

SYLLABUS ---Math 1493—Fall 2018
Applications of Modern Mathematics
10:30 – 11:45 TTh, 102 NCLB (North Classroom Building)

Professor: Dr. Bruce Crauder
e-mail: crauder@okstate.edu

Office phone: (405) 744-7778
Office: 522 Math Sciences

Office Hours: *Tuesdays, 2 pm—3:30 pm, and Wednesdays, 1 pm – 2:30 pm*, OR as announced OR by appointment. Office hours are, of course, in my office (!) in 522 Math Sciences. In addition you may e-mail me or 744-7978 to arrange for an appointment.

The purpose of office hours is to provide a time dedicated to helping you. You are welcome to utilize any office hours listed above. Just come by my office at any of the stated hours – you don't need to make an appointment for those times; for other times, please make an appointment and be sure to keep it.

MLSC General Tutoring: The Math Learning Success Center is on the 5th floor of the Library and is available to you on Mondays through Thursdays, 9 am–9 pm; Fridays, 9 am–5 pm; and Sundays, 1 pm – 9 pm.

Text: You have two options for the text. You may use the physical book together with access to LaunchPad: *Quantitative Literacy: Thinking Between the Lines*, 2nd edition, with LaunchPad Access Card, by Crauder, Evans, Johnson, and Noell, ISBN 978-1-3190-1726-2, available at the OSU Bookstore for about \$139 new or \$105 used. OR You may use LaunchPad by itself since it contains the eBook, an electronic version of the complete text of the physical book. To use the eBook in class, though, you'll need to bring a laptop computer or similar device to class. *LaunchPad for Quantitative Literacy Access*, ISBN 978-1-3190-0039-4, is available at the OSU Bookstore or directly from the publisher for about \$98.

Calculator: You will need a decent calculator that does scientific-type calculation---not just +,-,x,/ but it should also be able to do ^ and preferably parentheses (and) also. Graphics calculators have very nice display screens, are easy to use, and are highly recommended. Calculators may be checked out (subject to availability) from the Math Department (MSCS 401) any workday from 8 am—5 pm.

Expectations: You are expected to attend class prepared to learn. This includes more than simply attending class and bringing your book and calculator. I expect you to come to class having reviewed the material covered in the previous class, having read the text, and having questions related to the material or the homework. This preparation for class is essential so you can learn from the class and not just passively watch.

Attendance: Attendance is very important in this class; indeed attendance is considered so important that I will add extra credit to your homework for that week based on attendance. If you miss class due to illness or other obligations, please contact me to learn what was covered in class, although I cannot give you extra credit for the missed class. In particular, your attendance, or lack of attendance, cannot lower your grade; it can only raise your grade.

Classroom Etiquette: The essence of good etiquette is courtesy to your fellow students. Whether you are tweeting, texting, or just talking with your friend, you may be very distracting to others. Please turn off cellphones, iPods, etc during class.

Content: This course treats various applications of mathematics, particularly practical applications. It is designed to be a general education mathematics course for majors that do not require further mathematics. It is intended to be self-contained; it neither assumes any math background nor is it preparatory for further mathematics courses. The text covers many interesting topics, more than we can cover in one semester, including the following:

- Critical thinking – Chapter 1
- Analysis of growth – Chapter 2
- Linear and exponential change: comparing growth rates – Chapter 3
- Personal finance – Chapter 4
- Introduction to Probability – Chapter 5
- Statistics – Chapter 6
- Graph theory – Chapter 7
- Voting and social choice – Chapter 8
- Geometry – Chapter 9

Tests: There will be four exams each worth 100 points. The dates for the exams are:

Exam I:	Thursday, September 20th, during class
Exam II:	Thursday, October 18th, during class
Exam III:	Thursday, November 15th, during class
Final Exam:	Thursday, December 13th, during the final exam period (10:00 – 11:50 am)

These exam dates are fixed and will not change.

Homework: There will be homework assignments most weeks. Homework is normally due on Thursdays *at the beginning of class* and returned to you on Tuesdays in class. Homework will be announced in lecture, normally the previous week. There will be 10 graded homework assignments each worth 20 points so your total homework score will be out of a possible 200 points, i.e. the same as two exams. In addition there will be some extra credit opportunities (see, for example, Attendance above).

Quizzes, Videos, and Other Resources on LaunchPad: LaunchPad has a great collection of resources that will be very helpful to you in doing homework, studying for exams, and in general learning the material. There will be assignments, about two per week, which will be worth a total of 100 points, that is, the same as one exam. In addition, this syllabus, homework assignments, practice exams, and other communications will be posted on LaunchPad.

Missed Assignments or Exams: I will reasonably allow makeup work for missed assignments or exams, but only for documented and valid reasons such as military service, serious illness, official University activities, mandatory court appearances, family emergencies, or similarly serious events. You must contact me in a timely fashion for such an accommodation.

Grading: You have the possibility of earning up to 700 points (4 x 100 = 400 points for the exams, 200 points for the homework, and 100 points for LaunchPad assignments). The following grades are guaranteed: 630 points (90%) A; 560 points (80%) B; 490 points (70%) C; and 420 points (60%) D.

Personal Integrity: In all matters of personal integrity, such as homework and tests, you are expected to ensure that work with your name on it is truly your own work. This includes homework done working with other students; your paper should ultimately be your own work. Cheating, of course, is not tolerated.

Additional Information: Important deadlines and other helpful information is found in the syllabus attachment