Math 1332.T30- Intro to Contemporary Mathematics
Spring 2022 Syllabus
MWF 2:00-1:50 pm and TR 2:00-3:15 pm MCS 215

Meeting Times: This class **meets five days a week** in room MCS 215. On Monday, Wednesday, and Friday we meet from 2:00-2:50 pm. On Tuesday and Thursday we meet from 2:00-3:15 pm. You are expected to attend class each day.

Disclaimer: This syllabus is current and accurate as of its posting date, but will not be updated. For the most complete and up-to-date course information, contact the instructor.

Instructor Information:
Name: Ms. Cynthia Bishop

Office: MCS 220B

Phone: 325-486-5428

Email: cynthia.bishop@angelo.edu

Office Hours:
Monday/Wednesday/Friday: 10:00-11:00 am and 1:00-2:00 pm

Tuesday/Thursday: 9:00-11:00 am

And by appointment

Office hours may be in person or virtual through Blackboard Collaborate. Please email me to set up a virtual appointment.

Textbook: You do not need to purchase a textbook for this course. A free reference textbook is available for additional help. The link to the reference textbook is available in Blackboard.

What is a T-Section?
- A T-Section is college credit bearing course paired with additional support for those students who are not TSI complete.
- T-Sections allow students to take their college level mathematics class (with additional support) immediately rather than having to first spend a semester or two taking developmental mathematics courses prior to being allowed to take college level mathematics. This course design is ideal for students who have math deficiencies, but are willing to put forth the time and effort needed to complete the course satisfactorily.
- The course materials and lessons for the college level course and supplemental instruction will complement each other. In a way, each part of the T-Section reinforces and helps the other part.
- Learning communities are a great way to begin college life. We will heavily stress learning communities. You will work some problems in groups with each person in the group contributing their fair share to the effort. You will be asked at times to be peer tutors for others that are struggling.

Student Expectations: YOU are expected to…

- Attend class consistently and in a timely manner.
- Foster a learning environment by practicing common courtesy at all times.
- Be respectful to your classmates and your instructor.
- Pay attention fully during class. Stay off your phone,
- Complete each assignment by the specified due date.
- Maintain academic honesty.
- Work outside of class on homework, quizzes, and review materials to master concepts and adequately prepare for exams.
- Utilize, as needed, all available study-aid options (including utilizing the math lab tutors, meeting with the instructor, referring to outside text, etc.) to resolve questions.

Technology Requirements: All students need access to a computer (with reliable internet), a printer, and a scientific or graphing calculator.

Course Delivery:

This is a face to face course. Students are expected to attend class every day when healthy. See the attendance policy for information on how to handle absences.

Attendance: Attendance will be taken **daily** and is worth 10% of your average in this course**.** Each day that you attend class and participate you will receive a 100 for the day. Points will be deduced for tardiness, being off task, leaving early, etc. Point deductions will be determined by the instructor.

 If you must miss class for any reason, please do the following:

1) Either live stream from Collaborate ("attend" class virtually) or watch the recording later in the day. To find the recording you must go to our Blackboard course, click on "Collaborate", go to the menu (three horizontal bars in the upper left corner), and click "Recordings." From there you can find the date you need.
2) Complete your class notes for the day and email me a copy of your filled-out notes by **2:00 pm the next class day**.
3) Print your homework assignment from Blackboard, complete it, and have it ready to turn in the next class day. (If you are not in class the next day, you must email it to me by the due date.)

If you send me your completed lecture notes on time, you will not be counted absent for that day. Students with a doctor's note will receive an attendance grade of 100 for that day. Students who do not provide a doctor's note will receive an attendance grade of 90 for that day. Failure to follow the directions above will result in an attendance grade of 0 for that day.

Math Lab: The Math Learning lab offers FREE math tutoring. It is located on the third floor of the library in room 330. Hours are Monday-Thursday 11 am to 8 pm; Friday 11 am to 3 pm; Sunday 4 pm to 8 pm. Please utilize this great resource- no appointment is necessary.

Class Notes: It is your responsibility to print the lecture notes from Blackboard and bring them to class. Lecture notes will be bundled by test material and I will let you know when you need to have each set printed and brought to class. Notes and other class materials should be kept in a 3-ring binder.

Blackboard/Email:

- Notes, worksheets, test reviews, and other documents will be posted on Blackboard. In addition, grades and other important announcements will be posted on Blackboard.
- You will be expected to print your class notes and bring them to class**.**
- Blackboard can be accessed through RamPort or by visiting Blackboard.[1]
- I may send you information via email. It is your responsibility to regularly check your angelo.edu email account. All electronic correspondence will be sent to your ASU e-mail account unless other arrangements are made.
- I will do my best to respond to all emails by the next business day. Any emails sent on the weekend or after 5 pm will generally not be answered until the next business day.

Calculators: All students will need a calculator. You do not need to go buy an expensive calculator. If you already have a graphing calculator, that will be sufficient. If you do not have a calculator, an inexpensive one that will work for this course is the TI 30XII S. It runs $10 - $20.

Daily Assignments/Homework: Homework will be assigned over every section. Daily work will consist of worksheets. All homework will be due at the beginning of the next class period unless otherwise specified.

- Homework must be done legibly with all answers clearly visible.
- You must turn in the actual worksheet. A handwritten version of the worksheet will not be accepted.
- Homework must be turned in to Ms. Bishop at the **beginning of the next class period**.
- If you are going to be absent, you still must turn in your homework on time. You may drop it off in my office early or email the worksheet to be **before class on the day it is due.**
- Emailed submissions must be in PDF form. Images or other file types will not be accepted. Pages must be in the correct order, with proper orientation.
- I do not accept late homework.
- I will drop 4 homework/quiz grades at the end of the semester to help compensate for unavoidable circumstances.

Tests/Final Exam: There will be three regular exams during the semester and a non-cumulative final exam. All exams must be taken in person.

- Calculators **are allowed** on exams.
- Exams dates are tentatively scheduled as follows:
    - Exam 1: Thursday 2/10
    - Exam 2: Thursday 3/10
    - Exam 3: Thursday 4/14
    - Exam 4: Monday 5/9 3:30 – 5:30 pm (This exam will be taken during our final exam slot.)
- If you are unable to take an exam during the scheduled time, you must let me know **BEFORE THE EXAM.** All decisions regarding make up exams will be made at my discretion. Failure to contact me on or before the exam date will result in a zero for that exam.
- If you miss an exam you will be required to take a COMPREHENSIVE final exam to replace it.

Drop Date: Thursday April 28th is the last day to drop a class. Note: Students required to be in a T-section are not allowed to drop a T-section course per university policy.

Binders: Organization is key in a math class! I strongly recommend that everyone purchase a three ring binder and a set of 8 tabs. Label the tabs with Syllabus, Test 1 Notes, Test 2 Notes, Test 3 Notes, Test 4 Notes, Algebra Notes, Completed Homework, and Exams. Class notes can be printed from Blackboard and placed in the binder.

Grading: Grades will be determined as follows:

- Daily Assignments/Homework Average - 20%
- Exam 1-4 average - 70%
- Attendance – 10%

Final Grades: Final grades will be determined using the following scale

- A: 90% or above
- B: 80% - 89.9%
- C: 70% - 79.9%
- D: 60% - 69.9%
- F: Below 60%

Subject Matter: (tentative schedule- subject to change)

The subject matter schedule listed below is **tentative, and subject to change and adaptation.** For current, updated information about course topics, contact the instructor or see Blackboard.

Tentative Course Schedule

Week	Topics
1	Syllabus, Basic Elements of an Election, Voting Methods
2	Integers, Weighted Voting, Banzhaf Power, Solving Linear Equations
3	Fair Division, Sealed Bids, Absolute Value, Extra Credit for Exam 1
4	Exam 1 Review, EXAM 1, Fractions
5	Apportionment, Hamilton's Method, Intro to Graph Theory, Order of Operations
6	Euler's Theorem, Eulerizing Graphs, Traveling Salesman Problem, Exponents
7	Hamilton Paths & Circuits, Brute Force Algorithm, Nearest Neighbor Algorithm, Polynomials
8	Exam 2 Review, EXAM 2
9	Trees and Networks, Spanning Trees, Kruskal's Algorithm, Math of Finance Intro, Simple Interest
10	Compound Interest, Annuities, Math of Finance Overview
11	Translations, Reflections, Rotations, Factoring by GCF
12	Exam 3 Review, EXAM 3
13	Frequency Tables, Graphs & Charts , Statistics, Factoring
14	Factoring, Probability, Future Value Annuities Math of Shopping and Simplifying Radicals
15	Exam 4 Review
16	EXAM 4 (Final Exam)

Student Learning Outcomes:

1. **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: basic algebraic techniques, voting theory, apportionment, the mathematics of money, probability, statistics, graph theory, and geometry.

2. **Students will 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 social phenomena.

3. **Students will apply course material along with techniques and procedures covered in this course to solve problems and improve decision making.** 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. **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. Students will develop basic algebraic skills necessary for the support of their academic careers.

Course Content:

1. **Mathematics of Voting:** Preference Ballots, Plurality, Borda, Runoff Voting, Pairwise Comparison, Rankings
2. **Weighted Voting:** The Banzhaf Power Index, The Shapley-Shubik Power Index
3. **Apportionment and Sharing:** Fair-Division Games, The Divider-Chooser Method, The Lone-Divider Method, The Lone Chooser Method, The Last Diminisher Method, Sealed Bids, Markers
4. **Apportionment:** Various methods including Hamilton's, Jefferson's, Adam's, and Webster's; The Alabama Paradox
5. **Euler Paths and Circuits:** Euler Circuit Problems, Graphs, Euler's Theorems, Fleury's Algorithm, Eulerizing Graphs
6. **The Traveling Salesman Problem:** Hamilton Paths and Circuits, Complete Graphs, Greedy and Nearest Neighbor Algorithms
7. **Networks:** Trees, Spanning Trees, Kruskal's Algorithm, Shortest Networks for Three or more points
8. **Math of Finance:** Percentages, Simple Interest, Compound Interest, Annuities
9. **Mathematics of Symmetry:** Rigid Motions, Reflections, Rotations Translations, Glide Reflections, Patterns
10. **Descriptive Statistics:** Graphical Methods, Variables, Data Summaries, Spread
11. **Probability:** Random Experiments, Sample Spaces, Permutations, Combinations, Equiprobable Spaces, Odds

Additional Algebraic Techniques:

- Order of Operations- numeric applications for PEMDAS with no variables.
- The Distributive Law
- Absolute Value- evaluating the absolute value of numbers as a distance from 0
- Exponent Rules- basic integer exponents (both positive and negative), along with the product rule, quotient rule, and power rule
- Simplifying Radicals- simplifying square roots and cube roots with simple variables under the radicals; will include both perfect squares/cubes and others that have to be factored out
- Polynomial Addition & Subtraction

- Polynomial Multiplication- both distributive property and FOIL are introduced
- Factoring by GCF- factoring polynomials strictly by greatest common factor
- Factoring Basic Trinomials- factoring trinomials with a leading coefficient of 1, or a GCF that lends a leading coefficient of 1
- Solving Linear Equations – determine if a number is a solution to an equation; solving basic linear equations

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[2]
- Angelo State University Catalog[3]

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.[4]

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.[5] The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dr. 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[6] for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU's Academic Integrity policy[7] 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.

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[8] for more information.

Title IX at Angelo State University

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Miller, J.D. You may submit reports in the following manner:

Online: Incident Reporting Form[9]

Face to Face: Mayer Administration Building, Room 210

Phone: 325-942-2022

Email: michelle.miller@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit the Title IX website.[10]

Information About COVID-19

Please refer to ASU's [COVID-19 (Coronavirus) Updates](https://www.angelo.edu/covid-19/)[11] web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

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[1] angelo.blackboard.com/

[2] https://www.angelo.edu/current-students/student-handbook/

[3] https://www.angelo.edu/academics/catalog/

[4] https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=97

[5] https://www.angelo.edu/current-students/disability-services/

[6] https://angelo.policystat.com/policy/10659448/latest/

[7] https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=97

[8] https://angelo.policystat.com/policy/10659368/latest/

[9] https://www.angelo.edu/incident-form

[10] https://www.angelo.edu/title-ix

[11] https://www.angelo.edu/covid-19/