MATH 1332.020
Introduction to Contemporary Mathematics

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Office Hours:
MTWRF: 9:00-10:00, 1:00-2:00

Course Information

Course Description
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 Courses
Completion of Mathematics Texas Success Initiative (TSI) requirements.

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.

Course Delivery

Synchronous Remote Sessions
To maintain academic quality while accommodating social distancing needs this semester, this course will use a split delivery model that combines face-to-face teaching with remote instruction.

The goal is to provide face-to-face instruction to students who want to return to campus, while also allowing students who may need to learn remotely to participate via virtual class sessions.

How Does It Work?
Your class will be divided and you will be placed into a smaller group of students to maintain physical distancing requirements in our assigned classroom space.

Your assigned group will receive a schedule of in-person class meetings. This schedule is not flexible. For instance, if you are supposed to attend class on a Monday, you cannot elect to go on Wednesday with another class group instead.

When you are not in the physical class, you will attend live remote sessions at the same time as our scheduled course. You will also be expected to complete coursework via Blackboard.¹ In the event that you miss a class, there will be a recording of the lecture available in the Lessons tab in Blackboard. You will still be counted absent for that class.
Please refer to this Health and Safety web page\textsuperscript{2} for updated information about campus guidelines as they relate to the COVID-19 pandemic.

**Required Texts and Materials**

*Excursions in Modern Mathematics* 9\textsuperscript{th} ed. By Peter Tannenbaum. Please read the technology requirements below.

**Technology Requirements**

Access to exams, quizzes, and homework will be through Blackboard. You will need to scan or photograph any written assignments and submit them through Blackboard. So you will necessarily need a computer, iPad or phone with the above capability. A printer would undoubtedly make your life easier, but it is not required.

If you miss a class, you may either stream it live or watch the lecture at a later time. Both the streaming and recording will be done using Collaborate.

You will also need to purchase MyMathlab for this course. You can obtain a code for this software package by purchasing the textbook at the ASU bookstore. You can also purchase the code without the textbook from the bookstore as well. Incidentally, you do not actually need a hard copy of the book since an online version is included with MyMathlab software. Some student, however, prefer to have a copy of the book.

**Communication**

I will do my best to respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

**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 in your subject line.

**Virtual communication:** Office hours and/or advising may be done with the assistance of the telephone, and either Zoom or Collaborate (the choice will depend on which seems to work best). I will make sure you have clear instruction as to how to be connected. If you would like to visit in person, you must make an appointment.

**Grading**

**Evaluation and Grades**

There will be four in-person tests for this course. The test dates are given below. You can be excused from taking a test if the following two conditions are satisfied:
1) You have at most one absence during that test period.
2) You have homework grade for that test period of 70 or better.

If those two conditions are satisfied, you may choose to let your test grade be that homework average. A couple of things you should consider:

- Being present in class means that you are physically in the classroom, you are not using your phone, and you are participating; or you are attending virtually. In the case of virtual attendance, I will periodically ask simple “yes” or “no” questions. When I do, you have one minute to respond using the chat feature in Blackboard. If you fail to respond within a minute to any of the questions I ask, you will be counted absent.

- You may attempt any homework problem as often as you like. So there is actually no reason why you shouldn’t have a 100 homework average.

If you do end up taking a test, I will give you either your test grade, or your test grade averaged with your homework grade (50-50), whichever is greater.

If you do not have to take a test, you are excused from coming to class on that particular day.

**Grading System**

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

- A = 90 or more points
- B = 80-89 points
- C = 70-79 points
- D = 60-69 points
- F = 0-59 points

**Assignment and Activity Descriptions**

All assignments will be submitted through MyMathlab. Pay close attention to any deadlines and instructions. Late submissions will not be accepted.

**General Policies Related to This Course**

All students are required to follow the policies and procedures presented in these documents:
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 (ADAAAA) 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](#).

**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 Day](#) 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](mailto:michelle.boone@angelo.edu)
You may also file a report online\(^\text{11}\) 24/7.

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, visit the [Title IX website].(12)

**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](#)\(^\text{13}\) 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.

**Modifications to the Syllabus**

This syllabus, including grade evaluation and course schedule, is subject to modification. In particular, the COVID-19 pandemic may require significant changes in course delivery and content on potentially short notice.

**Course Schedule**

The following is a tentative outline of the material to be covered. I have included the designated test date for each topic. *I reserve the right to change the material and/or sequence.*

Topics by week

1) Voting
2) Weighted Voting
3) Fair Division Games
4) Apportionment Test 1 (2/19) chpts 1, 2, 3
5) Euler Paths
6) Hamilton Circuits
7) Trees
8) Population Growth Test 2 (3/19) chpts 4, 5, 6, 7
9) Fibonacci Numbers
10) Math of Finance
11) Symmetry
12) Statistics Test 3 (4/16) chpts 9, 10, 11, 13
13) Statistics
14) Probability
15) Normal Curves
16) Test 4 (5/10—3:30-5:30) chpts 14, 15, 16, 17

1 https://angelo.blackboard.com/
2 https://www.angelo.edu/covid-19/returning-to-campus/health-and-safety.php
3 https://www.angelo.edu/current-students/student-handbook/
4 https://www.angelo.edu/academics/catalog/
5 https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96
6 https://www.angelo.edu/current-students/disability-services/
7 https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
8 https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96
9 https://www.angelo.edu/current-students/writing-center/academic_honesty.php
10 https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of
11 http://www.angelo.edu/incident-form
12 https://www.angelo.edu/title-ix