribution of points:

- Quizzes + collected homework: 35%
- 2 group projects: 30%
- Final + Midterm: 35%

Note that to pass the course a student must complete the final examination.

Free Tutoring: Free pre-calculus tutoring is available Monday-Thursday 8:30am-7:00pm and Friday 8:30am-2:30pm in room 274, Bldg. 129. Also note that a new *quiet study* room is available in Bldg. 122, across from the undergraduate commons.

Substitute day: The University of Utah has created a *substitute day* during the week of February 15 to make room for classes not being held on President's Day, when the U will be closed. During the week of February 15, classes normally taught on Monday (President's day holiday) will be taught on Tuesday. Classes normally taught on Tuesday will be canceled. Wednesday, Thursday, and Friday classes will be held as usual. This means that class will be held on Tuesday February 16.

Incompletes: The grade "incomplete" will be given only when, during the final stages of the course, the student is prevented by circumstances beyond his or her control to complete the course.

Withdrawals: The last day to drop classes is Sunday, Jan 17. Until January 22 you can withdraw from the class with no approval at all. After that date and before Friday, March 5, you may withdraw only after petitioning the Dean's office.

ADA: The "American with Disabilities Act" requires that reasonable accommodations be made for students with physical, sensory, cognitive, systemic, learning and psychiatric disabilities. Please contact me at the **beginning** of this semester to discuss any such accommodation for the course.