A. COURSE INFORMATION
Course number/section: MATH-1324.B09 CRN#53077
Class meeting time: MWF 08:00-08:50AM
Class location: CS 111
Course Website: Blackboard bb9.tamucc.edu

B. INSTRUCTOR INFORMATION
Instructor: Celil Ekici, PhD
Office location: CI312
Office hours: Monday, Tuesday, Thursday 9:00AM-11:00AM
Telephone: 361 825-2819
e-mail: celil.ekici@tamucc.edu
Appointments: You can schedule in person or WebEx/online meeting by sending an email

C. COURSE DESCRIPTION
This course is designed specifically for students majoring in business. Students will learn how the properties and language of mathematics can be used in business and real-world problem solving and understand the techniques and applications of finance problems, basic matrix operation, basic counting principles, and probability analysis in modeling real-world scenarios. The course will provide students with communication skills, creative problem solving skills, and the ability to work independently.

Extended Course Description
Topics include 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. Counts as the mathematics component of the University Core Curriculum.

D. PREREQUISITES AND COREQUISITES
Prerequisites
MATH 1314 (College Algebra) or placement beyond MATH 1314.
Corequisites
None
E. **REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES**

**Required Textbook(s)**
Tan/Waner, Custom WebAssign Finite Mathematics for the Managerial, Life, and Social Sciences + Applied Calculus ISBN 9780357465516

*WebAssign access code* - It is available as a bundle with the textbook or separately as a standalone access code at the bookstore.

**Supplies:** A calculator or graphing calculator is required for this class and it is the student’s responsibility to obtain it. The TI 83/84 Plus Graphing Calculator is recommended. Other calculators may not be supported by the instructor. I will allow other graphing calculators provided they are not capable of symbolic manipulation, such as the TI-89, TI-92, TI-nSpire CAS, Voyage 200, and HP-48 series. I will not allow cell phones, laptops, tablets, or other smart devices to be used as a calculator during quizzes or exams. All calculators or handheld devices to be used in the course must first be approved by the instructor. Furthermore, the instructor reserves the right to erase the memory of any calculator or handheld device to be used in an exam.

F. **STUDENT LEARNING OUTCOMES AND ASSESSMENT**

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

Upon successful completion of this course, students should be able to:
1. Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions to solving real-world problems.
2. Solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans.
3. Apply basic matrix operations, including linear programming methods, to solve application problems.
4. Demonstrate fundamental probability techniques and application of those techniques, including expected value to solve problems.
5. Apply matrix skills and probability analyses to model applications to solve real-world problems.

G. **INSTRUCTIONAL METHODS AND ACTIVITIES**

Methods and activities for instruction include:
• instructional presentation of new material and concepts,
• class discussion, group discussions, and problem solving analysis using critical thinking techniques,
• individual written assignments such as problem of the weeks to enhance understanding of new concepts,
• online and individual instructional support using WebAssign.
• discovery method using digital manipulatives by integrating instructional technologies such as Geogebra, Desmos, spreadsheets or graphing calculators to view the effects of shifting and translation concepts on the functions

MAJOR COURSE REQUIREMENTS AND GRADING

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>%30</td>
</tr>
<tr>
<td>Modeling Assignments &amp;Quizzes</td>
<td>%15</td>
</tr>
<tr>
<td>Homework- WebAssign</td>
<td>%20</td>
</tr>
<tr>
<td>Project Report &amp; Presentation</td>
<td>%10</td>
</tr>
<tr>
<td>Final</td>
<td>%25</td>
</tr>
<tr>
<td>TOTAL</td>
<td>%100</td>
</tr>
</tbody>
</table>

I. The Final Project and some of the classroom activities requiring a presentation will be graded using the following Grading Rubric:

<table>
<thead>
<tr>
<th>Category</th>
<th>4 Exemplary</th>
<th>3 Good</th>
<th>2 Satisfactory</th>
<th>1 Unsatisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject knowledge</td>
<td>Demonstrates subject knowledge throughout the entire assignment. All information is clear, appropriate, and accurate. The solutions to all problems are correct.</td>
<td>Demonstrates subject knowledge most of the time. Most of the information is clear, appropriate, and accurate. Most of the solutions to problems are correct, some solutions have minor errors.</td>
<td>Demonstrates some subject knowledge. Some information is clear, appropriate, and accurate. Some solutions to problems are correct.</td>
<td>Subject knowledge is not demonstrated. Information is confusing, insufficient, inappropriate, and inaccurate. Solutions are incorrect.</td>
</tr>
<tr>
<td>Organization</td>
<td>The sequence of information is logical and well organized.</td>
<td>The sequence of information is well organized.</td>
<td>Parts of the sequence of information is organized.</td>
<td>The information is disorganized.</td>
</tr>
<tr>
<td>Communication (written paper, and/or ppt and oral presentation)</td>
<td>Excellent written communication of ideas. Excellent integration of spoken and visual presentation.</td>
<td>Good written communication of ideas, mainly good integration of spoken and visual presentation, mostly.</td>
<td>Some parts well written, ideas are communicated effectively (written/oral and visually).</td>
<td>The report is hard to follow. Ideas are not communicated effectively. Written, spoken and visual information are not integrated.</td>
</tr>
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</table>

H. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE (BY DAY OR WEEK)</th>
<th>TOPIC</th>
<th>CHAPTER(S)</th>
<th>ASSIGNMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 0-1</td>
<td>Review Polynomial, Exponential Logarithmic Functions</td>
<td></td>
<td>Review on Functions</td>
</tr>
<tr>
<td>Week 1:</td>
<td>Introduction</td>
<td>Section 1.1, 1.2, 1.3</td>
<td>Web Assign</td>
</tr>
<tr>
<td>Week 2</td>
<td>Systems of Linear Equations and Matrices</td>
<td>Sections 4.1, 4.2, 4.3, 4.4</td>
<td>WebAssign</td>
</tr>
<tr>
<td>Week</td>
<td>Topic</td>
<td>Sections</td>
<td>Notes</td>
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<tr>
<td>3</td>
<td>Inverse of a square matrix and matrix equations and system equations</td>
<td>5.1, 5.2, 5.3</td>
<td>WebAssign</td>
</tr>
<tr>
<td>4</td>
<td>Review and Exam 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Linear inequalities in two variables, Exponential and Logarithmic functions</td>
<td>5.3, 2.3, 2.4</td>
<td>WebAssign</td>
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<tr>
<td>6:</td>
<td>Exponential and Logarithmic functions, Compound Interest</td>
<td>2.5, 2.6, 3.1</td>
<td>WebAssign</td>
</tr>
<tr>
<td>7</td>
<td>Simple, compound and continuous compound interest</td>
<td>3.2, 3.3, 3.4</td>
<td>WebAssign</td>
</tr>
<tr>
<td>8</td>
<td>Review and Midterm exam-II</td>
<td></td>
<td>WebAssign</td>
</tr>
<tr>
<td>9</td>
<td>Modeling Problems Chapter 3</td>
<td></td>
<td>Student led presentations</td>
</tr>
<tr>
<td>10</td>
<td>Counting Principles, Permutation and Combinations</td>
<td>7.2, 7.3</td>
<td>WebAssign</td>
</tr>
<tr>
<td>11</td>
<td>Counting Principles, Permutation and Combinations</td>
<td>7.3, 7.4</td>
<td>WebAssign</td>
</tr>
<tr>
<td>12</td>
<td>Sample spaces, events, probability, Union, Intersection and complement of events</td>
<td>8.1, 8.2, 8.3</td>
<td>WebAssign</td>
</tr>
<tr>
<td>13</td>
<td>Conditional probability, intersection and independence and Bayes’ formula, Modeling Problem Presentations on Bayes’ Formula</td>
<td>8.2, 8.3</td>
<td>WebAssign</td>
</tr>
<tr>
<td>14</td>
<td>14 Ch. 8 Random variable, probability distribution, and expected value</td>
<td>8.4, 8.5</td>
<td>WebAssign</td>
</tr>
<tr>
<td>15</td>
<td>Comprehensive Review Exam Including Chapter 8 Preparation for Final</td>
<td></td>
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Note: This is the pacing schedule projected at the beginning of the semester. Changes in this course schedule may be necessary and will be announced to the class by the instructor. For any adjustments, the announcements will be made during the class. You are expected to follow the most updated pacing schedule from the blackboard.
The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

Important Dates:

- **August 19**: Classes begin Regular Fall & 1st 7-week session
- **August 26**: Last day to late register or add a class
- **September 3**: 12th Class Day Census
- **September 7**: Labor Day Holiday- Campus Closed
- **October 14-28**: Mid-Term Grading
- **November 5**: Last day to drop a class in the full term
- **November 25**: Reading Day- No Class
- **November 26-27**: Thanksgiving Holiday- Campus Closed
- **November 30**: Reading Day- No Class
- **December 4**: FINAL EXAM 8:00am - 10:30am, Place TBA
- **December 14**: Fall grades due at noon

I. **COURSE POLICIES**

**COVID-19**

Face Coverings—Face coverings (cloth face covering, surgical mask, etc.) must be properly worn in all non-private spaces including classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource and support offices, and outdoor spaces where 6 feet of physical distancing is difficult to reliably maintain. Extra masks will be made available if needed.

- **Attendance/Tardiness**
  You are expected to be regular and punctual in your class attendance online/in class with synchronous and asynchronous timely engagement. You are responsible for all notes, assignments and announcements made in class. Please regularly check BlackBoard for updates.

- **Late Work and Make-up Exams**
  Late work and Make-up Exams are allowed with proper documentation submitted to Student Services.

- **Extra Credit**: None

- **Cell Phone Use**
There is a zero tolerance policy for texting or any other cell phone use in class. Cell phones may be left on vibrate for emergency notification purposes. If you expect an important phone call, please inform me before class and quietly excuse yourself when you receive it.

 Participation
An important aspect of learning to teach is, in part, a function of being a member of a community of learners that interacts to build knowledge about teaching and children’s learning. Another important aspect of learning to teach is engagement and collaborative work. Effective teachers are committed to professional growth through participation and collaboration to improve their practice. You are expected to actively participate in class, as this course is designed to draw upon the experiences and insights of your peers and your participation makes for a richer experience for all. Simply attending class does not constitute participation.

I. COLLEGE AND UNIVERSITY POLICIES

• Academic Integrity (University)
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

• Classroom/Professional Behavior
Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in Article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

• Statement of Civility
Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.
• Deadline for Dropping a Course with a Grade of W (University)
I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. **Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to drop this course.** Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar ([http://www.tamucc.edu/academics/calendar/](http://www.tamucc.edu/academics/calendar/)) for the last day to drop a course.

• Grade Appeals (College of Science and Engineering)
As stated in University Procedure 13.02.99.C0.03, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is required to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C0.03, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at [http://academicaffairs.tamucc.edu/rules_procedures/assets/13.02.99.c0.03_student_grade_appeals.pdf](http://academicaffairs.tamucc.edu/rules_procedures/assets/13.02.99.c0.03_student_grade_appeals.pdf). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

• Disability Services
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection 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 call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

[http://disabilityservices.tamucc.edu/](http://disabilityservices.tamucc.edu/)

• Civil Rights Complaints
Texas A&M University-Corpus Christi is committed to fostering a culture of caring and respect that is free from discrimination, relationship violence and sexual misconduct, and ensuring that all affected students have access to services. For information on reporting Civil Rights complaints, options and support resources (including pregnancy support accommodations) or university policies and procedures,
please contact the University Title IX Coordinator, Sam Ramirez (Samuel.ramirez@tamucc.edu) or Deputy Title IX Coordinator, Rosie Ruiz (Rosie.Ruiz@tamucc.edu) x5826, or visit website at Title IX/Sexual Assault/Pregnancy.

**Limits to Confidentiality.** Essays, journals, and other materials submitted for this class are generally considered confidential pursuant to the University's student record policies. However, students should be aware that University employees, including instructors, are not able to maintain confidentiality when it conflicts with their responsibility to report alleged or suspected civil rights discrimination that is observed by or made known to an employee in the course and scope of their employment. As the instructor, I must report allegations of civil rights discrimination, including sexual assault, relationship violence, stalking, or sexual harassment to the Title IX Coordinator if you share it with me.

These reports will trigger contact with you from the Civil Rights/Title IX Compliance office who will inform you of your options and resources regarding the incident that you have shared. If you would like to talk about these incidents in a confidential setting, you are encouraged to make an appointment with counselors in the University Counseling Center.

- **Statement of Academic Continuity**
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

**OTHER INFORMATION**
- **Academic Advising**
  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**GENERAL DISCLAIMER**
I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.