

Math 117

Introduction to Mathematics for Business and Economics

4.0 Units
Spring 2016
MWF 12:00-12:50pm

Location: GFS 118

Instructor: Sami Assaf

Office: KAP 438-C

Office Hrs: M 11am-12pm and W 10am-11am

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Contact: tbd

Course Description

This course introduces the basic concepts of functions and graphs, including polynomials and rational functions as well as exponential and logarithmic functions. We will also cover systems of linear equations and matrices.

Learning Objectives

The goal of this course is to introduce students to the basic concepts of functions that can be used to model and solve real world phenomena and problems that arise in business and economics.

Prerequisite(s): Math 040

Course Notes

Homework assignments will be posted weekly to Blackboard.

Required Readings and Supplementary Materials

Required: *Precalculus*, Version $[\pi] = 3$, Corrected Edition by Carl Stitz and Jeff Zeager
Freely available online at <http://stitz-zeager.com/>.

Description and Assessment of Assignments

Students are expected to complete weekly problem sets that reinforce topics covered in lecture. Weekly quizzes will be administered on Tuesdays in discussion section. There will be three in-class midterm exams, on February 3, March 2 and April 6, and a final exam on May 6 from 11am-1pm.

Grading Breakdown

Assignment	Points	% of Grade
Quizzes	20	10%
Problem Sets	30	15%
Midterm I	30	15%
Midterm II	30	15%
Midterm III	30	15%
Final Exam	60	30%
TOTAL	200	100%

Assignment Submission Policy

Problem sets will be posted on Blackboard by noon on Monday and are due in class the following Friday. Late homework will not be accepted without prior permission from the instructor.

Course Schedule: A Weekly Breakdown

	Topics	Readings	Deliverable (Due Date)
Week 1	The coordinate plane	1.1, 1.2	Problem Set 1 (1/15)
Week 2	Functions	1.3, 1.4	Problem Set 2 (1/22)
Week 3	Models and graphs	1.5, 1.6	Problem Set 3 (1/29)
Week 4		1.7	Midterm Exam I (2/03)
Week 5	Linear functions	2.1, 2.2, 2.4	Problem Set 4 (2/12)
Week 6	Polynomial functions	2.3, 3.1	Problem Set 5 (2/19)
Week 7	Factors and roots	3.2, 3.3, 3.4	Problem Set 6 (2/26)
Week 8		4.1	Midterm Exam II (3/02)
Week 9	Rational functions	4.2, 4.3, 5.1	Problem Set 7 (3/11)
Week 10	Exponential functions	6.1, 6.2, 6.3	Problem Set 8 (3/25)
Week 11	Logarithmic functions	6.4, 6.5	Problem Set 9 (4/01)
Week 12		8.1	Midterm Exam III (4/06)
Week 13	Systems of equations	8.2, 8.3	Problem Set 10 (4/15)
Week 14	Matrices	8.4, 8.5	Problem Set 11 (4/22)
Week 15	Review		
Final			Final Exam (5/06)

Statement on Academic Conduct and Support Systems

Academic Conduct

Plagiarism presenting someone else's ideas as your own, either verbatim or recast in your own words is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards* <https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct/>.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu/> or to the *Department of Public Safety* <http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us>. This is important for the safety of the whole USC community. Another member of the university community such as a friend, classmate, advisor, or faculty member can help initiate the report, or can initiate the report on behalf of another person. The *Center for Women and Men* <http://www.usc.edu/student-affairs/cwm/> provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. The *Office of Disability Services and Programs* http://sait.usc.edu/academic-support/center-programs/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu/> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.