MATH 1324 – D20 – Finite Mathematics – Fall 2021

Contact Information:

- Instructor: Jesse Taylor
- Office: MCS 219E
- Email: jesse.taylor@angelo.edu
- Our Classroom: Online (except for tests)
- Meeting Times: No regular meeting time (except for tests, which are Tuesdays 5:30pm-6:45pm)
- Office Hours:
  - If we experience COVID-19 complications, office hours may be moved to a virtual setting (Blackboard Collaborate) throughout the semester. Watch emails and announcements for details.
  - Mondays and Wednesdays: 11:00am – 12:00pm
  - Tuesdays and Thursdays: 9:30am – 12:30pm
  - Virtual office hours available by request (email me to set something up)
  - Other times available by appointment (email me to set something up)

Required Textbooks

Finite Mathematics with Business Applications, curated by Susan Abernathy, Dennis Hall, and Jesse Taylor (various authors).
This is an OER (open educational resource) available for free at https://math.libretexts.org/Courses/Angelo_State_University/Finite_Mathematics

Course Content

Selected sections from chapters 1-6, 8, and 9 will be covered. Note that our course is asynchronous. That means that we will not “meet” as a class to cover content. The content will be posted online and you may watch/read/learn at your own pace as long as you are keeping up with due dates for assignments.

Blackboard

All the instructional material for our course can be found in Blackboard. All of our homework (more on that below) will also be completed in Blackboard. All the general information about our course is here in the syllabus and on Blackboard.

Homework

All homework in this class will be done online using MyOpenMath (with access through Blackboard). Since homework is incorporated into Blackboard, you will not need to visit a third-party website or pay any fees associated with the homework. Just click the link titled “MyOpenMath (HW)” in the navigation menu, choose the assignment, and work/submit your assignments in Blackboard.
Please do not wait until the last minute to complete your homework assignments. Technology-based systems (like Blackboard) are sometimes unavailable and no late homework will be accepted. In general, homework will be due on Mondays, Wednesdays, and Fridays by 11:59pm.

**Quizzes**

In addition to homework, we will have weekly “check-in” quizzes beginning in week 2. These quizzes are not computational. They are writing assignments designed to let you reflect and give feedback about what has been going well and what has been going poorly. These quizzes will be taken in Blackboard and are located in the “Quizzes” section of the Blackboard navigation menu.

**Tests**

We will have three tests and a cumulative final exam. Although the course is an online course, all our exams will be taken in person in the math and computer science building on the campus of Angelo State University. Our tests will be held on Tuesdays from 5:30pm-6:45pm (the class day/time in the schedule). Below is a table containing a schedule for the tests. If you have a conflict with one of the tests you must let me know at least one week before the test is taken to ensure that you receive a make-up exam. The earlier you let me know, the better. If you need to take a test online you must get permission from me to do so. More information regarding online testing is below.

<table>
<thead>
<tr>
<th>Test</th>
<th>Material Covered</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>Chapters 1 and 2</td>
<td>September 21</td>
</tr>
<tr>
<td>Test 2</td>
<td>Chapters 3, 4, and 5</td>
<td>October 19</td>
</tr>
<tr>
<td>Test 3</td>
<td>Chapters 6, 8, and 9</td>
<td>November 23</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Cumulative</td>
<td>6:00pm-8:00pm, Tues Dec 7</td>
</tr>
</tbody>
</table>

It is expected that you will take your tests in person. However, in the event that you need to take a test online (for health reasons, quarantining, a campus shutdown, etc) you will need to do so using Respondus Lockdown Browser and must be video recorded via Respondus Monitor. Respondus requires a desktop computer or laptop (not a Chromebook) and a webcam. It is your responsibility to get this equipment if you need it. For best results, use an ethernet cable to connect to your Internet source instead of relying on Wifi (there are ethernet ports available to students in the campus library, for instance, or on your home router). There are instructions linked in the Blackboard course for Respondus (how to install, what to expect, etc).

**Grading**

Your grade in this class will be determined based on the following grading rubric.

- Homework/Quizzes: 15%
The three regular exams: 20% each
Final Exam: 25%

Your final letter grade in this class will be determined based on a ten-point grading scale.

**Calculator**

You **will** need a calculator for this class. Many of the calculations we will do (especially in the finance sections) are too complex to do by hand. You may use any **non-graphing** calculator for our class. The calculator I recommend is the Texas Instruments TI-30X IIS scientific calculator as it is inexpensive and robust, however you may use any calculator that cannot graph functions and cannot share files wirelessly.

Note that although a calculator is allowed, there will be many problems this semester for which you are required to show work. In these instances, it is not enough to say “I typed it into my calculator.” Please keep this in mind as you work through the material. A calculator is a good tool, but it is not a substitute for understanding the material.

**Technology**

Unless you have special accommodations documented with the Student Life office, no cell phones, tablets, laptops, games, or other electronic devices may be used at any time during in-person class or tests.

**If ASU has to move to all online delivery due to a COVID-19 outbreak**

In the event that ASU is forced to move online due to a COVID-19 all tests will be taken through Respondus. See the “Tests” section of the syllabus for more information regarding Respondus.

**Study Aids**

- The Math Lab offers free math help to all students enrolled in mathematics courses at or below the level of Calculus. The Math Lab is located on the third floor of the library (C302) and its times are listed below.
  - Monday – Thursday: 11:00am – 8:00pm
  - Friday: 11:00am – 3:00pm
  - Sunday: 4:00pm – 8:00pm
- The mathematics department maintains a list of students who are interested in tutoring privately. Students who are interested in obtaining private tutoring or serving as private tutors should visit the math department’s office for more information.
- Feel free to contact me for help. I am available for one-on-one meetings during office hours and am available for virtual meetings by request. Let me know if you have questions or want to discuss anything!
Notes

- All electronic correspondence will be sent to your ASU email account unless other arrangements are made. Please check your email!
- If you do not receive a graded homework assignment, quiz, or test on the day they are returned, please contact me to pick the assignment up.
- Good luck. I want you to succeed in this course. If at any point during the semester you feel as if you do not understand the material, please come talk with me as soon as possible. An ounce of prevention is worth a pound of cure.
- All items and dates in this syllabus are subject to change as the semester progresses. Students will be notified in class of any changes, and the changes will not be updated within this syllabus.

Mathematics 1324 – Finite Mathematics I

Student Learning Objectives

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 Finite Mathematics I including exponents, factoring, linear and quadratic equations, number systems, functions, polynomials, logarithms, matrices, mathematics of finance, set theory, and basic probability.

2. Students will describe the fundamental principles arising from the mathematical ideas associated to business applications. Students will identify and apply the laws and formulas that result directly from the definitions; for example, the properties associated with probability models and probability experiments, the properties of exponents, logarithms, equations, and the formulas associated with the mathematics of finance.

3. Students will apply the course material along with techniques and procedures covered in this course to solve business related problems. Students will use the facts, formulas, and the techniques learned in this course to solve basic business problems. This includes applying probability models to business problems; solving annuity and interest problems; analyzing and interpreting graphs; converting logarithmic equations to exponential equations and vice-versa; using lines and their properties; performing matrix operations; graphing various function types; and employing the use of calculators and/or computers.

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 acquire a level of proficiency in the fundamental concepts and applications necessary for areas requiring Finite Mathematics I as a prerequisite.
These areas might include business, marketing, finance, computer science, nursing, and the social sciences, as well as mathematics.

**Textbook**

*Finite Mathematics with Business Applications*, curated by Susan Abernathy, Dennis Hall, and Jesse Taylor (various authors).
This is an OER (open educational resource) available for free at [https://math.libretexts.org/Courses/Angelo_State_University/Finite_Mathematics](https://math.libretexts.org/Courses/Angelo_State_University/Finite_Mathematics)

**Course Content**

The following sections are covered.

1. **Algebra Essentials.** The real numbers; exponents and scientific notation; rational exponents and radicals; polynomials; factoring; rational expressions.
2. **Equations and Inequalities.** Rectangular coordinate system and graphs; linear equations in one variable; quadratic equations.
3. **Functions.** Functions and function notation; domain and range;
4. **Linear, Polynomial, and Rational Functions.** Linear functions; modeling with linear functions; quadratic functions.
5. **Exponential and Logarithmic Equations.** Exponential functions and their graphs; logarithmic functions and their graphs; logarithmic properties; exponential and logarithmic equations.
6. **Systems of Linear Equations.** Systems of linear equations; matrices and matrix operations; solving systems with Gaussian elimination; solving systems with inverses.
7. **Finance.** Simple interest; compound interest; annuities and payout annuities; loans.
8. **Sets and Probability.** Basics of sets; union, intersection, complement, and venn diagrams; introduction to probability; inclusion-exclusion and independence; conditional probability.
# Anticipated Schedule

Below is a table containing an approximate guide to what we will cover during each week of the semester. These topics are subject to change.

<table>
<thead>
<tr>
<th>Course Week</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction and real numbers</td>
</tr>
<tr>
<td>2</td>
<td>Exponents, radicals, and polynomials</td>
</tr>
<tr>
<td>3</td>
<td>Factoring, rational expressions, graphing, and linear equations</td>
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<tr>
<td>4</td>
<td>Linear equations, lines and slope, and quadratic equations</td>
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<tr>
<td>5</td>
<td>Test 1 and functions</td>
</tr>
<tr>
<td>6</td>
<td>Applications of linear equations, quadratic functions and their applications</td>
</tr>
<tr>
<td>7</td>
<td>Exponential and logarithmic functions and their graphs</td>
</tr>
<tr>
<td>8</td>
<td>Properties of logarithms and exponential and logarithmic equations</td>
</tr>
<tr>
<td>9</td>
<td>Test 2, simple interest, compound interest</td>
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<tr>
<td>10</td>
<td>Annuities and Loans</td>
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<tr>
<td>11</td>
<td>Systems of equations, matrices, and Gaussian elimination</td>
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<tr>
<td>12</td>
<td>Matrix inverses and sets</td>
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<tr>
<td>13</td>
<td>Set Operations and probability</td>
</tr>
<tr>
<td>14</td>
<td>Test 3, independence, and conditional probability</td>
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<tr>
<td>15</td>
<td>Study period for final exam and review</td>
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<tr>
<td>16</td>
<td>Final exam</td>
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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](#)

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:

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](#) for more information.

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

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
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.

Information About COVID-19

Please refer to ASU’s COVID-19 (Coronavirus) Updates web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

Modifications to the Syllabus
This syllabus, including grade evaluation and course schedule, is subject to modification on potentially short notice based on developing circumstances.

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i https://www.angelo.edu/current-students/student-handbook/
ii https://www.angelo.edu/academics/catalog/
iii https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96
iv https://www.angelo.edu/current-students/disability-services/
v https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
vi https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of
vii https://www.angelo.edu/incident-form
viii https://www.angelo.edu/title-ix
ix https://www.angelo.edu/covid-19/