

# Math 1300 Fall 2013 Syllabus

<b>Section: 24</b>
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## COURSE DESCRIPTION

Math 1300 introduces students to the fundamental concepts of mathematics relevant to business and social science applications. These include financial mathematics, linear algebra, linear programming, combinatorics, probability and statistics. At the successful conclusion of this course, students will be able to perform the following.

1. Show solid conceptual understanding of the fundamental ideas and tools of the mathematical topics covered.
2. Demonstrate the ability to independently identify and use the appropriate tools to solve real-life problems.

## PREREQUISITES

In order to satisfy the prerequisite requirements for Math 1300, students must satisfy ONE of the following criteria:

- C- or higher grade in Math 1100 or Math 1160 (or transferable equivalent)
- Credit by exam for Math 1100 (Proctored ALEKS Exam score of 66% or higher)
- College Algebra exemption AND ALEKS Exam score of 66% or higher dated 9/15/12 or later

Note: Students who are exempt from College Algebra must still earn the minimum ALEKS score in order to take Math 1300. **Students who do not satisfy the prerequisite requirements will be dropped from Math 1300.** It is your responsibility to provide appropriate documentation for satisfying these prerequisites and to check that the corresponding documentation has been entered in the MU system.

## TEXTBOOK AND ONLINE HOMEWORK ACCESS

The textbook for this course is *Finite Mathematics and Its Applications* by Goldstein, Schneider and Siegel, 11<sup>th</sup> Edition.

At a minimum, all students are required to have access to MyMathLab and the online eTextbook, ISBN 9780321199911.

Students who would like to purchase a physical textbook, access to MyMathLab and the online eTextbook should order ISBN 9780321921789.

Students who would like to purchase a physical textbook, access to MyMathLab and the online eTextbook and save money by purchasing the Math 1400 textbook at the same time should order ISBN 9780321951182.

## CALCULATOR

In this course, students are required to have a **scientific calculator** for use on exams and quizzes; **graphing calculators are prohibited**. Any calculator with power functions, root functions, logarithms and exponential functions is sufficient. The MU Bookstore sells a number of inexpensive and acceptable scientific calculators. For example, the TI-30Xa is a standard scientific calculator which sells for around \$14.99 at the MU Bookstore. Any of the calculators in the TI-30 series are acceptable for use on exams and quizzes in this course.

As noted above, **graphing calculators are not permitted** for use on exams or quizzes. For example, Texas Instruments graphing calculators, such as those in the TI-83 series, TI-84 series, the TI-86, TI-89, TI-Nspire and Voyage 200 are not permitted. Similarly, the Casio line of graphing calculators, such as the CASIO FX-9750G (or GA) Plus or CASIO CFX-9850GC Plus cannot be used.

Business and financial calculators such as the TI-BAll, TI-BA II Plus and similar models are not prohibited, but often have features which make them difficult to use without reading the manual.

**It is very important that students remember to bring an appropriate, functioning calculator to each exam, and that they know how to use it.** Instructors will not have extra calculators that can be borrowed, and students who take exams and quizzes without a calculator will not be graded by a different standard.

## GRADING

Final grades will be based on 3 midterm exams, 1 final exam, at least 10 in-class quizzes (lowest score dropped) and 12 online homework assignments (lowest 2 scores dropped). Final grade will be weighted as follows:

Midterm Exams 45%  
Final Exam 30%  
Homework 20%  
In-Class Quizzes 5%

## EXAMS

Below is a summary of dates, times and sections covered on the midterm and final exams.

Exam	Date	Time	Textbook Sections
1	18-Sep	6:30-7:30 PM	10.1-10.3, 2.1-2.5
2	16-Oct	6:30-7:30 PM	3.1-3.3, 5.1-5.6
3	20-Nov	6:30-7:30 PM	6.1-6.6, 7.1-7.5
Final	11-Dec	8:00-10:00 PM	All

## ONLINE HOMEWORK

There will be 12 online homework assignments in this course. The two lowest scores for each student will be dropped and the remaining 10 assignments will account for 20% of each student's grade.

Homework assignments are due Tuesday mornings at 8:00 AM. After the deadline, assignments can still be submitted for 50% credit until 8:00 AM the final day of class. Aside from dropping the lowest two scores and allowing students to submit homework assignments after the deadline for 50% credit, there will be no additional deadline extensions for homework assignments.

There will be no homework assignments due the week after each midterm exam.

## QUIZZES (In Class)

There will be a total of at least 10 in-class quizzes in this course. They will be administered at each instructor's discretion. The lowest score for each student will be dropped and the remaining 9 quizzes will account for 5% of each student's grade.

No make-ups will be given for these quizzes, except for University sponsored travel. MU athletes who miss a quiz due to team travel must provide a letter or email from the Total Person Program. Any quizzes missed for this reason must be made up within one week.

## CLASS ATTENDANCE

**Attendance is vital to your success in this course.** Students are expected to attend all scheduled class sessions, and attendance will be taken regularly. Students who miss class for any reason are responsible for learning any material covered, obtaining any materials distributed and being aware of any announcements made by the instructor. Students who arrive late or leave early will be considered absent.

All absences are treated equally. There are no "excused" and "unexcused" absences.

**Any student with 9 or more absences and an exam average of D or lower will be dropped from the class due to poor attendance.** (Students who reach their 9<sup>th</sup> absence the week of December 2 will not be dropped from the class since this is past the withdrawal deadline).

## GRIEVANCE POLICY

If you have a complaint regarding this course or your instructor, please contact the **course coordinator, Steven Goldschmidt** ([goldschmidtsr@missouri.edu](mailto:goldschmidtsr@missouri.edu)). You may also contact the Mathematics Department's Director for Undergraduate Studies, Professor Ian Aberbach ([aberbachi@missouri.edu](mailto:aberbachi@missouri.edu)).

## UNIVERSITY POLICIES

All University policies, rules and regulations are incorporated by reference into this course syllabus. You can find a statement of these policies rules and regulations in the M-book, available at <http://studentlife.missouri.edu/mbook.php>

### Academic Dishonesty

Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, or collaboration, consult the course instructor.

Academic Dishonesty includes but is not necessarily limited to the following:

- ☐ Cheating or knowingly assisting another student in committing an act of cheating or other academic dishonesty.
- ☐ Plagiarism which includes but is not necessarily limited to submitting examinations, themes, reports, drawings, laboratory notes, or other material as one's own work when such work has been prepared by another person or copied from another person.
- ☐ Unauthorized possession of examinations or reserve library materials, or laboratory materials or experiments, or any other similar actions.
- ☐ Unauthorized changing of grades or markings on an examination or in an instructor's grade book or such change of any grade report.

Academic Integrity Pledge: Students are expected to adhere to this pledge on all graded work whether or not they are explicitly asked in advance to do so: "I strive to uphold the University values of respect, responsibility, discovery, and excellence. On my honor, I pledge that I have neither given nor received unauthorized assistance on this work."

The University has specific academic dishonesty administrative procedures. Although policy states that cases of academic dishonesty must be reported to the Office of the Provost for possible action, the instructor may assign a failing grade for the assignment or a failing grade for the course, or may adjust the grade as deemed appropriate. The instructor also may require the student to repeat the assignment or to perform additional assignments. In instances where academic integrity is in question, faculty, staff and students should refer to Article VI of the Faculty Handbook. Article VI is also available in the M-Book. Article VI provides further information regarding the process by which violations are handled and sets forth a standard of excellence in our community.

## University of Missouri-Columbia Notice of Nondiscrimination

The University of Missouri System is an Equal Opportunity/Affirmative Action institution and is nondiscriminatory relative to race, religion, color, national origin, sex, sexual orientation, age, disability or status as a Vietnam-era veteran. Any person having inquiries concerning the University of Missouri-Columbia's compliance with implementing Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans With Disabilities Act of 1990, or other civil rights laws should contact the Assistant Vice Chancellor, Human Resource Services, University of Missouri-Columbia, 130 Heinkel Building, Columbia, Mo. 65211, (573) 882-4256, or the Assistant Secretary for Civil Rights, U.S. Department of Education.

## Accommodations For Students With Disabilities

If you need accommodations because of a disability, if you have emergency medical information to share with your instructor, or if you need special arrangements in case the building must be evacuated, please inform the instructor privately as soon as possible. Please see your instructor after class, or at his/her office. To request academic accommodations (for example, a note-taker), students must also register with Disability Services, S5 Memorial Union, 882-4696. This is the campus office responsible for reviewing documentation provided by students requesting academic accommodations, and for accommodations planning in cooperation with students and instructors, as needed and consistent with course requirements. Another resource, MU's Adaptive Computing Technology Center, 884-2828, is available to provide computing assistance to students with disabilities. For more information about the rights of people with disabilities, please see [ada.missouri.edu](http://ada.missouri.edu) or call 884-7278.

## OTHER MATH 1300 POLICIES

☐ Make-up exams will only be given to students who have an approved excuse and who have submitted a request at least one week in advance to the course coordinator, two weeks in advance for the final exam. Approved excuses include the following: (a) the exam time overlaps with the official meeting time of an MU class in which the student is enrolled, (b) the exam overlaps with another exam which the student is required to take, (c) participation in a University sanctioned athletic or academic event, (d) serious medical condition or (e) death in the immediate family. **Documentation is required for each of these**

**circumstances.** Students must contact the course coordinator **at least one week in advance** to find out what documentation is required and to schedule a make-up exam.

☐ Make-up exams will NOT be offered to accommodate the following: personal travel such as vacations, weddings or graduations; work schedules; court appearances; university events other than sanctioned athletic or academic events such as fraternity and sorority events, intramural sports or club activities.

☐ Online homework deadlines will not be extended. Students should begin their assignments shortly after the relevant sections are covered in class.

☐ Sleeping or appearing to sleep in class counts as an absence. Showing up late or leaving early counts as an absence.

☐ Students may not consult smart phones or other electronic devices (other than a scientific calculator) during class. Failure to adhere to this policy may result in course point losses. Students should turn off cell phone ring tones during class. Students may not answer phone calls during class. Failure to adhere to this policy may result in course point losses.

☐ Being disruptive in class may result in course point losses commensurate with the magnitude of the disruption. Vulgar language will be considered disruptive.

## Math 1300 Fall 2013 Calendar

	Date	Day	Lecture (Section)	Lecture (Topic)	Homework	Exam/Other
Week 1	19-Aug	Mon	10.1	Interest		<b>Syllabus and Class Policies</b>
	20-Aug	Tue				
	21-Aug	Wed	10.1	Interest		
	22-Aug	Thu				
	23-Aug	Fri	10.2	Annuities		
Week 2	26-Aug	Mon	10.2	Annuities		
	27-Aug	Tue			HW 1 - Due 8:00 AM	
	28-Aug	Wed	10.3	Amortization of Loans		
	29-Aug	Thu				
	30-Aug	Fri	2.1	Systems of Linear Equations		
Week 3	2-Sep	Mon	LABOR DAY - No Class			
	3-Sep	Tue			HW 2 - Due 8:00 AM	
	4-Sep	Wed	2.2	General Systems of Linear Equations		
	5-Sep	Thu				
	6-Sep	Fri	2.3	Arithmetic Operations on Matrices		
Week 4	9-Sep	Mon	2.3	Arithmetic Operations on Matrices		
	10-Sep	Tue			HW 3 - Due 8:00 AM	
	11-Sep	Wed	2.4	Inverse of a Matrix		<b>Deadline: Exam 1 Make-Up Requests</b>
	12-Sep	Thu				
	13-Sep	Fri	2.5	Gauss-Jordan Method		
Week 5	16-Sep	Mon	Catch Up/Review	Catch Up/Review		
	17-Sep	Tue			HW 4 - Due 8:00 AM	
	18-Sep	Wed	Exam 1 Review	Exam 1 Review		<b>EXAM 1, 6:30-7:30 PM</b>

	Sep					
	19-Sep	Thu				
	20-Sep	Fri	No Class			
Week 6	23-Sep	Mon	3.1	Linear Programming Problem		<b>Last Day - Drop Without Grade</b>
	24-Sep	Tue				
	25-Sep	Wed	3.2	Fundamental Theorem - Linear Programming		
	26-Sep	Thu				
	27-Sep	Fri	3.3	Linear Programming		
Week 7	30-Sep	Mon	5.1	Sets		
	1-Oct	Tue			HW 5 - Due 8:00 AM	
	2-Oct	Wed	5.2	Fundamental Principle of Counting		
	3-Oct	Thu				
	4-Oct	Fri	5.3	Venn Diagrams & Counting		
Week 8	7-Oct	Mon	5.4	Multiplication Principle		
	8-Oct	Tue			HW 6 - Due 8:00 AM	
	9-Oct	Wed	5.5	Permutations & Combinations		<b>Deadline: Exam 2 Make-Up Requests</b>
	10-Oct	Thu				
	11-Oct	Fri	5.6	Further Counting Techniques		
Week 9	14-Oct	Mon	Catch Up/Review	Catch Up/Review		
	15-Oct	Tue			HW 7 - Due 8:00 AM	
	16-Oct	Wed	Exam 2 Review	Exam 2 Review		<b>EXAM 2, 6:30-7:30 PM</b>
	17-Oct	Thu				
	18-Oct	Fri	No Class			

Week 10	21-Oct	Mon	6.1	Experiments, Outcomes, Events		
	22-Oct	Tue				
	23-Oct	Wed	6.2	Assignment of Probabilities		
	24-Oct	Thu				
	25-Oct	Fri	6.3	Calculating Probabilities of Events		
Week 11	28-Oct	Mon	6.4	Conditional Probability & Independence		
	29-Oct	Tue			HW 8 - Due 8:00 AM	
	30-Oct	Wed	6.4	Conditional Probability & Independence		
	31-Oct	Thu				
	1-Nov	Fri	6.5	Tree Diagrams		
Week 12	4-Nov	Mon	6.6	Bayes' Theorem		
	5-Nov	Tue			HW 9 - Due 8:00 AM	
	6-Nov	Wed	7.1	Visual Representations of Data		
	7-Nov	Thu				
	8-Nov	Fri	7.2	Frequency & Probability Distributions		
Week 13	11-Nov	Mon	7.3	Binomial Trials		
	12-Nov	Tue			HW 10 - Due 8:00 AM	
	13-Nov	Wed	7.4	Mean		<b>Deadline: Exam 3 Make-Up Requests</b>
	14-Nov	Thu				
	15-Nov	Fri	7.5	Variance & Standard Deviation		
Week 14	18-Nov	Mon	Catch Up/Review	Catch Up/Review		
	19-Nov	Tue			HW 11 - Due 8:00 AM	
	20-Nov	Wed	Exam 3 Review	Exam 3 Review		<b>EXAM 3, 6:30-7:30 PM</b>
	21-Nov	Thu				
	22-Nov	Fri	No Class			
Week 15	25-Nov	Mon	THANKSGIVING BREAK			
	26-Nov	Tue	THANKSGIVING BREAK			
	27-Nov	Wed	THANKSGIVING BREAK			<b>Deadline: Final Exam Make-Up Requests</b>
	28-Nov	Thu	THANKSGIVING BREAK			
	29-Nov	Fri	THANKSGIVING BREAK			
Week 16	2-Dec	Mon	Final Exam Review	Final Exam Review		<b>Last Day - Withdraw from Class</b>
	3-Dec	Tue			HW 12 - Due 8:00 AM	
	4-Dec	Wed	Final Exam Review	Final Exam Review		
	5-Dec	Thu				
	6-Dec	Fri	Reading Day - No Class			
Final	9-Dec	Mon				
	10-Dec	Tue				

s	Dec					
	11-Dec	Wed				FINAL EXAM, 8:00-10:00 PM
	12-Dec	Thu				
	13-Dec	Fri				