MATH 1324.06 (Finite Mathematics I)
Syllabus – Spring 2018
TR 12:30-1:45 pm

Instructor of Records Information:
Instructor: Harvey D. Johnson
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Office Hours:
Mon. & Wed. — 01:30 pm-03:30 pm
Tues. & Thur. — 02:00 pm-04:00 pm
Fri. —10:15 am-10:45 am, 12:00pm-01:30 pm
(and all other times by appointment only)

Textbook:
Mathematical Applications for the Management, Life, and Social Sciences, 11th ed., by Ronald Harshbarger & James Reynolds

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 to disciplinary action and possible expulsion from ASU.

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 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.

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 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 that 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 the policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty involved if you experience serious illness or a personal misfortune that would keep you from completing course. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures for more information.

Course Policies
Major Examinations - There will be 3 major examinations (excluding the final examination). Each of the major examinations will be designed to be completed in forty-five to sixty minutes. There will be no "make-up" for any major examination; however a major examination can be taken early under certain reasonable circumstances. No examination grades will be dropped.

Schedule for the 3 Major Examinations -
Hour Examination I: Thursday, February 15, 2018
Hour Examination II: Tuesday, March 27, 2018
Hour Examination III: Thursday, April 26, 2018

Short Quizzes - There will be between 5 and 20 short quizzes of about 10 to 15 minutes duration which will usually be announced. These short quizzes will consist of problems similar to those in the homework assignments. There will be no "curve" or "make-up" on short quizzes; however the lowest quiz score made on only one short quiz will be dropped.

Final Examination - The final examination is compulsory, is comprehensive, and will be given on Thursday, May 10, 2018, from 10:30 am - 12:30 pm for this course.

Homework - Usually no homework will be taken up by me and graded. Class discussions visits to my office for help when necessary, and short quizzes covering the skills demonstrated in the lecture sessions and developed in the homework assignments should provide ample coverage.

Class Attendance - Class attendance records will be kept for the lecture sessions.

Semester Score - The sum of 60% of the average of the 3 one-hour major examinations scores, 10% of the combined short quiz scores and 30% of the final examination score will constitute the semester score.

Grading Scale - 100-91.5 A 91.4-89.5 A- 89.4-87.5 B+ 87.4-81.5 B 81.4-79.5 B- 79.4-77.5 C+ 77.4-71.5 C 71.4-69.5 C- 69.4-67.5 D+ 67.4-61.5 D 61.4-59.5 D- 59.4-0 F

Course Content - Algebra Review - Part I, Coordinate Systems and Graphs, Mathematics of Finance, Matrices and Linear Systems, Algebra Review - Part II, Introduction to Probability

Note: Monday, April 02, 2018, is the last day to drop a class or withdraw from the University for the regular 16-week spring 2018 semester.
Student Learning Objective/Outcomes for Finite Mathematics I:
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 I including solving linear and quadratic equations, inequalities, number systems, polynomials, exponents, logarithms, matrices, mathematics of finance, and probability.

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 student should be able to write and apply the quadratic formula, rules of exponents, and properties of logarithms. The student should also be able to solve equations and inequalities as well as apply the formulas associated with matrices and mathematics of finance.

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

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 other areas requiring Finite Mathematics I as a prerequisite. These other areas might include business, marketing, finance, computer science, nursing, and the social sciences as well as mathematics.

Course Content:

Algebraic Concepts — real numbers; exponents and radicals; operations with algebraic expressions; factoring; rational expressions.

Linear Equations and Functions — solutions of linear equations; graphs; systems of linear equations; applications to business and economics

Special Functions — quadratic equations; parabolas and quadratic functions; linear regression; applications to Business.

Matrices - operations on matrices; inverse of a matrix; Gauss-Jordan elimination.

Exponential and Logarithmic Functions — properties of logarithms; relationship between logarithmic and exponential Equations; applications of logarithms to business mathematics.

Mathematics of Finance — simple interest; compound interest; continuous compound interest; ordinary annuities.

Introduction to Probability — probability; odds; unions and intersections of events; one-trial experiments; probability trees.

Day Planner for Finite Mathematics I:
In the preparation of compilation of the following list of topics to be covered in Finite Mathematics I during the spring 2018 semester, effort has been made by the instructor of records to be as accurate as possible and to avoid redundancy. In addition, the instructor of records retains the right to supplement and/or modify any topic contained in the list when appropriate without having to provide advance notification.

Day 1: Introduction, The Real Numbers, Solution of Linear Equations in One Variable
Days 2 & 3: Integral Exponents
Day 20: Compound Interest
Day 21: Future Value of Ordinary Annuities
Day Planner for Finite Mathematics I: Cont’d

Day 4: Operations with Algebraic Expressions

Days 5 & 6: Factoring

Day 7: Algebraic Fractions

Days 8 & 9: Quadratic Equations and Review for Hour Examination I

Day 10: HOUR EXAMINATION I

Day 11: Introduction to Functions and Linear Functions

Day 12: Graphs of Nonlinear Functions

Days 13 & 14: Solution for Systems of Two Linear Equations in Two Variables

Day 15: Algebraic Solution for Story Problems

Day 16: Break-even Analysis and Market Equilibrium

Days 17 & 18: Simple Interest and Review for Hour Examination II

Day 19: HOUR EXAMINATION II

Day 22: Present Value of Ordinary Annuities

Day 23: Loans and Amortization Schedules

Day 24: Logarithmic Functions and Their Properties

Day 25: Solving Exponential Equations Using Logarithmic Properties

Day 26: Solutions of Linear Systems of Three Equations in Three Variables and Review for Hour Examination III

Day 27: HOUR EXAMINATION III

Day 28: Solutions of Linear Systems of Three Equations in Three Variables Continued, Matrices, and Introduction to Probability

Day 29: Probability Continued and Review for for Final Examination

Day 30: FINAL EXAMINATION