# Math 1483, *Functions & Uses*, Summer 2015, Section 1

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Class Meeting: MTWR, 9:00AM-10:15AM, HSCI 134
Office Hours: TW, 10:30AM-11:30AM and by appointment, MLSC
Textbook: *Functions and Change: A Modeling Approach to College Algebra, 5th edition*, by Crauder, Evans, and Noell
Online Classroom: http://oc.okstate.edu
OSU Syllabus Attachment: Summer 2015 Syllabus Attachment

**Description.** Mathematical Functions and Their Uses. Prerequisite(s): An acceptable placement score (see placement.okstate.edu). 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.

**Mathematics Learning Success Center (MLSC).** The MLSC can be an invaluable resource to support your mathematical learning. Location: 5th floor of the Library.

**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, and each additional missed day will deduct 5 points from your score. If it helps your grade, then 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, then 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 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 Thursdays (see schedule below) you will turn in your recent 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.

**Exams.** There will be 2 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. Calculators will be allowed, but no books, notes, or any other electronic devices will be permitted during exams.

**Grades.** There are 700 total possible points in this course:

| | Homework | Midterm Exams | Final Exam |
|---|---|---|---|
| Possible Points | 300 | $2 \times 100$ | 200 |

Your score will be earned points divided by possible points truncated to an integer percentage, and determines your grade as follows:

| Score (%) | $0 - 59$ | $60 - 69$ | $70 - 79$ | $80 - 89$ | $90 - 100$ |
|---|---|---|---|---|---|
| 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.

**Office Hours.** I encourage you to come talk to me during my office hours or email for an appointment, when you have questions or concerns. When you come to my office hours or to the MLSC, you should come prepared with specific questions. You should have already reviewed your lecture notes, read through and taken notes on the relevant portions of the textbook, and attempted some problems. Be prepared to tell me or the tutor where you are stuck or what concepts are still confusing to you, and we will be happy to help.

**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.

**Schedule.** The following course schedule is preliminary.

| Monday | Tuesday | Wednesday | Thursday |
|---|---|---|---|
| June 8th   **1**<br>§1.1 *Functions given by formulas* | 9th   **2**<br>§1.2 *Functions given by tables* | 10th   **3**<br>§1.3 *Functions given by graphs* | 11th   **4**<br>§1.4 *Functions given by words*<br>Due: §1.1, 1.2, 1.3 |
| 15th   **5**<br>§2.1 *Tables and trends* | 16th   **6**<br>§2.2 *Graphs* | 17th   **7**<br>§2.3 *Solving linear equations* | 18th   **8**<br>§2.4 *Solving nonlinear equations*<br>Due: §1.4, 2.1, 2.2, 2.3 |
| 22nd   **9**<br>§2.5 *Inequalities* | 23rd   **10**<br>§2.6 *Optimization* | 24th   **11**<br>Exam 1 Review<br>Due: §2.4, 2.5, 2.6 | 25th   **12**<br>**Exam 1** |
| 29th   **13**<br>§3.1 *The geometry of lines* | 30th   **14**<br>§3.2 *Linear functions* | July 1st   **15**<br>§3.2 *Linear functions* | 2nd   **16**<br>§3.3 *Modeling linear data*<br>Due: E1, §3.1, 3.2 |
| 6th   **17**<br>§3.4 *Linear regression* | 7th   **18**<br>§3.5 *Systems of equations* | 8th   **19**<br>§4.1 *Exponential growth and decay* | 9th   **20**<br>§4.2 *Constant percent change*<br>Due: §3.3, 3.4, 3.5, 4.1 |
| 13th   **21**<br>§4.3 *Modeling exponential data* | 14th   **22**<br>§4.4 *Modeling nearly exponential data* | 15th   **23**<br>Exam 2 Review<br>Due: §4.2, 4.3, 4.4 | 16th   **24**<br>**Exam 2** |
| 20th   **25**<br>§4.5 *Logarithmic functions* | 21st   **26**<br>§5.1 *Logistic functions* | 22nd   **27**<br>§6.1 *Velocity* | 23rd   **28**<br>§6.2 *Rates of change*<br>Due: E2, §4.5, 5.1, 6.1 |
| 27th   **29**<br>§6.3 *Estimating rates of change* | 28th   **30**<br>§6.4 *Equations of change* | 29th   **31**<br>Final Exam Review<br>Due: §6.2, 6.3, 6.4 | 30th   **32**<br>**Final Exam** |