

LECTURE: MWF 10 – 10:50 in WH 116.

INSTRUCTOR: William Cherry

OFFICE: GAB 405

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WEB PAGE: <http://wcherry.math.unt.edu/math1580>

MYMATHLAB COURSE ID: cherry16829

OFFICE HOURS: Mondays & Tuesdays 1:30–4:30, Wednesdays 11:15–1, and by appointment.

Not available: Sep 4–12, Sep 21, or any Thursdays

PREREQUISITE(S): Math 1010 with a C or better, or placement into math placement group MTH1 or higher, or college credit with a grade of C or better in a non-developmental non-remedial college-level mathematics course.

TEXT: Angel, Abbott, Runde, *A Survey of Mathematics with Applications*, Pearson, 2009.

**Important Note:** You must purchase an access code for MyMathLab for Math 1580. Your MyMathLab access code includes access to the online e-book. It is up to you whether you also want to purchase a physical copy of the textbook.

GRADES: There will be four components to your final grade, weighted as follows:

Homework: 25%

Quick Quizzes: 10%

In Class Tests: 40% (10% each)

Final Exam: 25%

Students are also expected to complete a student evaluation of teaching.

#### IMPORTANT DATES

FINAL EXAM: Wednesday, December 15, 8 – 10 a.m.

IN CLASS TESTS: Wednesday, September 29; Wednesday, October 27; Wednesday, November 17; and Monday, December 6.

ATTENDANCE: Class attendance will not be taken, but experience shows that students who do not regularly attend class tend not to get good grades. **No late homework** will be accepted. Quick Quizzes may be given **any class day** and may not be made up. **Students must plan to attend the tests and final exams.** Makeup tests and final exams will be given only in extremely exceptional circumstances, such as serious illness, and must be arranged in advance.

ACADEMIC DISHONESTY: Cheating on exams is a serious breach of academic standards and will be punished severely. UNT's full policy on academic integrity can be found at:

<http://vpaa.unt.edu/academic-integrity.htm>.

STUDENT EVALUATION OF TEACHING EFFECTIVENESS (SETE): The SETE is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. Please be sure to complete this important survey for all of your classes.

*Note: It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office.*

## Course Description

Topics include probability, statistics, algebra, logic and the mathematics of finance. Additional topics are selected from geometry, sets, cryptography, fair division, voting theory and graph theory. Emphasis is on applications. Recreational and historical aspects of selected topics are also included. Technology is used extensively. MATH 1580 is not intended to prepare students for calculus, science, engineering or business courses.

**Caution!** Math 1580 does satisfy the mathematics component of the University Core Curriculum and also meets the mathematics requirement for the College of Arts & Sciences. However, Math 1580 is not accepted by all majors. In particular, Math 1580 is not intended for science majors, engineering majors, students in the College of Business, students in the School of Journalism, and most students in the College of Education. If you have any doubts, you should check with your academic advisor as to whether Math 1580 will satisfy the math requirement for your major and any majors you might consider in the future.

## Learning Objectives

As a course in the Mathematics Component of the University Core Curriculum, Math 1580 meets the following State of Texas Exemplary Educational Objectives:

1. To apply arithmetic, algebraic, geometric, higher-order thinking, and statistical methods to modeling and solving real-world situations.
2. To represent and evaluate basic mathematical information verbally, numerically, graphically, and symbolically.
3. To use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results.
4. To interpret mathematical models such as formulas, graphs, tables and schematics, and draw inferences from them.

Additional course specific learning objectives for Math 1580 include:

- Help students develop basic quantitative and numerical literacy.
- Give students a basic background in the mathematics of personal finance.
- Give students a basic background in the concepts and calculations involved in probability and statistics.
- Allow students to explore other topics in mathematics and enable non-technical students to develop ability in, confidence in, and an appreciation for mathematics and its applications.

## Course Requirements

**Homework.** All homework for this course is turned in on-line via MyMathLab. There will be assignments due before the start of class most every class day. You must purchase MyMathLab access immediately because completing the homework is a vital part of the course. See the attached hand-out for details on how to register for MyMathLab. **Caution!** Unfortunately, MyMathLab does not provide refunds even if you drop the course within the first few days of the semester. If you are not certain you will take this course, you may want to wait to purchase your access to MyMathLab, even though you will not get credit for any homework assignments due prior to purchasing MyMathLab access.

**No late homework** will be accepted. Because most students will occasionally be ill or otherwise be unable to complete a few assignments, each student's **six** lowest homework scores will be dropped prior to computing final course grades.

**Quick Quizzes.** Some class periods will begin with "quick quizzes." Quick Quizzes may sometimes be quizzes about assigned reading or they may sometimes be a short math problem from a prior unit. Quick quizzes will **not** be announced in advance; they may happen during any class period. Each student's **three** lowest quick quiz scores will be dropped prior to computing final course grades.

**In Class Tests.** In class tests will occur on the following dates: Wednesday, September 29; Wednesday, October 27; Wednesday, November 17; and Monday, December 6. You must take these tests in class as scheduled. Makeup exams will be given only in very exceptional circumstances, such as a serious illness.

**Final Exam.** The final exam will be 8–10 a.m. on Wednesday, December 15. Again, you must take the final at this time. Makeup exams will be given only in very exceptional circumstances, such as a serious illness.

## Where to get help

**Instructors' Office Hours:** Your professor is here to help you learn. You are encouraged to take full advantage of his office hours. No appointment is necessary to see your instructor during his regularly scheduled office hours. If you cannot make the regularly scheduled office hours, ask for an appointment for another time.

**Math Lab:** The Math Lab located in GAB 440 offers free tutoring. The Math Lab is open from 7:00 a.m. until 9:00 p.m. Mondays–Thursdays, from 7–4 on Fridays, and from 12–5 p.m. on Saturdays. The Math Lab is NOT open during the first week of class nor during finals week.

**Note:** Try not to get addicted to math lab help. It is important that you learn to do problems on your own, or you will not do well on tests. Never ask for help in the math lab unless you have thought about a problem for at least 20 minutes on your own first.

**Private Tutors:** The Mathematics Department (GAB 435) can provide you with a list of private tutors if you really feel you need more one-on-one help than the above sources can provide. If you do work with a tutor, remember you cannot bring your tutor to exams with you. If you do not start your homework until you meet with your tutor, you will start to rely on your tutor like a crutch and will not do well on exams. To work effectively with a tutor, you need to continually try to do as much as possible by yourself BEFORE you meet your tutor, and only use your tutor for those things you could not do by yourself.

## Tentative Course Outline

The following is intended to provide a rough outline of what will be covered when in class. Students should consult the more detailed schedules that will be distributed weekly during the course for more up-to-date information on what will happen each week. “Quick Quizzes” may occur on any class day and will not be announced in advance.

<b>Chapter 15: Voting and Apportionment: Aug 27 – Sep 3</b>		
Monday	Wednesday	Friday
		8/27: 15.1: Voting Methods
8/30: 15.2: Voting Flaws HW due	9/1: 15.3: Apportionment HW due	9/3: 15.4: Apportionment Flaws HW due
<b>Chapters 12 &amp; 13: Probability &amp; Statistics: Sep 8 – Oct 13</b>		
Monday	Wednesday	Friday
9/6: <b>Labor Day</b> No Class	9/8: 12.1: Probability HW due	9/10: 12.2: Probability Theory HW due
9/13: 12.4: Expected Value HW due	9/15: 12.5: Tree Diagrams HW due	9/17: 12.6: OR versus AND HW due
9/20: 12.8: Counting HW due	9/22: 12.9: Combinations HW due	9/24: 12.10: Combinations HW due
9/27: Review HW due	9/29: <b>TEST 1</b> Chapters 15 & 12	10/1: 13.1 Sampling HW due
10/4: 13.2: Misuses of Statistics HW due	10/6: 13.3-4: Frequency & Graphs HW due	10/8: 13.5-6: Statistical Measures HW due
10/11: 13.7: The Normal Curve HW due	10/13: 13.8: Linear Regression HW due	10/15: 3.1: Logic HW due
<b>Chapter 3: Logic: Oct 15 – Oct 22</b>		
Monday	Wednesday	Friday
10/18: 3.2-3: Truth Tables HW due	10/20: 3.4: Equivalent Statements HW due	10/22: 3.5-6: Arguments & diagrams HW due
<b>Chapter 11: Mathematics of Personal Finance: Oct 29 – Nov 12</b>		
10/25: Review HW due	10/27: <b>TEST 2</b> Chapters 13 & 3	10/29: 11.1-2: Percentages & Interest HW due
11/1: 11.3: Compound Interest HW due	11/3: 11.4: Installment Buying HW due	11/5: 11.5: Mortgages HW due
11/8: 11.6: Annuities HW due	11/10: Retirement Planning HW due	11/12: Taxes HW due
<b>Chapters 9 &amp; 14: Topology &amp; Graph Theory: Nov 24 – Dec 1</b>		
Monday	Wednesday	Friday
11/15: Review HW due	11/17: <b>TEST 3</b> Chapter 11	11/19: 14.1: Graphs & Paths HW due
11/22: 14.2: Euler paths HW due	11/24: 9.6: Topology HW due	11/26: <b>Thanksgiving</b> No Class
11/29: 14.3: Hamilton paths HW due	12/1: 14.4: Trees HW due	12/3: Review HW due
12/6: <b>TEST 4</b> Chapter 14	12/8: Review HW due	12/10: <b>Reading Day</b> No Class
	12/15: <b>Final Exam</b> 8–10 a.m.	