

Master Course Syllabus

MATH_1314 **College Algebra (2701015419)**

*******NOTE TO STUDENT*******

Student success is our number one priority at Coastal Bend College and we realize that prompt, effective communication plays a significant role in achieving that goal. It is vitally important that you have the proper contact information for your instructor. This should include their phone number, email address, and if applicable, their office number, and office hours. If you ever have any problems contacting your instructor, or do not receive a prompt response to your inquiries, please contact the Assistant Dean of Academics or the Dean of Academics as soon as possible. Their contact information is provided below:

Mark L. Secord, Dean of Academics (361) 354-2529 secordm@coastalbend.edu	Kayla D. Jones, Assistant Dean of Academics (361) 354-2532 kdjones@coastalbend.edu
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We wish you all the best in your education and encourage you to contact us if you have any questions or concerns.

Keeping student success in sight, faculty in each of the courses will review with students, course information with specific reading schedules, assignments, and testing information during the first week of class. Additionally, the course information will be posted to Blackboard (THECB 60x30TX compliance).

Course Description: In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included.

Semester Hours Credit: 3

Lecture/Lab Hours: 3 - 0

Pre-Requisite: MATH 0322 with grade of “C” or better or TSI Math Score of 350 or above

Textbook(s): *(Required)* MyMathLab Student Access Kit, 4th edition **ISBN:** 9780321199911
(Optional) College Algebra Enhanced with Graphing Utilities, 7th edition
ISBN: 9780134265131

Student Learning Outcomes:

Upon successful completion of this course, students will:

1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve and apply systems of linear equations using matrices.

Course Outline:

- **Unit 1: Systems of Linear Equations, Functions and Their Graphs**
 - Solving Systems of Linear Equations using Matrices (Gaussian Elimination)
 - Functions
 - The Graph of a Function
 - Library of Functions; Piecewise-defined Functions
 - Graphing Techniques; Transformations
- **Unit 2: Linear and Quadratic Functions**
 - Linear Functions and Their Properties
 - Quadratic Functions and Their Properties
 - Quadratic Models
- **Unit 3: Polynomial and Rational Functions**
 - Polynomial Functions and Models
 - The Real Zeros of a Polynomial Function

- Complex Zeros; Fundamental Theorem of Algebra
- Properties of a Rational Function
- The Graph of a Rational Function
- Polynomial and Rational Inequalities

▪ **Unit 4: Exponential and Logarithmic Functions**

- Composite Functions
- One-to-one Functions; Inverse Functions
- Exponential Functions
- Logarithmic Functions
- Properties of Logarithms
- Logarithmic and Exponential Equations
- Financial Models
- Exponential growth and Decay Models; Newton's Law, Logistic Growth Models

Evaluation Methods: Please see individualized instructor policies for course evaluation methods. Students will be assessed on the same measure, across each discipline, as per CBC guidelines.

Technical Support:

Email Support:	helpdesk@coastalbend.edu cabrigo@coastalbend.edu ycharles@coastalbend.edu
Telephone Support:	866-722-2838 ext. 2508 (Toll Free) 361.354.2508 (Direct Line)
Live Chat:	Fall/Spring Hours: Monday-Thursday 8 a.m. to 8 p.m.; Friday 8 a.m. to 5 p.m. Summer Hours: Monday-Thursday 7 a.m. to 6 p.m.

Tutoring Services: Coastal Bend College offers free tutoring services to all CBC students who need academic assistance. Services include One-on-One, Group, and Online tutoring to all current CBC students. The Tutoring Coordinator's office is at CBC-Beeville in the Student Success Center (SSC), Room 140 which is in the R.W. Dirks

building. The SSC's hours of operation are Monday-Thursday from 8 am – 8 pm. Tutoring services are also available at all CBC site locations and students can visit each site's SSC. For questions regarding tutoring services, please contact the CBC Tutoring Coordinator at (361) 354-2838 extension 2578 or visit our website at: <http://coastalbend.edu/tutoring/>.

Beeville	Alice	Kingsville	Pleasanton
3800 Charco Road Beeville, TX 78102 1-866-722-2838	704 Coyote Trail Alice, TX 78332 1-866-891-2981	1814 Brahma Blvd. Kingsville, TX 78363 1-866-262-1615	1411 Bensdale Pleasanton, TX 78064 1-866-361-4222

Grady C. Hogue Learning Resource Center (Library): Located on the Beeville campus, the operation hours are Monday - Thursday 8:00 a.m. - 6:00 p.m.; Friday 8:00 a.m. - 5:00 p.m.

(Summer semesters will observe the CBC campus operation hours.) For locations and hours of CBC library in Alice, Kingsville, and Pleasanton sites please visit the library web page links below.

Grady C. Hogue Learning Resource Center (Library): <http://lrc.coastalbend.edu/about>

Online Catalog : <http://lrc.coastalbend.edu/catalog>

Library Website: <http://lrc.coastalbend.edu/about>

Hours and Locations: <http://lrc.coastalbend.edu/hours>

Pleasanton Public Library: <https://pleasanton.biblionix.com/>

115 N. Main St., Pleasanton, TX 78064

Monday – Friday 9:00 a.m. – 6:00 p.m.

Saturday 9:00 a.m. – 1:00 p.m.

Financial Aid: Resources are available for students for financial aid, work study, and veteran benefits. For additional information, visit our website at www.coastalbend.edu/finaid or contact us at 361-354-2238. Office hours: Monday-Thursday 7-6 and Friday 8-5.

ADA Statement: No qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the College District, or be



subjected to discrimination by the College District. Nor shall the College District exclude or otherwise deny equal services, programs, or activities to an individual because of the known disability of an individual with whom the individual is known to have a relationship or association. 42 U.S.C. 12132; 28 CFR 35.130(g).

See at: [GA \(Legal\)](#)

Student with Disabilities: Please notify your instructor of any modification/adaptation you may require to accommodate a disability-related need. You will need to provide documentation to the Director of Student Services so the most appropriate accommodations can be determined. Specialized services are available through the Office of Disability Services (SSB 4.104, 471-6259). For more information contact (361) 354-2300.

Scholastic Dishonesty: Each student is charged with notice and knowledge of the contents and provisions of Coastal Bend College's rules and regulations concerning student conduct. All students shall obey the law, show respect for properly constituted authority, and observe correct standards of conduct. Scholastic dishonesty shall constitute a violation of these rules and regulations and is punishable as prescribed by Coastal Bend College Policies [FLB \(Local\)](#) and [FM \(Local\)](#). Scholastic dishonesty shall include, but not be limited to, cheating on a test, plagiarism, and collusion.

Use of E-mail for Official Correspondence to students: All students should be familiar with the college's official email student notification policy. Students are expected to check their CBC email on a frequent and regular basis to stay current with college-related communications, recognizing that certain communications may be time-critical. CBC email format: last name with last four digits of social security number @study.coastalbend.edu and password is your student ID (ex. cougar1234@study.coastalbend.edu).

Copyright Law and Intellectual Property Rights Policy: Copyright is the right of an author, artist, composer or other creator of a work of authorship to control the use of his or her work by others. Protection extends to literary works, musical works, dramatic works, pantomimes and choreographic works, pictorial and graphic works, sculpture, motion pictures and other audiovisual works, sound recordings and architectural works. Generally speaking, a copyrighted work may not be reproduced by others without the copyright owner's permission. The public display or performance of copyrighted works is similarly restricted. Generally, the unauthorized reproduction, performance or



distribution of a copyrighted work is copyright infringement and may subject the infringer to civil and criminal penalties. The Fair Use Doctrine outlines exceptions to this Law and is outlined in Coastal Bend College Policy, [CT \(Legal\)](#).

Coastal Bend College, its faculty, students and employees must comply with Copyright Law. Detailed information on Copyright Law and Intellectual Property Rights is available in Coastal Bend College Policy [CT \(Legal\)](#) and [CT \(Local\)](#).

Questions regarding this information should be directed to the Director of Library Services at: library@coastalbend.edu or the Office of Marketing and Public Relations at: socialmedia@coastalbend.edu.

Intellectual Property: Student /Third Party Works: Rights to copyrightable or patentable works created by a student or a third party, that is, not a College District employee, shall reside with the author/ creator. Detailed information on Copyright Law and Intellectual Property Rights is available in Coastal Bend College Policy [CT \(Legal\)](#) and [CT \(Local\)](#).

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Master Course Syllabus

MATH_1324

Mathematics for Business & Social Sciences (2703015219)

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Course 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.

Semester Hours Credit: 3

Lecture/Lab Hours: 3 - 0



Pre-Requisite: Meet TSI college-readiness standard for Mathematics or equivalent

Textbook(s): *(Required)* MyMathLab Student Access Kit, 4th edition **ISBN:** 9780321199911
(Optional) College Mathematics for Business, Economics, Life Sciences & Social Sciences Plus
 NEW MyMathLab with Pearson eText – Access Card Package, 13th edition
ISBN: 9780321947611

Student Learning Outcomes:

Upon successful completion of this course, students will:

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.

Course Outline:

Evaluation Methods: Please see individualized instructor policies for course evaluation methods. Students will be assessed on the same measure, across each discipline, as per CBC guidelines.

Technical Support:

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