MATH 1324 - D10 - Finite Mathematics - Fall 2017

Instructor: Jesse Taylor
Office Hours: M: 11:00-12:00, 3:00-3:45
Office: MCS 219E
Email: jesse.taylor@angelo.edu
Office Hours: T: 9:15-11:00
Our Classroom: Online (MCS 214 for tests)
Meeting Times: Online (Thurs 5:30 - 7:00 for tests)

Office: MCS 219E
Email: jesse.taylor@angelo.edu
Office Hours: W: 11:00-12:00, 3:00-3:45
Meeting Times: F: 11:00-2:00

Office: MCS 219E
Email: jesse.taylor@angelo.edu
Office Hours: Th: 9:15-11:00
Meeting Times: and by appointment

Required Textbook: Mathematical Applications, eleventh edition, by Harshbarger and Reynolds, with WebAssign access.

Course Content: Selected sections from chapters 0-7 will be covered.

Course Website: In addition to the Blackboard shell for our course, we will also have a dedicated course website. The URL for the website is

https://sites.google.com/a/angelo.edu/math-1324---finite-mathematics/

There is also a link to the course website in Blackboard. In general, all of the instructional material for our course can be found on the course website while all the general information about our course can be found here in the syllabus and on Blackboard.

Homework: All homework in this class will be done online with WebAssign. To register, go to www.webassign.net and click on the button “ENTER CLASS KEY” in the upper right corner of the screen. You must register using your ASU email account. The class key for our class is angelo 3494 3044

You will also need an access code, which should have come with your textbook. If you do not have an access code, you can purchase one online through the WebAssign website. We will have homework assignments from each section covered in the text. There is an “Introduction to WebAssign” video on the homepage of our course website for more information.

Please do not wait until the last minute to complete your homework assignments. Technology-based systems are sometimes unavailable and no late homework will be accepted. In general, our homework for this course will be due on Mondays, Wednesdays, and Fridays by 11:59pm.

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 MCS 214 on Angelo State University’s campus. Below is a schedule for the tests. If you have a conflict with one of tests you must let me know before the test is taken to ensure that you receive a make-up exam.

<table>
<thead>
<tr>
<th>Test</th>
<th>Material Covered</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>Chapters 0 and 1</td>
<td>September 28</td>
</tr>
<tr>
<td>Test 2</td>
<td>Chapters 1, 2, 3, and 5</td>
<td>October 26</td>
</tr>
<tr>
<td>Test 3</td>
<td>Chapters 5, 6, and 7</td>
<td>November 30</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Cumulative</td>
<td>6:00 - 8:00pm, Thurs Dec 14, 2017</td>
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</table>
Grading: Your grade in this class will be determined based on the following grading rubric.

- Homework: 25%
- Lowest Test: 10%
- Other two tests: 20% each
- Final Exam: 25%

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

Calculator: You are allowed to use a scientific calculator on our exams and you will definitely need a calculator for the third exam and the final exam. However, you may NOT use a graphing calculator (for example a TI-83 or higher). The calculator I recommend is the Texas Instruments TI-30X ISS scientific calculator as it is inexpensive and robust, however you may use any non-graphing calculator.

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.

Study Aids:
- The Math Lab offers free math help to all students enrolled in mathematics courses through Calculus. The Math Lab is located on the 3rd floor of the library (C302), and its times are listed below.
  - Monday – Thursday: 9:00 am - 8:00 pm
  - Friday: 9:00 am - 12:00 pm
  - Sunday: 4:00 pm - 8:00 pm

- 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 department office for more information.
- Feel free to come by my office for help. I will definitely be near my office during my office hours (or there will be a note telling you when I will be back). If my office hours are not convenient for you, meet with me to arrange for another time that is more convenient.

Notes:

- In the event that the university is closed for a scheduled class time, whatever was scheduled for that day and/or whatever was due that day will be scheduled and/or due on the next scheduled class time.

- All electronic correspondence will be sent to your ASU e-mail account unless other arrangements are made.
- 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.
Core Curriculum Student Learning Objectives
MATH 1324

• **Core Objective (Critical Thinking):** Gather, analyze, evaluate, and synthesize information relevant to a question or issue. (CT1)
  o **Course Student Learning Objective:** Students will use mathematical facts, formulas, and techniques to analyze, interpret, and solve applications in business and finance.
  o **Assessment:** Assessment exam that demonstrates CT1.

• **Core Objective (Communication):** Develop, interpret, and express ideas through effective visual communication. (CS3)
  o **Course Student Learning Objective:** Students will model and solve linear programming problems by graphical methods.
  o **Assessment:** Assessment exam that demonstrates CS3.

• **Core Objective (Empirical and Qualitative Skills):** Manipulate and analyze numerical data and arrive at an informed conclusion. (EQS1)
  o **Course Student Learning Objective:** Students will use the facts, formulas, and techniques learned in this course to solve problems involving the mathematics of finance.
  o **Assessment:** Assessment exam that demonstrates EQS1.

Mathematics 1324 – Finite Mathematics I

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

2. **The 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. **The 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. 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 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.

Course Content

Textbook: Mathematical Applications, 11th edition, by Harshbarger and Reynolds. The following chapters including the particular sections listed are covered.

0. Algebraic Concepts. Sets, real numbers; exponents; radicals; operations with algebraic expressions; factoring; algebraic fractions.

1. Linear Equations and Functions. Solutions of linear equations and inequalities; functions; linear functions; systems of linear equations; applications of functions in business and economics.

2. Quadratic and Other Special Functions. Quadratic equations; quadratic functions: parabolas; business applications.


5. Exponential and Logarithmic Functions. Exponential functions; logarithmic functions and their properties; solution of exponential equations; applications.

6. Mathematics of Finance. Simple interest; compound interest; future value of ordinary annuities; present values of ordinary annuities; loans and amortization.

7. Introduction to Probability. Probability; odds; union and intersection of events; conditional probability; probability trees.
Below is an approximate guide to what we will cover on each week of the semester. These topics are subject to change.

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<th>Topics</th>
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<td>Section 0.1 and 0.2</td>
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<tr>
<td>2</td>
<td>Section 0.3, 0.4, and 0.5</td>
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<tr>
<td>3</td>
<td>Section 0.6, 0.7, and 1.1</td>
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<td>4</td>
<td>Section 1.2 and 1.3</td>
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<td>Section 3.4, 5.1, and 5.2</td>
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<td>9</td>
<td>Section 5.3 and Test 2</td>
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<td>10</td>
<td>Section 6.1 and 6.2</td>
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<tr>
<td>11</td>
<td>Section 6.3 and 6.5</td>
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<td>12</td>
<td>Section 7.1 and 7.2</td>
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<td>13</td>
<td>Section 7.3 and Thanksgiving break</td>
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<td>14</td>
<td>Test 3</td>
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<td>15</td>
<td>Study period for the final exam</td>
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<td>16</td>
<td>Final exam</td>
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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

Title IX

Angelo State University is committed to the safety and security of all students. If you or someone you know experience sexual harassment, sexual assault, domestic or dating violence, stalking, or discrimination, you may contact ASU’s Title IX Coordinator:

Michelle Boone
Director of Title IX Compliance
325-486-6357
michelle.boone@angelo.edu

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. (http://www.angelo.edu/opmanual/ -- OP 10.19)

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