Instructor: Mrs. Autumn Hoover  Fax: (325) 942 – 2503
Office: MCS 220M  e-mail: Autumn.Hoover@angelo.edu
Office Phone: (325) 486-5431
Office Hours: Monday: 9:00 – 10:00, 2:00 – 3:00
              Tuesday: 9:30 – 11:30, 2:00 – 3:00
              Wednesday: 9:00 – 10:00, 2:00 – 3:00
              Thursday: 9:30 – 11:30, 2:00 – 3:00
              Friday: by appointment

Textbook: Excursions in Modern Mathematics, 9ed. by Peter Tannenbaum.

Course Content: Refer to the attached Student Learning Outcomes and Content sheet for information on the topics covered in this course.

T - Section: A T - Section is a 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 spending semesters taking developmental mathematics courses first. 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.
- Learning communities are a great way to begin college life. You will be allowed to work 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. The nature of the material is such that each of you will find topics in which you excel and other topics in which you struggle. This is where peer tutoring will become very helpful!

Math Lab: The math learning lab is available on campus and provides free math tutoring. Please utilize this great resource – no appointment is required.

- MATH LAB – LIB, third floor, room 330
  - Monday – Thursday: 9:00 am – 8:00 pm
  - Friday: 9:00 am – 12:00 pm
  - Sunday: 4:00 pm – 8:00 pm

Blackboard/Email:

- I plan to post your daily assignments, class notes, class announcements and other documents on Blackboard. I will expect you to print these documents and bring them to class with you.
- Blackboard can be accessed through RamPort or by visiting Blackboard.
- I may send you information via email. It is your responsibility to regularly check your angelo.edu email account.

Attendance:

- Class attendance will be taken daily.
- Absences are reported to the administration and play an important role in suspension considerations.
- You are expected to attend all scheduled class meetings, arrive on time, and stay for the entire class period.
- You will be marked absent if you are more than 10 minutes late or if you leave early. I will count three tardies as an absence.
- Perfect attendance will get you 2 points added to your final course grade, 1-3 absences will get you 1 point.
Homework:
- There will be daily assigned exercises from the textbook or handouts and will follow the Homework Guidelines attached to this syllabus.
- Homework is due at the BEGINNING of class and NO LATE HOMEWORK will be accepted for any reason, including absences. If you have trouble completing a homework assignment, see me for assistance before it is due.
- If you are absent, it is your responsibility to contact me or view Blackboard in order to get the new homework assignments.
- You may send your homework to class with a friend, scan or take a picture of it and email it to me or fax it to the office. They must be received prior to the beginning of class.
- I will drop 4 homework grades. This is the leeway you are given to allow for unavoidable absences. Do not waste them.

Exams:
- We will have three regular exams and a non-comprehensive final exam on Monday, December 9, 2019, 10:30 am – 12:30 pm
- If you miss an exam, you need to get in touch with me immediately! You may be required to take a comprehensive final exam to compensate for the missing exam.
- You may take an exam early ONLY if I excuse the absence.
- If you leave the room during an exam, I may take your test and grade it AS IS!

Grading Scheme:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework Average</td>
<td>20%</td>
</tr>
<tr>
<td>Exams (20% each)</td>
<td>60%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
</tbody>
</table>

The following determines how letter grades will be assigned in this course.

90 – 100 : A  
80 – 89: B  
70 – 79: C  
60 – 69: D  
Below 60: F

Calculators: You will be allowed to use calculators in this class. 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 a TI 30XII S. It runs $10-$15.

Common Courtesy:
- Turn off all cell phones or any other electronic devices before entering the classroom. Place these items in your backpacks. I do not want to see them on your desk or in your laps. THIS MEANS NO TEXTING DURING CLASS! I reserve the right to ask you to leave class if I catch you on your phone.
- Please refrain from carrying on personal conversations once class has started. Be courteous to your peers when they are responding in class by listening to what they have to say.

Homework Guidelines for written work from the textbook:

1. Fold your homework in half vertically with your name and row number visible on the outside.
2. Please box and/or highlight your answers.
3. No spiral paper is allowed.
4. Write legibly. Clearly indicate the page number, problem number, and show all work in an organized manner. If your answer cannot be read, it’s WRONG. Your homework assignment should not look like scratch paper.
5. STAPLE your work before folding it vertically.
6. You CAN use both sides of a sheet of paper.

WARNING: POINTS MAY BE DEDUCTED IF THESE STANDARDS ARE NOT FOLLOWED!!
Drop Date:
**Thursday, October 31, 2019** is the last day to drop a course with a W or withdraw from ASU. However, unless you become TSI complete, you may not drop this course.

**University Policies:**

**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. ([OP 10.19 Student Absence for Observation of Religious Holy Days](#)) You are still responsible for completing all course work missed on that day.

**Student Disability Services**
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.

The Office of Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting:

Dallas Swafford  
Director of Student Disability Services  
Office of Student Affairs  
325-942-2047  
dallas.swafford@angelo.edu

- If you have any simpler needs (like needing me to speak louder, needing to sit in a certain location, needing a larger font, etc.), let me know immediately.

**Title IX**
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. Sex discrimination, sexual misconduct, public indecency, interpersonal violence, sexual assault, sexual exploitation, sexual harassment, and stalking are not tolerated at ASU. As a faculty member, I am a Responsible Employee meaning that I will report any allegations I am notified of to the Office of Title IX Compliance in order to connect students with resources and options in addressing the allegations reported. You are encouraged to report any incidents to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator. You may do so by contacting:

Michelle Boone  
*Director of Title IX Compliance/Title IX Coordinator*  
Mayer Administration Building, Room 200  
325-942-2022  
michelle.boone@angelo.edu

You may also file a report online 24/7 at [www.angelo.edu/incident-form](http://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*.

The Office of Title IX Compliance also provides accommodations related to pregnancy (such as communicating with your professors regarding medically necessary absences, modifications required because of pregnancy, etc.). If you are pregnant and need assistance or accommodations, please contact the Office of Title IX Compliance utilizing the information above.

For more information about Title IX in general you may visit [www.angelo.edu/title-ix](http://www.angelo.edu/title-ix).

**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.

**Student Conduct Policies:**

**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 Statement of [Academic Integrity](#).

**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 via Turnitin. Resources to help you understand this policy better are available at the [ASU Writing Center](#).

**Copyright Policy**

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

**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](#)
- [Angelo State University Catalog](#)
Course Content

Textbook: *Excursions in Modern Mathematics 9th ed.* by Peter Tannenbaum, Prentice Hall

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


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. **Scheduling:** Directed Graphs, Priority Lists, The Decreasing Time Algorithm, Critical Paths, Independent Tasks

9. **Fibonacci Numbers and the Golden Ratio:** Fibonacci Numbers, The Golden Ratio, Gnomons, Spiral Growth

10. **Math of Finance:** Percentages, Simple Interest, Compound Interest, Annuities

11. **Mathematics of Symmetry:** Rigid Motions, Reflections, Rotations Translations, Glide Reflections, Patterns

12. **Fractals:** The Koch Snowflake, The Sierpinski Gasket, Chaos, The Mandelbrot Set

13. **Collecting Data:** Sampling, Random Sampling, The Capture-Recapture Method, Clinical Studies

14. **Descriptive Statistics:** Graphical Methods, Variables, Data Summaries, Spread

15. **Probability:** Random Experiments, Sample Spaces, Permutations, Combinations, Equiprobable Spaces, Odds

16. **Normal Distributions:** Approximately Normal Distributions, Normal Curves, Distributions of Random Events, Statistical Inference.

**Additional Algebraic Topics:**

- 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; then solving basic linear equations; no rational equations are covered.
The schedule listed below is tentative and subject to change. For current, updated information about course topics, contact the instructor or see Blackboard. The Additional Algebra Topics will be interspersed throughout the semester.

**Fall 2019 MWF**

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<tr>
<th>Course day</th>
<th>Topic</th>
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<td>Syllabus, Basic Elements of an Election</td>
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<td>2</td>
<td>Preference Schedules; Voting Methods: Plurality</td>
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<tr>
<td>3</td>
<td>Voting Methods: Borda, Plurality with Elimination, Pairwise Comparisons</td>
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<td>4</td>
<td>Weighted Voting</td>
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<td>5</td>
<td>Weighted Voting; Banzhaf</td>
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<td>Fair Division</td>
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<td>7</td>
<td>Sealed Bids</td>
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<td>8</td>
<td>Sealed Bids; Apportionment</td>
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<td>9</td>
<td>Apportionment; Test 1 Review</td>
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<td>10</td>
<td>Review work-Practice Test 1</td>
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<td>11</td>
<td>Test 1 (9/20/2019)</td>
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<td>12</td>
<td>Hamilton’s Method; Street-Routing Problems; Introduction to Graphs</td>
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<tr>
<td>13</td>
<td>Introduction to Graphs</td>
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<td>14</td>
<td>Introduction to Graphs; Euler’s Theorem</td>
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<td>15</td>
<td>Euler’s Theorem; Eulerizing Graphs</td>
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<td>16</td>
<td>Traveling Salesman Problem; Hamilton Paths &amp; Circuits</td>
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<td>17</td>
<td>Hamilton Paths &amp; Circuits; Brute Force Algorithm</td>
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<td>18</td>
<td>Nearest Neighbor Algorithm; Networks and Trees</td>
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<td>19</td>
<td>Networks and Trees; Spanning Trees</td>
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<td>20</td>
<td>Kruskal’s Algorithm</td>
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<td>Test 2 Review</td>
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<td>22</td>
<td>Practice Test 2</td>
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<td>Test 2 (10/18/2019)</td>
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<td>24</td>
<td>Math of Finance Definitions; MOF Packet 1</td>
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<td>25</td>
<td>Math of Finance Packet 1</td>
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<td>26</td>
<td>Math of Finance Packet 1; Annuity Packet</td>
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<td>27</td>
<td>Annuity Packet</td>
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<td>Annuity Packet; Rigid Motions</td>
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<td>Translations, Reflections</td>
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<td>30</td>
<td>Reflections, Rotations</td>
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<td>Math of Finance Packet 2</td>
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<td>32</td>
<td>Math of Finance Packet 2</td>
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<td>Frequency Tables; Graphs &amp; Charts</td>
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<td>Test 3 Review</td>
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<td>Test 3 (11/15/2019)</td>
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<td>36</td>
<td>Means, Medians and Percentiles</td>
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<td>37</td>
<td>Means, Medians and Percentiles; Range and Standard Deviation</td>
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<td>38</td>
<td>Future Value of Annuities; Advanced Rigid Motions</td>
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<td>39</td>
<td>Probability</td>
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<td>40</td>
<td>Probability; Core Assessment, IDEA</td>
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<td>41</td>
<td>Review for final exam</td>
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<tr>
<td>42</td>
<td>Practice Test 4</td>
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<tr>
<td>43</td>
<td>Final Exam, <strong>Monday, December 9, 2019 at 10:30 – 12:30</strong>;</td>
</tr>
</tbody>
</table>

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1. [http://blackboard.angelo.edu](http://blackboard.angelo.edu)
2. [http://www.angelo.edu/opmanual/](http://www.angelo.edu/opmanual/)