

OKLAHOMA STATE UNIVERSITY - DEPARTMENT OF MATHEMATICS

MATH FUNCTIONS AND USES (MATH 1483) FALL 2011

- Instructor: Scott Larson
 - E-mail: slarson@math.okstate.edu
 - Phone: (405) 744-2904
 - Office: MSCS 419
 - Office Hours: TR 1:45PM-3:00PM and by appointment
- Class Meeting: TR, 10:30AM-11:45AM, HES 134
- Textbook: *Functions and Change* by Crauder, Evans, and Noell, 4th Edition
- Links:
 - Course Web Page: <http://www.math.okstate.edu/~slarson/teaching/11F-MATH1483-11>
 - Online Classroom (D2L): <http://oc.okstate.edu>
 - OSU Syllabus Attachment: <http://academicaffairs.okstate.edu/faculty-a-staff/46-syllabus-attachment>
 - OSU Syllabus Attachment: <http://academicaffairs.okstate.edu/faculty-a-staff/47-syllabus-fall>

COURSE DESCRIPTION

Prerequisite(s): Intermediate algebra or placement into 1513. Analysis of functions and their graphs from the viewpoint of rates of change. Linear, exponential, logarithmic and other functions. Applications to the natural sciences, agriculture, business and the social sciences.

CALCULATORS

You will need a calculator that is capable of generating graphs and tables. A TI-83 or TI-84 Plus is recommended as this is what will be demonstrated in class and the kind your instructor is used to. If you don't own one, you may borrow a calculator from the Math Department free of charge, as long as you return it by the last day of finals week. Dates and times that you may borrow calculators will be announced in class. You are required to bring your calculator to each class meeting and be prepared to work along with me.

MLRC (THE MATHEMATICS LEARNING RESOURCE CENTER)

The MLRC can be an invaluable resource to support your mathematical learning. **Location:** 4th Floor Classroom Building.

- Monday: 12-10
- Tuesday: 12-10
- Wednesday: 12-6
- Thursday: 12-10
- Friday: 12-5

ATTENDANCE

Attendance will be checked at the beginning of each class meeting. You will start with an attendance score of 100. You may miss class twice without affecting this score. No additional absences will be excused for any reason. Each day you miss in excess of 2 will deduct 5 points from your score. If it helps your grade, your attendance score will be averaged with your lowest 100 point test score (which may be half of your final exam score). If that does not help your grade, your attendance score will not be used. You are responsible to know the material covered in class and that in the corresponding sections of your textbook.

HOMEWORK

Homework is a key part of the course. You will be assigned homework each class meeting and in general you will be expected to have it completed by the next class period. Group discussions of homework assignments can be helpful, but each student must write up their own solutions in their own words and based on their own work. We will spend a lot of time discussing the homework in class. Most Tuesdays you will turn in your weeks homework for selective grading. Homework is expected to be neat and well organized. Unreadable homework will not be graded. Late homework will not be accepted. Your best 10 homework scores will be used to calculate your semester homework score.

EXAMS

There will be 3 midterm exams and a final exam which contribute to your final grade. Each exam will be announced in class and appear online in the course schedule. Make-up exams will be given only under exceptional circumstances and if you contact me in advance. May 6th is the designated date for all make-up exams to be given. Calculators will be allowed, but no books, notes, or any other electronic devices will be permitted during exams.

GRADES

The contributions to your total score will be weighted as follows.

Contribution	Homework	Midterm Exams	Final Exam	Total Points
Weight (final grade)	200	300	200	700

Your total score will be truncated to an integer percentage and determines your final grade as follows.

Total Score	0-59%	60-69%	70-79%	80-89%	90-100%
Letter Grade	F	D	C	B	A

Curving may be applied in form of a linear adjustment to all scores on a particular exam. I reserve the right to decide borderline cases based on class attendance and subjective impressions such as effort and conscientiousness.

ADVICE

Complete your homework each day, and do not miss class. People who do these things generally are successful. Those who don't are generally not. If you need help, come see me right away. If you do, I can and will help you.

COURSE SCHEDULE

The following course schedule is preliminary.

Class Week	Date	Sections from Textbook	Subject	Homework Assignment	Due Date
1	08/23	1.1 1.2 1.3	Functions Given by Formulas Functions Given by Tables Functions Given by Graphs	1-3,6 11,13,14 5,11	08/30

2	08/30	1.4 2.1 2.2	Functions Given by Words Tables and Trends Graphs	3-9 17-20 1-4,6,7	09/06
3	09/06	2.3 2.4 2.5	Solving Linear Equations Solving Nonlinear Equations Optimization	5,7,11,13,15,16,18 2,8,16 4,5,8-10	09/13
4	09/13		Exam 1		09/15
5	09/20	3.1 3.2 3.3	The Geometry of Lines Linear Functions Modeling Data with Linear Functions	1-7,8-13 1,2,5,6,10,11 1-3,5-8	09/27
6	09/27	3.3 3.4 3.5	Modeling Data with Linear Functions Linear Regression Systems of Equations	11-14 1-6,8,9,15,16 1-5,14,15	10/04
7	10/04	4.1	Exponential Growth and Decay	1-6	10/11
8	10/11	4.2 4.3	Modeling Exponential Data Modeling Nearly Exponential Data	1-7,12-14 1-6	10/18
9	10/18	4.4	Logarithmic Functions	1,2	10/25
10	10/25		Exam 2		10/25
11	11/01	5.2 5.3	Power Functions Modeling Data with Power Functions	1-4,6,10-13 1,2,5,6,17	11/01
12	11/08	6.1 6.2	Velocity Rates of Change for Other Functions	5-11 1-3,5,6,11-14,16	11/15
13	11/15	6.3 6.4	Estimating Rates of Change Equations of Change: Linear and Exponential Functions	1-2,4,8-10 1,8,9,12	11/22
14	11/22		Exam 3		11/22
15	11/29		Final Exam Review		
16	12/06		Final Exam Review		
Final Exam	12/13		10 - 11:50 am		

ACADEMIC INTEGRITY

I will respect OSU's commitment to academic integrity and uphold the values of honesty and responsibility that preserve our academic community. For more information, see

<http://academicintegrity.okstate.edu>.

DISCLAIMER

This syllabus may be subject to future changes and it is your responsibility to be informed. Any change of the syllabus will be announced in class and appear online.