MATH1580.520: Survey of Math

2016 Spring

INSTRUCTOR: Jason Taylor	**OFFICE:** GAB 471E **OFFICE PHONE:** 940-369-7374
DROP IN OFFICE HOURS: MW 11:00 am – 12:00 pm, MW 01:00 pm – 03:00 pm TR 12:30 pm – 01:30 pm. Appointment required for other times.	**CLASS MEETS: MW 03:30 pm – 04:50 pm**
EMAIL: jason.taylor@unt.edu. Email is ONLY for requesting non-scheduled office hours appointments & confirming early testing dates. All other course related topics must be addressed during scheduled office hours. Allow two (2) business days for reply. Use only your UNT email account; course, section & and your full name in the subject header.	**FINAL EXAM DATE AND TIME:** http://registrar.unt.edu/exams/final-exam-schedule/spring **MATH LAB (GAB 440):** Go to Website: www.math.unt.edu/mathlab for information. Opens January 25; Closes May 6.

COURSE DESCRIPTION: MATH1580 (MATH1332). 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. Students may not receive credit for both MATH 1580 and MATH 1581*. Satisfies the Mathematics requirement of the University Core Curriculum. *MATH 1581 is no longer offered.

MyMathLab Required

You will access your math course platform from within Blackboard Learn. The course content (assignments, help tools, textbook, etc.) is delivered in the online platform MyMathLab accessed through Blackboard Learn. Alternate access is: www.pearsonmylab.com. Register in MyMathLab (MML) the first class day of semester. Temporary access is available, register immediately. You must purchase MML by the end of the temporary 14-day access period. If you do not purchase MML by the end of the temporary access, you may lose credit for all work previously completed in MML AND be administratively dropped with the possibility of no refund. No extensions will be given for any missed assignments for any reason. Not having access to MML is not an exception.

PRINT TEXTBOOK is OPTIONAL: Thinking Mathematically, 6th Edition, by Blitzer. The textbook in electronic form is included in MML. MML may be purchased packaged with textbook, as a stand-alone or directly online at the time of registration.

CAMPUS INTERNET ACCESS: UNT has many general access computer labs for students, see http://www.gacl.unt.edu/.	**ONLINE TUTORING:** The UNT Learning Center offers an online tutoring system using the AskOnline platform. Go to www.unt.edu/lc, and select the online tutoring button located along the top of the page.

GRAPHING CALCULATOR:

TI 83, TI 83 Plus, TI 84, TI 84 Plus or equivalent for the lecture. Only TI83/84, TI83/84 Plus are supported. TI NSprires, TI 89's, TI 92'2 or any other utility with alphanumeric/CAS capabilities ARE NOT permitted. A calculator may not be shared during an exam.

ATTENDANCE POLICY:

Class attendance is mandatory. Students are responsible for all information given in class, regardless of his/her attendance. Starting Monday February 29, students may be administratively dropped from the course for nonattendance with a grade of WF. The last day a student may be dropped for nonattendance is Friday April 22. Four or more absences constitute nonattendance.

ACADEMIC DISHONESTY:

Refer to the following university site for the official policy with regards to academic dishonesty. The web site is: http://vpaa.unt.edu/academic-integrity.htm

EVALUATION MATH1581: Homework 20% Quizzes 15% Average of 3 in-class exams 45% Final Exam 20%	**GRADE ASSIGNMENT:** A: [90%,]; B: [80%, 90%); C: [70%, 80%); D: [60%, 70%); F: [0%, 60%), 59% is an F

Your grade is determined solely by your performance on the evaluation criteria. Grades are not wages; they are not intended to reflect how hard you've worked or the goodness of your intentions. Grades reflect your proficiency of the course content as you have demonstrated them on the evaluation criteria. Expect no extra credit or bonus assignments.

FINAL GRADE: Semester grades online at: my.unt.edu. Grades posted online are for your record-keeping purposes only. Your course grade is determined by the criteria explicitly stated on syllabus.

DISABILITY ACCOMMODATIONS:

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking

accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation website at http://www.unt.edu/oda. You may also contact them by phone at 940.565.4323.

NOTES:

1) This syllabus is subject to change as the instructor deems necessary. Any/all changes will be announced during regular class time. It is the responsibility of the student to attend each scheduled class to be informed of these changes.

2) You are responsible for meeting all university deadlines, such as: registration, fee payment, drop deadlines, etc. Refer to the printed Schedule of Classes and/or University Catalog for policies and dates.

Summary of Key Dates for 2016 Spring:

January 19, Tuesday
Classes begin

January 22, Friday
Last day to add/swap a class. Cannot swap up to higher level class, only down.

February 1, Monday
Census date, last day to drop course with a "W". After this date, instructor's written consent required.

February 26, Friday
Last day to drop a course or withdraw from the university with a grade of "W" for courses that a student is not passing; after this date a grade of "WF" may be recorded.

February 29, Monday
Beginning this date, instructor may drop students with grade of "WF" for nonattendance.

March 14, Monday – March 18, Friday
Thanksgiving – University closed

April 5, Tuesday
Last day to drop a course with consent of instructor. Grade of "W" or "WF" may be assigned.

April 18, Monday
Beginning this date a student may request a grade of "I", incomplete, a non-punitive grade given only if a student (1) is passing; (2) has justifiable reason why the work cannot be completed on schedule; and (3) arranges with instructor to complete the work within the following academic semester.

April 22, Friday
Last day for an instructor to drop a student with a grade of "WF" for non-attendance. Last day to withdraw from the semester.

May 30, Saturday – May 6, Friday
Pre-final week.

May 6, Reading Day
No Classes. MATH LAB CLOSES for the semester.

May 7, Saturday – May 13, Friday
Final examinations. NO SCHEDULED OFFICE HOURS DURING FINAL EXAMS WEEK. Term ends.

Academic Dishonesty:

Cheating on final exam, on in-class tests, or on quizzes is a serious breach of academic standards and will be punished severely and generally result in a student failing the course. All work done on in-class exams and quizzes must represent only the student's own work. See http://facultysuccess.unt.edu/academic-integrity for details on academic integrity at UNT.

Attendance:

Class attendance is mandatory. Missing any portion of class (lecture or lab) is considered absence from the entire class. My email may NOT be used in lieu of attendance. Students are responsible for all information given in class, regardless of his/her attendance. This includes knowing exam dates, homework assignments and any changes made to due dates that are announced in class. If you miss a class, it is your responsibility to learn of all the important stuff you missed. Exchange phone numbers/email addresses with several members of your class so that you have multiple sources of information in case of a personal emergency. **Four** or more absences in lecture constitute non-attendance; in which a student may be administratively dropped for non-attendance with a grade of WF.

Classroom Etiquette:
Appropriate behavior is expected of all students taking this course. Arrive to class promptly and do not leave until the scheduled ending time of the class. If you must arrive late or leave early, please do so as discreetly as possible and take a seat near the door. Turn off all non-medical electronic devices such as pagers, cell phones, laptops, etc. Take off the headphones. Do not read newspaper or work on unrelated assignments during class. I prefer that you not eat during class. You will be asked to leave the classroom if you access an electronic messaging device during class AND it will be counted as an absence.

Course Requirements:
As a general rule, average college students are expected to spend three (3) hours per week for each one (1) hour of class working on the course to be able to successfully learn the content. If you are an "average" college-level learner, you should spend about nine (9) hours per week if you expect to successfully complete this course. Adjust for more (or less) hours to accommodate your learning level.

Drop Policy:
If the student is unable to complete this course, it is his/her responsibility to formally withdraw from the course. The student may do so through the Registrar's Office after obtaining the necessary signatures. Consents for withdrawal and all necessary signatures may be obtained in the Math Department Testing and Placement Office, GAB 443. The last day to drop a class with an automatic "W" is Monday, February 1. The last day to drop a class with "W" or "WF" is Tuesday, April 5. "WF" is averaged into your GPA as an "F." If the student does not properly withdraw from the course but stops attending, s/he will receive a performance grade, usually an F.

Exams:
Three in-class exams are planned for this semester. Check your posted online exam score with the grade you earned. If they are not the same, notify me immediately to correct the error. You have one week from the time the graded exam is posted to contest errors. Keep a record of all your scores. Each exam is 15% of the course grade.

Content and dates are *tentatively* scheduled as follows, YOU MUST ATTEND CLASS TO KNOW:
EXAM 1 – February 17: (Chapters 13 and 8)
EXAM 2 – March 30: (Chapters 3 and 12)
EXAM 3 – April 27: (Chapters 11 and 14)

The final exam is comprehensive and REQUIRED. There are no exemptions.

Exam Etiquette:

- Any student who arrives late for an exam will not be permitted to take the exam. The student will receive a zero for that exam.
- Place all papers, textbook, notes, etc. in a backpack or a book bag and close it securely.
- Turn off all electronic devices (unless medically necessary), this includes cell phones, pagers, etc. and place out of sight. Handling any electronic device besides an approved calculator during an exam will be construed as cheating.
- Do not wear HATS or CAPS during exams.
- Do not share any materials during an exam. This includes, but is not limited to pencils, erasers, calculators, etc.
- Only approved calculators during an exam. You may have both a scientific and a graphing calculator. It is your responsibility to know how to work the calculator(s) you bring to a test.
- Have only the exam booklet, pencil, eraser and calculator out during an exam. Plenty of work–space is provided on the exam booklet. You will not be permitted to have any scratch paper during an exam.

Final Exam:

Your final exam will be administered in our regular classroom. The date and time are posted online at: http://registrar.unt.edu/exams/final-exam-schedule/spring for UNT 2016 Spring final exams schedule. **You should look up the time and record it for your academic planning. The final exam is comprehensive and is 20% of the course grade.**

Grade Assignment:

The student course grade is assigned according to the evaluation criteria and grading assignment stated on this syllabus. The grade is completely objective and is determined solely by student performance on each of the evaluation criteria (in-class exam grades, homework, and the final exam). Don't expect extra credit work or bonus grade assignments.

Homework:

Most of your homework assignments will be administered through MyMathLab (MML); you may also have occasional "paper" and "in-class" assignments which evaluate as a homework grade. MML is the required online course delivery platform. All regular online homework assignments for the entire term are already set; due dates and times explicitly stated in MyMathLab. You will typically have an online assignment due each Tuesday and Thursday at 6:00am. I suggest you complete your assignments the day before each due date when possible. You have five (5) attempts per problem-type for each online problem in MyMathLab. Use the attempts carefully so that you can earn a 100% on each assignment. **NO LATE HOMEWORK** will be accepted for any reason whatsoever. A grade of zero will be assigned to any homework assignment not completed online and submitted by the due date and time. Specifically, due dates will NOT be extended for any reason. **NO EXCEPTIONS.** If you are prone to circumstances that affect your ability to complete assignments as due, I suggest that you work ahead. The homework assignments, including online, in-class and take-home together comprise 20% of the course grade.

At the end of the semester (Friday, April 29 – Friday, May 6, 6am) you will have the opportunity to complete three (3) replacement homework assignments. If you do not complete a homework assignment by the due date during the semester or do not perform as well as you would've liked, you will have the opportunity to replace up to three of those grades by successfully completing replacement homework assignments. The homework assignments are worth 20% of the course grade.

Incomplete, the Grade of:
Beginning Monday, April 18, a student that qualifies may request a grade of "I", incomplete. An "I" is a non-punitive grade given only if ALL three of the following criteria are satisfied. They are:

1) The student is passing the course;
2) The student has a justifiable (and verifiable) reason why the work cannot be completed as scheduled; and
3) The student arranges with the instructor to complete the work within one academic year.

Learning Objectives:
Upon successful completion of this course, the student will be able to:

- Demonstrate proficiency of arithmetic and algebraic skills
- Communicate mathematics and use technology to solve problems
- Demonstrate understanding of financial mathematics
- Demonstrate understanding of basic statistics
- Demonstrate understanding of voting methods, apportionment methods, their theory and uses
- Demonstrate understanding of basic logic
- Demonstrate understanding of graph theory basics

Make-up Exam Policy:
NO MAKE-UP EXAMS WILL BE GIVEN. An exam may be taken **prior** to the scheduled date. You must make your request, via email, at least a week prior to the date you need to take your test. In the event of a schedule conflict with a university function, dental/physician's appointment, wedding, formal, or whatever, the **student must take the test early**. If a student does not take a scheduled exam, a zero will be recorded for that exam and an academic alert will be filed.

There are three in-class exams. If your final exam score is higher than one of your in-class exam scores, then that in-class exam grade will be replaced with final exam grade. If you miss an in-class exam, a zero will be recorded for that exam grade and your final exam score will replace that one zero. If you receive a zero for cheating on an exam, the final exam score will NOT replace that zero. Again, **NO MAKE-UP EXAMS WILL BE GIVEN FOR ANY REASON EVER**.

Progress Reports:
Students needing progress reports completed/signed for athletics, scholarships and/or any other organization must attend office hours to get them completed.

Quizzes (Online):
All MML quizzes for the term are immediately available; due dates and times for all quizzes are posted in MML. You have nine (9) total quizzes, six chapter quizzes and three skills prep quizzes. All quizzes are required. The average of all the Quiz grades will comprise15% of the course grade.

Chapter Quizzes
You have six (6) chapter quizzes. The quizzes are due 11:59PM on Saturday:

1) You must attempt and submit your Chapter Quiz sufficiently prior to the posted due date;
2) You must earn at least 90% on the corresponding 2nd Quiz Attempt HW assignment to be permitted two more attempts on the Chapter Quiz. The 2nd Quiz Attempt Homework assignments count as regular online homework assignments. These homework assignments are due on Saturday of the Quiz due date.
3) Your highest Chapter Quiz grade will be counted. If you do not earn the requisite 90% on the corresponding Recitation Skills Review HW homework; your first attempt quiz grade will be used.

Chapter Skills Check Diagnostic (Quizzes)
You have three (3) chapter skills check diagnostic quizzes. The quizzes are due 11:59PM on Thursday.

1) You must attempt and submit your Skills Check Diagnostic Quiz sufficiently prior to the posted due date;
2) You must earn at least 90% on the corresponding Skills Check Homework assignment to be permitted two more attempts on the Skills Check Diagnostic Quiz. The Skills Check Homework assignments count as regular online homework assignments. These homework assignments are due on Thursday of the Quiz due date.
3) Your highest Chapter Quiz grade will be counted. If you do not earn the requisite 90% on the corresponding Skills Check Diagnostic Quiz; your first attempt quiz grade will be used.

Summary

1) You have Quizzes due on Thursdays and Saturdays. Refer to the Assignment tab in MML for the dates.
2) The quizzes are timed and you get three complete attempts.
3) The highest earned quiz score is used.

Tentative Quiz Due Dates

Quiz	Associated Homework	Due – 11:59PM
Ch. 8 Skills Check Diagnostic	Section 8.R Skills Check HW	Thursday, 1/28/2016
Chapter 13 Quiz	Chapter 13 2nd Attempt Homework	Saturday, 1/30/2016
Chapter 8 Quiz	Chapter 8 2nd Attempt Homework	Saturday, 2/13/2016
Ch. 12 Skills Check Diagnostic	Section 12.R Skills Check HW	Thursday, 3/3/2016
Chapter 3 Quiz	Chapter 3 2nd Attempt Homework	Saturday, 3/5/2016
Chapter 12 Quiz	Chapter 12 2nd Attempt Homework	Saturday,3/26/2016
Ch. 11 Skills Check Diagnostic	Section 11.R Skills Check HW	Thursday, 4/14/2016
Chapter 11 Quiz	Chapter 11 2nd Attempt Homework	Saturday, 4/16/2016
Chapter 14 Quiz	Chapter 14 2nd Attempt Homework	Saturday, 4/23/2016

Recommended Keys to Success/Expectations:

Success in math classes requires a great deal of time and honest effort outside of class along with punctual attendance. You are expected to come to each class on time and stay the entire class. You are responsible for everything that happens in class. You should come to each lecture and come prepared. Spend an hour (or two) after each lecture with a classmate reviewing the lesson and working on homework problems. Use the UNT Math Lab and meet with a study group every day.

Math is not a spectator sport. You will not learn mathematics just from watching me or friends display ideas and solve problems. You must try the problems, finish problems, ask questions, correct your mistakes; put concepts in your own words, and practice, practice, practice!! An increase in effort usually results in increases in success.

Student Behavior:

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Center for Student Rights and Responsibilities to consider whether the student's conduct violated the Code of Student Conduct. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at www.unt.edu/csrr. *Texting or using any electronic messaging devices during class is not acceptable behavior and is grounds for disciplinary action.

Student Perception of Instruction (SPOT):

A student evaluation of instruction 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. You will receive more information on this survey after the semester starts.

Statement regarding use of email and attendance:

- Email may not be used in lieu of attendance. YOU MUST ATTEND class to obtain instruction regarding lectures, lessons, quizzes, homework assignments, answers to particular problems, etc.
- Due to limitations of email communication, you must physically meet with me for help with course materials.
- YOU are responsible for attending the required class meetings and labs as stated in the course schedule guide.

Web Access:
You should be able to access your MyMathLab account through UNT's course management system: https://learn.unt.edu/. You may also access MyMathLab at: www.pearsonmylabandmastering.com. Necessary information for using this site will be provided in the first day of class. Record you login and password somewhere readily available to you for both Blackboard (http://learn.unt.edu) and Pearson (www.pearsonmylabandmastering.com) access.

TOC

Math 1580 list of sections to be taught from course textbook (additional content may be presented in lecture)**:**

UNIT 1

Chapter 13: VOTING AND APPORTIONMENT
13.1: Voting Methods
13.2: Flaws of Voting Methods
13.3: Apportionment Methods
13.4: Flaws of the Apportionment Methods

Chapter 8: PERSONAL FINANCE
8.1: Percent, Sales Tax, and Discounts
8.2: Income Tax
8.3: Simple Interest
8.4: Compound Interest
8.5: Annuities, Methods of Saving, and Investments
8.6: Cars
8.7: The Cost of Home Ownership
8.8: Credit Cards

UNIT 2

Chapter 3: LOGIC
3.1: Statements, Negations, and Quantified Statements
3.2: Compound Statements and Connectives
3.3: Truth Tables for the Negation, Conjunction, and Disjunction
3.4: Truth Tables for the Conditional and the Biconditional
3.5: Equivalent Statements and Variations of Conditional Statements
3.6: Negations of Conditional Statements and DeMorgan's Laws
3.7: Arguments and Truth Tables

Chapter 12: STATISTICS
12.1: Sampling, Frequency Distributions, and Graphs
12.2: Measures of Central Tendency
12.3: Measures of Dispersion
12.4: The Normal Distribution
12.5: Problem Solving with the Normal Distribution
12.6: Scatter Plots, Correlation, and Regression Lines.

UNIT 3

Chapter 11: COUNTING METHODS AND PROBABILITIES THEORY
11.1: The Fundamental Counting Principle
11.2: Permutations
11.3: Combinations
11.4: Fundamentals of Probability
11.5: Probability with the Fundamental Counting Principle, Permutations, and Combinations
11.6: Events Involving *Not* and *Or*; Odds
11.7: Events Involving *And*; Conditional Probability
11.8: Expected Value

Chapter 14: GRAPH THEORY
14.1: Graphs, Paths, and Circuits
14.2: Euler Paths and Euler Circuits
14.3: Hamilton Paths and Hamilton Circuits
14.4: Trees

Wk	Monday	Wednesday
1	1/18 MLK Day University Closed	1/20 13.1: Voting Methods and Course Introductions
2	1/25 13.2: Flaws of Voting Methods, 13.3: Apportionment Methods	1/27 13.4: Flaws of Apportionment Methods,
3	2/1 8.1: Percent, Sales Tax, & Discounts, 8.2: Income Tax,	2/3 8.3: Simple Interest, 8.4: Compound Interest
4	2/8 8.5: Annuities, Methods of Saving and Investment, 8.6: Cars;	2/10 8.7: The Cost of Home Ownerships, 8.8: Credit Cards
5	2/15 3.1: Statements, Negations and Quantified Statements, 3.2: Compound Statements and Connectives,	2/17 Exam 1 (Chapters 13 and 8)
6	2/22 3.3: Truth Tables for the Negation, Conjunction, and Disjunction; 3.4: Truth Tables for the Conditional and the Biconditional	2/24 3.5: Equivalent Statements and Variations of Conditional Statements
7	2/29 3.6: Negations of Conditional Statements and DeMorgan's Laws; 3.7: Arguments and Truth Tables	3/2 12.1: Sampling, Frequency Distributions, and Graphs
8	3/7 12.2: Measures of Central Tendency; 12.3: Measures of Dispersion	3/9 12.4: The Normal Distribution
	SPRING BREAK (March 14 – March 18)	
9	3/21 12.5: Problem Solving with Normal Distribution	3/23 12.6: Scatter Plots, Correlation, and Regression Lines

Wk	Monday	Wednesday
10	3/28 11.1:The Fundamental Counting Principle; 11.2 Permutations	3/30 EXAM 2 (Chapters 3 and 12)
11	4/4 11.3: Combinations; 11.4:Fundamentals of Probability	4/6 11.5: Probability with the Fundamental Counting Principle, Permutations, and Combinations
12	4/11 11.6: Events Involving *Not* and *Or*; Odds; 11.7: Events Involving *And*; Conditional Probability	4/13 11.8: Expected Value;
13	4/18 14.1: Graphs, Paths, and Circuits, 14.2: Euler Paths and Euler Circuits	4/20 14.3: Hamilton Paths and Hamilton Circuits
14	4/25 14.4: Trees	4/27 EXAM 3 (Chapters 13 and 14)
15	5/2 Course Overview and Content Extensions	5/4 Course Overview and Content Extensions
16	**FINAL EXAM WEEK**	

If you have technical difficulties with MyMathLab, call 1-800-677-6337
On-Line MML Homework Tips for Math 1580

- Find a relatively quiet, distraction-free place with internet connection. Commit to NOT surfing the internet while working on math (or any assignment for that matter).

- Keep a notebook for online assignments, both homework and quizzes. Write problems just as you would if the homework is submitted on paper.

- You are given five attempts per problem-type. Use the attempts carefully so that you can earn 100% for each MML homework assignment.

- MyMathLab has very useful features, including viewing videos, animations and a feature called the, "Help Me Solve It." When you use the Help Me Solve It feature be sure to write out each of the guided steps and explanations.

- Using the "Help Me Solve It" feature uses one of your five attempts.

- You can circumvent using up an attempt when using the "Help Me Solve It" feature by going to the "Study Plan" link.

- Get help from tutors in the UNT Math Tutor Lab (GAB 440); SI's and from the "Help Me Solve It" feature in MML; but continue to rework a similar exercise until you can do the exercises without any assistance. Only then will be ready to do well on an exam on that material.

- Prepare for tests by reviewing notes, writing your personal learning notes, reworking homework problems, and the Study Plan. The Study Plan option can be used to help you focus your learning needs. Use it also to augment your learning process.

- Start preparing and reviewing for the final exam the first week of classes. Revisit previous homework assignments, review completed in-class exams.

Keep a positive attitude about your ability to succeed and work diligently towards that goal.