Course Information

Course Description

This course is a survey of ideas in contemporary mathematics. Topics may include graphs and networks, theory of elections and apportionment, statistics, and mathematical models. Recommended for students who wish to satisfy their core mathematics requirement but do not plan to take additional mathematics coursework.

Prerequisite and Co-requisite Courses

Completion of Mathematics Texas Success Initiative (TSI) requirements.

Course Delivery

This is an online course that will be delivered via Blackboard. If you choose, you can complete the course without visiting ASU’s campus. There are no class meetings. You will also access homework and some resources through MyMathLab.

Required Texts and Materials

REQUIRED PURCHASE: MyMathLab (MML) access code from Pearson.

We will use the following textbook. Access to an electronic version of the book is included with your MML access code. Purchasing a hard copy is optional.
Excursions in Modern Mathematics, 9th edition, by Tannenbaum with MyMathLab.

**Technology Requirements**

**Required:**
- Purchase of a MyMathLab access code.
- A computer (desktop/laptop) or mobile device (phone/tablet) that can access the internet.
- Access to a stable internet connection.
- Respondus Lockdown Browser software for tests. Respondus requires a desktop computer or laptop (not a Chromebook).
- Speakers/earbuds/headphones for listening to videos.
- Internet browsing software (such as Mozilla Firefox or Google Chrome).ii
- PDF-viewing software (such as Adobe Acrobat Reader).iii

**Optional:**
- Device with a microphone for chatting with the professor during online office hours through Blackboard Collaborate.

**Communication**

Faculty will usually respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until the next work day.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails to faculty, include the course name and section number in your subject line.

**Student Responsibilities and Tips for Success:**

- Maintain academic honesty. Don’t cheat.
- Be prepared to devote time to this class – if this class were in-person, you would spend three hours a week in class, plus extra to work on homework.
- Keep up with due dates. All homework due dates and test dates are set from the beginning of the semester. Make a calendar or set reminders on your phone.
- Take notes as if you were in class while watching videos and reading the book.
- Organize your notes in a notebook or binder.
- Be proactive about your grade in this course. You are not given a grade in a college course; you EARN your grade, based on completion of the course requirements and how well you demonstrate your understanding of the material to the professor. You may want or need a particular grade to graduate, maintain a scholarship, or stay in athletics, for instance. **It is your responsibility to put in as much effort as it takes to earn your desired grade.**
Grading

Grading System
Grades will be determined as follows:
- Tests: 84% (21% each)
- Homework (in MyMathLab): 16%
Course grades will be dependent upon completing course requirements and meeting the student learning outcomes. **Grades will not be rounded up.**

The following grading scale is in use for this course:
- A = 89.5-100 points
- B = 79.5-89.49 points
- C = 69.5-79.49 points
- D = 59.5-69.49 points
- F = 0-59.49 points

Tests
Tests will be administered online through Gradescope, likely using Respondus Lockdown Browser (both are available to you at no cost). Each test will be open for at least 48 hours and may be completed during that window whenever is convenient for you. It is your responsibility to start early enough so that you have enough time to complete the test.

Tentative test dates are listed here.
- Test 1: February 17-18
- Test 2: March 17-18
- Test 3: April 14-15
- Test 4: May 10-11

Tests are not cumulative and there is no cumulative final exam (the fourth test will take place during the final exam timeslot). If you have a conflict with an exam, please let me know as soon as possible. Make-up tests are given only under extreme circumstances at the discretion of the instructor. Test retakes are not given.

MyMathLab Homework
Homework will be assigned online through MyMathLab. Late homework is not accepted, but you may work ahead if you wish. Your lowest three homework grades will be dropped.
Directions for how to register for MyMathLab can be found on our Blackboard course ("MyMathLab" in the lefthand navigation). You will also access MyMathLab itself through our Blackboard course.

You will need to pay for an access code (bundled with your textbook or purchased directly from MyMathLab without a hard copy of the book). You may access MyMathLab for free for 14 days from the time that you register. After this free trial ends, you will be required to pay for access. Not having an access code does not warrant an extension on homework. Homework due dates are posted in MyMathLab.

Course Schedule
This subject matter listed below is tentative and subject to change. For current information about course topics, please contact the instructor.

Week 1 – Voting Theory
Week 2 – Voting Theory
Week 3 – Weighted Voting, Fair Division
Week 4 – Test 1
Week 5 – Fair Division
Week 6 – Fair Division, Intro to Graphs
Week 7 – Graphs, Traveling Salesman Problems
Week 8 – Test 2
Week 9 – Networks & Trees, MST’s, MaxST’s, Brute Force Algorithm
Week 10 – Percentages, Math of Finance
Week 11 – Math of Finance, Reflections, Translations, Rotations
Week 12 – Test 3
Week 13 – Glide Reflections, Fibonacci Numbers, Intro Graph/Charts/Statistics
Week 14 – Graphs/Charts/Statistics, Probability
Week 15 – Probability
Week 16 – Test 4

Student Learning Outcomes
1. **The students will demonstrate factual knowledge including the mathematical notation and terminology used in this course.** Students will read, interpret, and use the vocabulary, symbolism, and basic definitions used in a selection from the following topics: voting theory, apportionment, the mathematics of money, probability, statistics, graph theory, and geometry.

2. **The students will be able to describe generalizations of mathematics to real-world situations.** Students will be able to describe, for example, the role played by mathematics in the theory of voting. The students will be able to describe connections between mathematical concepts and natural and societal phenomena.
3. **The students will apply the course material along with techniques and procedures covered in this course to solve various problems and improve decision making.** The students will apply such topics related to statistics and probability to improve decision making through a broader understanding of mathematics. They will learn to analyze problems using mathematical ideas and symbolism and learn to obtain the appropriate resources required to better deal with such problems.

4. **The students will develop specific skills, competencies, and thought processes sufficient to support further study or work in this field or related fields.** Students will develop new approaches and algorithms for solving problems related to networking, scheduling and paths.

### General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)\(^5\)
- [Angelo State University Catalog](#)\(^6\)

### Required Use of Masks/Facial Coverings by Students

As a member of the Texas Tech University System, Angelo State University has adopted the mandatory [Facial Covering Policy](#)\(^7\) to ensure a safe and healthy classroom experience. Current research on the COVID-19 virus suggests there is a significant reduction in the potential for transmission of the virus from person to person by wearing a mask/facial covering that covers the nose and mouth areas. Therefore, in compliance with the university policy students in this class are required to wear a mask/facial covering before, during, and after class. Faculty members may also ask you to display your daily screening badge as a prerequisite to enter the classroom. You are also asked to maintain safe distancing practices to the best of your ability. For the safety of everyone, any student not appropriately wearing a mask/facial covering will be asked to leave the classroom immediately. The student will be responsible to make up any missed class content or work. Continued non-compliance with the Texas Tech University System Policy may result in disciplinary action through the Office of Student Conduct.

### Academic Integrity

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.
The College of Science and Engineering adheres to the university’s Statement of Academic Integrity.  

**Accommodations for Students with Disabilities**

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student’s responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the Student Disability Services website. The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford  
Director of Student Disability Services  
Office of Student Affairs  
325-942-2047  
dallas.swafford@angelo.edu  
Houston Harte University Center, Room 112

**Incomplete Grade Policy**

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures for more information.

**Plagiarism**

Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.
In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the ASU Writing Center.¹²

**Student Absence for Observance of Religious Holy Days**

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day¹³ for more information.

**Title IX at Angelo State University**

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Miller, J.D.
Special Assistant to the President and Title IX Coordinator
Mayer Administration Building, Room 210
325-486-6357
michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.
i Mozilla Firefox browser: https://www.mozilla.org/en-US/firefox/new/
ii Google Chrome browser: https://www.google.com/chrome/
iii Adobe Acrobat Reader: https://get.adobe.com/reader/
iv Gradescope: www.gradescope.com
v https://www.angelo.edu/current-students/student-handbook/
vi https://www.angelo.edu/academics/catalog/
ix https://www.angelo.edu/current-students/disability-services/
x https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
x https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96
xi https://www.angelo.edu/current-students/writing-center/academic_honesty.php
xii https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of