

Instructor Information

Instructor	Paul Hay
Email	haypa@lamarpa.edu
Phone	(409) 984-6549
Office	Student Center - Room: 418
Office Hours	MY OFFICE IS LOCATED IN STUDENT CENTER - ROOM 417 (NOT ROOM 418 AS STATED ABOVE) Monday & Wednesday - 9:30 AM - 12:00 PM Tuesday & Thursday - 9:30 AM - 10:30 AM Friday - 10:00 AM - 1:00 PM Walk-ins welcome during the hours listed above. Other times available by appointment.
Additional Contact Information	All emails must be sent with an official lamarpa.edu email address. Emails from personal accounts may be ignored.

Course Information

Description	The application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value.
Required Textbooks	<i>Textbook Purchasing Statement: A student attending Lamar State College Port Arthur is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.</i> Mathematics for Business and Social Sciences, by Kathryn Bollinger and Vanessa Coffelt, 2020. This is an open source text and is available to download for free online at: https://oaktrust.library.tamu.edu/handle/1969.1/188687 (It is also available on Blackboard)
Additional Materials/Resources	none
Corequisites/Prerequisites	MATH-0332 Intermediate Algebra
Learning Outcomes	• Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions to solving real-world problems. • Solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans. • Apply basic matrix operations, including linear programming methods, to solve application problems. • Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems. • Apply matrix skills and probability analyses to model applications to solve real-world problems.
Core Objectives	• <u>Communication skills</u>: Students will demonstrate effective written, oral and/or visual communication. • <u>Critical Thinking Skills</u>: Students will engage in creative and/or innovative thinking, and/or inquiry, analysis, evaluation, synthesis of information, organizing concepts and constructing solutions. • <u>Empirical and Quantitative Skills</u>: Students will demonstrate applications of scientific and mathematical concepts.
Lecture Topics Outline	<u>Chapter 1 Matrices</u> 1.1 Basic Matrix Operations 1.2 Matrix Multiplication <u>Chapter 2 Linear Models and Systems of Linear Equations</u> 2.1 Review of Lines

2.2 Modeling with Linear Functions
2.3 Systems of Two Equations in Two Unknowns
2.4 Setting Up and Solving Systems of Linear Equations
<u>Chapter 3 Linear Programming</u>
3.1 Setting Up Linear Programming Problems
3.2 Graphing Systems of Linear Inequalities in Two Variables
3.3 Graphical Solution of Linear Programming Problems
3.4 Simplex Method
<u>Chapter 4 Basic Probability and Applications</u>
4.1 Mathematical Experiments
4.2 Basics of Probability
4.3 Rules of Probability
4.4 Probability Distributions and Expected Value
<u>Chapter 5 Functions</u>
5.1 Relations and Functions
5.2 Polynomial Functions
5.3 Rational Functions
5.4 Power and Radical Functions
5.5 Piecewise-Defined Functions
5.6 Exponential Functions
5.7 Combining and Transforming Functions
5.8 Inverse Functions and Logarithms
<u>Chapter 6 Mathematical Finance</u>
6.1 Interest and Effective Rates
6.2 Annuities, Sinking Funds, and Amortization

Major Assignments Schedule

See Blackboard

Final Exam Date

May 12, 2025 - 12:30 PM Through May 12, 2025 - 2:0 PM

Grading Scale

90 - 100=A 80 - 89=B 70 - 79=C 60 - 69=D Below 59 = F

Determination of Final Grade

Attendance 10%
Homework 15%
Quizzes 15%
Exam 1 15%
Exam 2 15%
Exam 3 15%
Final Exam 15%

Course Policies

Instructor Policies

Blackboard/MyOpenMath:

All of your course materials and assignments are accessible through MyOpenMath via Blackboard. You will not need to sign up for or log on to any outside website, as everything will be integrated fully into Blackboard. MyOpenMath is an open-source program and does not require any access code or payment before using. If this is the only course you are taking this semester, or if all of your other classes use open-source (OER) resources, you should consider opting out of the Seahawk Book Bundle program.

Homework (Practice Problems):

Each section of the text is accompanied by a graded homework practice assignment. Homework and Quiz assignments will be due the day before their respective chapter exams. Please refer to Blackboard for exact due dates. Your homework average will count as 15% of your final grade.

Quizzes:

Each chapter of the text is accompanied by one or more graded quizzes. Homework and Quiz assignments will be due the day before their respective chapter exams. Your Quiz Average will count as 15% of your final grade. I will drop your lowest quiz grade, no questions asked, and there will be no extensions or make-ups given for any quizzes otherwise.

Exams:

There will be three mid-term exams scheduled at regular intervals throughout the semester and a comprehensive final exam at the end of the semester. Approximate dates for the exams are available on the schedule on Blackboard. I will announce more specific details about exams in class

about a week before they occur. Exams will be administered in class and will each count as 15% of your final grade. There will be no extensions or make-ups granted for any exams, and any conflicts with any of the scheduled exams must be brought to my attention beforehand.

Attendance:

See "Attendance Policy" information listed below. Your attendance will count as 10% of your final grade.

Attendance Policy

Students are expected to be present and ON TIME for all class meetings, therefore attendance will be recorded at the beginning of each class meeting through the use of a seating chart established by the end of the first week.

In addition to being present and on time for class, you are expected to be prepared and up to date in the material, remain for the entirety of each class meeting, and to be actively engaged in the daily activities and discussions.

Any behavior which is disruptive or disrespectful to either the instructor or students in this class will not be tolerated, and anyone engaging in such behavior will be dealt with appropriately.

Additional Information

This syllabus is subject to change as needed throughout the semester. Any major changes will be accompanied by an announcement in class.

Institutional Policies

MyLSCPA

Be sure to check your campus email and Course Homepage using MyLSCPA campus web portal. You can also access your grades, transcripts, academic advisors, degree progress, and other services through [MyLSCPA](#).

Academic Honesty

Academic honesty is expected from all students, and dishonesty in any form will not be tolerated. Please consult the LSCPA policies (Academic Dishonesty section in the Student Handbook) for consequences of academic dishonesty.

ADA Considerations

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the [Disability Services Coordinator](#), Room 117, in the Student Success Center. The phone number is (409) 984-6241.

COVID 19 Information

The Lamar State College Port Arthur (LSCPA) Student Code of Conduct COVID 19 Policy requires students who have been diagnosed with COVID 19 to report their condition directly to their local health department. Students should also contact their course faculty to report their quarantine status. In addition, this policy requires all students to wear face coverings when directly exposed to COVID 19 in compliance with the criteria included in the policy. For more information please refer to the COVID 19 link on the LSCPA website.

Facility Policies

No food or tobacco products are allowed in the classroom. Only students enrolled in the course are allowed in the classroom, except by special instructor permission. Use of electronic devices is prohibited.

HB 2504

This syllabus is part of LSCPA's efforts to comply with Texas House Bill 2504.

Mandatory Reporting of Child Abuse and Neglect

As per Texas law and LSCPA policy, all LSCPA employees, including faculty, are required to report allegations or disclosures of child abuse or neglect to the designated authorities, which may include a local or state law enforcement agency or the Texas Department of Family Protective Services. For more information about mandatory reporting requirements, see [LSCPA's Policy and Procedure Manual](#).

Title IX and Sexual Misconduct

LSCPA is committed to establishing and maintaining an environment that is free from all forms of sex discrimination, including sexual harassment, sexual violence, and other forms of sexual misconduct. All LSCPA employees, including faculty, have the responsibility to report disclosures of sexual misconduct, including sexual harassment, sexual assault (including rape and acquaintance rape), domestic violence, dating violence, relationship violence, or stalking, to LSCPA's Title IX Coordinator, whose role is to coordinate the college's response to sexual misconduct. For more information about Title IX protections, faculty reporting responsibilities, options for confidential reporting, and the resources available for support visit [LSCPA's Title IX website](#).

Clery Act Crime Reporting

For more information about the Clery Act and crime reporting, see the [Annual Security & Fire Safety Report](#) and the [Campus Security website](#).

Grievance / Complaint / Concern

If you have a grievance, complaint, or concern about this course that has not been resolved through discussion with the Instructor, please consult the Department Chair.

Department Information

General Education and Developmental Studies

Chair: [Dr. Steven Zani](#)
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