Department of Mathematics & Statistics  
Math 1324.002 Business Mathematics  
Fall Semester – 2018

A. COURSE INFORMATION

Course Number: Math 1324.002  
Class Meetings: MW 7:00 PM – 8:15 PM  
Class Location: IH-160  
Course Website: www.bb9.tamucc.edu  
Instructor: Dr. Nicolas (Nick) Curiel, Jr.  
E-MAIL Address: nicolas.curiel@tamucc.edu  
Office Address: CI-314  
Office Hours: TTR (12:45 PM – 1:45 PM) & (4:00 PM – 5:00 PM)  
M (4:00 PM – 5:00 PM)  
Appointments: Scheduled in advance via Email

B. RATIONALE

The rationale for offering a Business Mathematics course comes from the need for students to focus on the skills needed to solve mathematical problems, analyze and interpret data, and work independently. Students will learn to apply sound decision-making skills that relate to the business world.

C. COURSE DESCRIPTION

The course continues the development of mathematical skills with problems in business, economics, and the social sciences. Part 1 include the review of elementary/common algebraic functions; linear, quadratic, polynomial, rational, exponential, and logarithmic. Part 2 includes mathematics of finance (simple and compound interest, annuities, and amortization of loans); linear algebra (systems of linear equations, matrices, and linear programming); counting (permutations and combinations); and probability (sample space, conditional probability, Bayes’ formula, and expected value)

D. PREREQUISITES

Math 1314 (College Algebra) or placement beyond Math 1314
E. TEXT AND OTHER SUPPLIES REQUIRED


A TI-83/ TI-84 plus or TI equivalent is required for the course. Other models may be used but will NOT be supported by the instructor.

F. COURSE OBJECTIVES/STUDENT LEARNING OUTCOMES

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.

By the end of this course, students should be able to:

1. Apply elementary functions, including linear, quadratic, polynomial, rational, exponential, and logarithmic 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. Use logic to formulate precise mathematical statements and sets to build mathematical functions.

5. Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems.

6. Apply matrix skills and probability analyses to model applications to solve real-world problems.
G. INSTRUCTIONAL METHODS AND ACTIVITIES

1. Instructional presentation of new material and concepts.

2. Class discussion and problem-solving analysis using critical thinking techniques.

3. Use of MyLabsPlus which includes electronic copy of textbook, videos, PowerPoints with examples, and study hints.

4. Discovery method techniques supported by a graphing utility to view the effects of shifting and translation concepts on functions.

H. EVALUATION AND GRADE ASSIGNMENT

Student learning outcomes (described in Section F) will be measured via progress on homework, quizzes, exams, and final exam. Every homework problem can be worked multiple times until a correct answer is achieved. Chapter homework should be completed before the chapter quiz is attempted.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>15%</td>
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<tr>
<td>Exam 2</td>
<td>15%</td>
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<tr>
<td>Exam 3</td>
<td>15%</td>
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<tr>
<td>Final Exam (Comprehensive)</td>
<td>25%</td>
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<tr>
<td>Homework</td>
<td>15%</td>
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<tr>
<td>Quizzes/Participation</td>
<td>15%</td>
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Final Course grades will be assigned as follows:

<table>
<thead>
<tr>
<th>WEIGHTED AVERAGE in %</th>
<th>LETTER GRADE</th>
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<tbody>
<tr>
<td>90 - 100</td>
<td>A</td>
</tr>
<tr>
<td>80 – 89.99</td>
<td>B</td>
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<tr>
<td>70 – 79.99</td>
<td>C</td>
</tr>
<tr>
<td>60 – 69.99</td>
<td>D</td>
</tr>
<tr>
<td>Less than 60</td>
<td>F</td>
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I. **TENTATIVE COURSE SCHEDULE**  

### Fall 2018

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter/Section</th>
</tr>
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</table>
| 1    | 1.1 Linear Equations and Inequalities  
 1.2 Graphs and Lines |
| 2    | 2.1 Functions  
 1.3 Linear Regression |
| 3    | 4.1 Systems of Linear Equations in Two and Three Variables  
 4.4 Matrices: Basic Operation |
| 4    | 4.5 Inverse of a Square Matrix  
 4.6 Matrix Equations and System of Linear equations |
| 5    | Test 1  
 3.1 Simple Interest  
 3.2 Compound and Continuous Compound Interest |
| 6    | 3.3 Future Value of Annuity; Sinking Funds  
 3.4 Present Value of an Annuity; Amortization |
| 7    | 5.1 Linear Inequalities in Two Variables  
 5.2 System of Linear Inequalities in Two Variables |
| 8    | 5.3 Linear Programming in Two Dimensions: A Geometric Approach  
 Test 2 |
| 9    | 7.2 Sets  
 7.3 Basic Counting Principles |
| 10   | 7.4 Permutations and Combinations  
 8.1 Sample Spaces, Events, and Probability |
| 11   | 8.2 Unions, Intersections, and Complement of Events: Odds  
 8.3 Conditional Probability, Intersection, and Independence |
| 12 - 13 | 8.4 Bayes’ Formula  
 8.5 Random Variable, Probability Distribution, and Expected Value |
| 14   | Test 3 |
| 15   | Final Exam Review |
| 16   | Final Exam |
J. CLASS POLICIES

Attendance/Tardiness
Attendance will be taken each class. Talking during class time and tardiness are often disruptive to the whole class and are not appreciated. If you are delayed and arrive late please do so quietly. Excessive tardiness, disruptive talking, disruptive behavior or performing activities not related to the class will be counted as absences. The instructor is NOT responsible for informing absent students what was covered in previous classes, homework or any other announcements.

Extra Credit
If an extra credit work is assigned, or extra points are given, the total score should not exceed 100.

Cell Phone Use
Use of cell phone is prohibited in all circumstances. Students using their cell phones in class will be asked to leave the class and will be counted as absent for that day.

Laptop/Tablet Use
Students are welcome to use their laptops/tablets in class only if it is intended for learning purposes like logging into the class blackboard page, or MyLabsPlus website.

Missed Exam
There will be no makeup for a missed semester exam, unless for special circumstances. There is a 20% penalty for late homework. There will be no makeup for a missed final exam. Final exam must be taken per schedule.

Participation
Students are required to participate in class discussions and problem solving. Students who are absent will not receive credit for participation.

Other Class Policies
1. Students are expected to read the PowerPoint materials in Blackboard, view videos and other multimedia available in MyLabsPlus, and work assignments before the due dates.

2. Homework is assigned online regularly through MyLabsPlus, which can be accessed at tamucc.mylabsplus.com (you need to buy an access code) and is due as specified. If you have problems accessing the system you must let me know as soon as possible.

3. There is an online quiz immediately after each chapter is finished.

4. Three semester exams will be administered during class times. The dates will be announced in class and posted on Blackboard. These dates may be changed with due notice announced during class time. Bring your own calculators. Calculators cannot be shared. Cell phones cannot be used as calculators.

5. The final exam will be comprehensive covering all material covered during the semester.
K. RESPONSIBILITIES

1. You are responsible for the information contained in the university ACADEMIC CALENDAR – 2018. You are responsible for dropping the class if needed. Friday, November 9, 2018, is the last day to drop the class.

2. You are responsible for contacting me, if you miss a due date.

3. You are responsible for seeking help from the Center for Academic Student Achievement, a private tutor, coming to my office hours, or attending a student study group; if you have difficulty with a skill and/or concept.

4. You are expected to comply with the rules in the Student Handbook and Student Code of Conduct, as well as the processes in the latter, which are administered by the Office of Student Affairs. The Student Handbook and Student Code of Conduct are accessible at http://judicialaffairs.tamucc.edu/studentcofc.html.

L. COLLEGE AND UNIVERSITY POLICIES

1. 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.

2. 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.
3. Student 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.

4. 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/) for the last day to drop a course.

5. Grade Appeals (College of Science and Engineering)

As stated in university procedure 13.02.99.C2.01, 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 encouraged 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.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://studentaffairs.tamucc.edu/student_grade_appeal_procedure.pdf, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html 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.
6. 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 thing, 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. https://disabilityservices.tamucc.edu/

7. 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 using 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.

M. 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 and appointment. The College’s Academic Advising Center is in Center for Instruction 350 or can be reached at (361) 825-3928.

N. GENERAL DISCLAIMER

The instructor reserves the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus when necessary. The instructor will announce such changes in a timely manner during regularly scheduled lecture periods.
O. FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)

Under FERPA, a student has the right to:

1. Inspect and review their education records

Students can inspect and review their education records within 45 days of the day the University receives a request for access. A student should submit to the registrar, dean, head of the academic department, or other appropriate official, a written request that identifies the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. Request to amend their education records

Students can request to amend any of their education records that they believe are inaccurate, misleading, or otherwise in violation of the student’s privacy rights under FERPA. A student who wishes to ask the University to amend a record should write the University official responsible for the record, clearly identify the part of the record the student wants changed and specify why it should be changed. If the University decides not to amend the record as requested, the University will notify the student in writing of the decision and the student’s right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. Some control over the disclosure of their education records

Students have the right to provide written consent before the University discloses personally identifiable information from their education records, except to the extent that FERPA authorizes disclosure without consent. The University discloses education records without a student’s prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff).

A person or company with whom the University has contracted as its agent to provide a service instead of using University employees or officials (such as an attorney, auditor, or collection agent).

A person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.
A school official has a legitimate educational interest if the official needs to review an education record to fulfill his or her professional responsibilities for the University.

Upon request, the University also discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

4. File a complaint if they feel any of these rights have been violated

Students can file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5901

P. STARFISH EARLY ALERT

The Center for Academic Student Achievement is hosting Starfish, an Early Alert software program for identifying undergraduate students who need assistance from academic support services at Texas A&M University Corpus Christi. The Early Alert program offers convenient early warning identification capabilities and connects students to a collaborative “Success Network” of faculty, advisors, and specialized support staff to address students’ needs and inquiries in real time.

The Early Alert program allows faculty and staff to identify the academic needs of TAMUCC’s undergraduate students at any point during the academic term. Starfish provides early alerts, or “flags”, when raised by faculty or staff; generate emails notifying the student, and members of the student’s “Success Network” of course progress and academic concerns needing to be addressed.

Students can actively engage with members of their “Success Network” at any time. Early Alerts raised for students, however, will elicit an Early Alert response originating from CASA, supplemented by Academic Advising, and may include additional support from campus programs including Student Engagement and Success, Enrollment Management, PASS, and other academic support programs from TAMUCC.
Starting Spring 2014, all Pre-1000, 1000, and 2000 level courses at TAMUCC will be supported by the Early Alert program through the implementation of progress reports. Progress report will help to identify students’ academic needs, including:

- Poor class attendance
- Low class participation
- Low test or quiz scores
- Missing or incomplete work
- Midterm grade below a C
- In danger of Failing

Starfish Connect facilitates meaningful contact between students and their instructors, advisors, and mentors. The system encourages students to engage more deeply in their academic lives by connecting students to the people and resources in place to help students succeed. Students can access Starfish by logging into Blackboard (bb9.tamucc.edu) and selecting the Starfish Button within Blackboard’s Tools.

**Q. IMPORTANT DATES**

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<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>Monday, August 27th</td>
<td>Classes begin</td>
</tr>
<tr>
<td>Monday, September 3rd</td>
<td>Labor Day Holiday</td>
</tr>
<tr>
<td>Tuesday, September 4th</td>
<td>Last day to late register or add a class</td>
</tr>
<tr>
<td>Friday, October 5th</td>
<td>Last day to apply for December graduation</td>
</tr>
<tr>
<td><strong>Friday, November 9th</strong></td>
<td>Last day to drop a class</td>
</tr>
<tr>
<td>Wednesday, November 21st</td>
<td>Reading Day – No classes</td>
</tr>
<tr>
<td>Thursday, November 22nd</td>
<td>Thanksgiving Holiday</td>
</tr>
<tr>
<td>Friday, November 23rd</td>
<td>Thanksgiving Holiday</td>
</tr>
<tr>
<td><strong>Tuesday, December 4th</strong></td>
<td>Last day to withdraw from the University</td>
</tr>
<tr>
<td><strong>Wednesday, December 5th</strong></td>
<td>Last Day of classes</td>
</tr>
<tr>
<td>Thursday, December 6th</td>
<td>Reading Day – No classes</td>
</tr>
<tr>
<td><strong>Monday, December 10 (7:15 pm - 9:45 pm)</strong></td>
<td>Final Exam</td>
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*This syllabus and schedule may be changed at any time by verbal announcement. Attend class every day to be aware of any changes.*