

MAC1140 PRE-CALCULUS ALGEBRA GENERAL EDUCATION CORE COURSE E-LEARNING SYLLABUS.

Note: This syllabus is subject to change. The syllabus will be available in Canvas after the semester begin.

I. Semester Information

MAC 1140: Pre-Calculus Algebra, 3 lecture hours, and 3 credit hours.

Prerequisite: Minimum grade of “C” or higher in MAC 1105. Placement scores for the following ACT requires a score of 23 – 27; SAT requires 480 – 509; PERT requires a score of 138 – 150 (M) and 43 – 92 (CLM); New SAT requires 25.50
Current Semester: Summer CRN: 50224

II. Contact Information

Instructor: Debbie Frady

Instructor Credentials:

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III. Approved Course Materials and Resources

- a. **Textbook** Precalculus, Bedford, 2017, Gulf Coast State College
- b. **Graphing Calculator:** A graphing calculator is required (TI-83 or TI-84). The problems in the text, software, and course videos are illustrated using the TI-84+. Students are expected to have their own calculators. If a student wishes to use any other calculator, they must see their instructor in advance for approval.

IV. Curriculum

- a. **Course Description:** Prerequisite: “C” or higher in MAC 1105. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. Topics included are properties and graphs of polynomial and rational functions, polynomial and rational inequalities, properties and graphs of exponential and logarithmic functions, piecewise defined functions, conic sections, matrices and

determinants, sequences and series, mathematical induction, binomial theorem, and applications.

b. **Methods of Instruction**

- I. **e-Learning Class:** This course is also available through e-Learning. This method allows students to complete the course through home study with proctored examinations. Students obtain course information including test times and procedures that can be viewed on the Canvas LMS. The students are expected to take proctored unit tests and final exam at the dates specified either at the GCSC campus or at a designated remote area. The Precalculus Study Guide is available on the Canvas LMS.

- c. **Broad Goals of the course:** The goal of this course is to give the student (1) a thorough background in algebra as a basis for the calculus sequence and (2) algebra skills and concepts useful in any future mathematics course work. It is expected that the student will be able to understand the concepts of algebra as well as work a range of problems, from basic problems up to the more difficult application and conceptual problems. The student must earn a grade of “C” or better in this course in order to proceed to the next level math course.

d. **Approved Student Learning Outcomes (objectives)**

The Student will:

- Evaluate and graph piece-wise, polynomial, rational, exponential, and logarithmic functions; solve and illustrate the graphs of polynomial and rational inequalities.
- Use polynomial theorems and synthetic division to determine all the possible real zeros of a polynomial function; construct a polynomial from the given zeros.
- Use appropriate properties of logarithms to expand and condense logarithmic expressions; solve exponential and logarithmic equations.
- Use matrices and determinants to solve systems of equations; decompose rational expressions into partial fractions.
- Factor and simplify polynomial and rational expressions with rational and negative exponents; graph and construct equations of conic sections.
- Use mathematical induction to prove a given statement or inequality is true for every natural number.
- Write the terms of arithmetic, geometric, and recursively defined sequences; find the general terms of sequences; evaluate series; write series in summation notation including a binomial expression using the Binomial Theorem
- Model and solve real world applications.

V. **Student’s Expectations of the Instructor**

- a. **Office Hours:** The instructor will be available for 10 hours each week. The specific hours will be announced in class and posted in Canvas before the

end of the first week of classes. The instructor will respond to email within 24-48 hours with the possible exception of weekends and holidays. Sending an email to your instructor is the fastest way to get a response.

- b. **Learning Management System Usage Notification:** The student can expect the instructor to discuss the course layout in Canvas, and an explanation of how to access all course material therein such as the textbook, lecture notes, video instruction, reviews, and unit quizzes.
- c. **Email/voicemail response time of the instructor:** The student should communicate with the instructor using the Canvas email system or the Gulf Coast State College email and can expect to receive a reply within 24-hour window except weekends, holidays, and college closure events. Additionally, the student may also call the instructor's extension and leave a voicemail, which will be answered when the instructor is in their office.

VI. EXPECTATIONS OF THE STUDENT

- a. **Accountability:** The student will be held accountable for all material in this course. It is expected that the student is fully prepared for each test and taken on schedule date and time. This course should be viewed as a job. Attendance is necessary as well as attention to detail in order to be successful.
- b. **ACADEMIC INTEGRITY:**
Honest participation in academic endeavors fosters an environment in which optimal learning can take place and is consistent with the college's mission. Academic misconduct, including cheating or plagiarism, is destructive to the spirit of an educational environment and therefore will not be tolerated. "Cheating" includes but is not limited to use of any unauthorized assistance in completing course work. "Plagiarism" includes, but it not limited to, the use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment. Sanctions for incidences of academic misconduct, depending on the severity of the incidence and/or its repetition, may range from receiving an F grade (or zero) for the test, assignment, or activity, to failure of the course, to suspension or dismissal from the program or the college.
- c. **GULF COAST MATH LAB (Tutoring help!) Online or face to face.**
The Math Lab is on the second floor of SUW rooms 260 and 261 and their operating hours can be found either in the link provided in your Canvas course, on the college website, and on the math lab door. The Math Lab offers both face-to-face and online tutoring, please take advantage of this free service provided.
- d. **Online Videos**
Course videos can be found in the Canvas course under each test material tab. If you miss a class, it is strongly encouraged that you watch these useful videos along with keeping up with any assignments for that section.
- e. **Accessibility Statement**

Gulf Coast State College supports an inclusive learning environment for all students. If there are aspects of the instruction or design of this course that hinder your full participation, reasonable accommodations can be arranged. Prior to receiving accommodations, you must register with Student Accessibility Services. Appropriate academic accommodations will be determined based on the documented needs of the student. For information regarding the registration process, email sar@gulfcoast.edu or call 850-747-3243.

f. **Recording of Lectures**

HOUSE BILL 233 RECORDING CLASSES In accordance with federal and state privacy laws, students may record class lectures for their own personal educational use, in connection with a complaint to the college, or as evidence in internal or external legal proceedings. Students may not publish or upload the recordings or any components thereof without the knowledge and written permission of the faculty member. Failure to obtain permission to publish could lead to the students' having to pay damages, attorney fees, and court costs. For more information about what can be recorded, please see the guidelines on pages 36-38 in the GCSC Student Handbook <https://www.gulfcoast.edu/current-students/student-handbooks/2021-2022-student-handbook.pdf>.

g. **AI**

Use of Artificial Intelligence (AI) Tools: The Math Division at GCSC discourages you from utilizing AI as a substantial source of your learning. You are expected to do your own work in this course and will be graded on your mastery of the material herein. Although AI can be an outside resource for problem solving, it may not be a reliable source. What is most important in a math course is that you personally learn the step-by-step processes that it takes to find solutions to problems, to analyze data sets, to create mathematical models, and to apply what you have learned, in theory or through formulas, to applications of mathematics found in real-life instances.

For graded assignments (tests or quizzes), you will not be allowed to use any AI tools, such as chatbots, text generators, paraphrasers, summarizers or solvers, to complete any part of your assignments. Using AI tools for graded assignments will be considered a form of academic dishonesty and could result in a grade of zero for the assignment and disciplinary action. If you have any questions about what constitutes acceptable uses of AI tools, inside or outside the classroom, please consult your instructor.

h. **Attendance and Withdrawal Policy**

ATTENDANCE: This course should be viewed as a job and therefore time and effort are necessary, as well as attentiveness to detail and alertness. Regular participation in discussion boards are significant factors that help build a community-based learning environment as well as to promote success in college.

WITHDRAWALS: There are two types of withdrawals.

- STUDENT WITHDRAWAL – Students wishing to withdraw from the course must complete a withdrawal form and submit the form to the Office of Enrollment Services before the scheduled withdrawal deadline as published in the college catalog. The last day to withdraw from any class is to be determined but is usually the week following midterms. Withdrawals cannot be processed beyond that date.
- ADMINISTRATIVE WITHDRAWAL – Students who do not make academic progress in this course will be withdrawn. A mandatory introduction and at least one online quiz must be completed within the first few days of the class opening for online classes or the student will be withdrawn as a “NO SHOW”. A student missing two (2) tests can be withdrawn for failing to attend and make academic progress.
- CONSEQUENCES OF WITHDRAWALS: Two withdrawals are permitted per credit course. After that, a grade will be assigned. Please be concerned about withdrawals. When admitting students into certain programs, universities may calculate withdrawals as grades. It is your responsibility to verify the effects of enrollment and/or withdrawal upon your financial assistance.

VII. Measure of Student Performance

- a. Testing: There will be five-unit tests given. The unit tests will be announced in advance, will count equally, and will be returned. The final exam **will not** be returned. There are **no exemptions** from the final exam **[everyone must take the final exam]**.
- b. Quizzes: There will be five-unit quizzes. The unit quizzes will be announced in advance, will count equally, and will be returned. The student is expected to keep up daily with the assigned work.
- c. Grading: The average of the five-unit tests will count 60% of your grade. The average of the five-unit quizzes will count 15% of your grade, and the comprehensive departmental final exam will count 25% of your grade. The grading scale is A (100-90), B (89-80), C (79-70), D (69-60), and F (59-0).
- d. Make Up Work: Unit quizzes are due the day of the test and must be turned in on time. If you miss a unit test, then you must email your instructor the unit quizzes as **no quizzes will be made up**. If you miss a unit test and you have a valid excuse, your instructor may decide to give a make-up test or not at his/her discretion. If a make-up test is granted, then the make-up is to be completed prior to the next class meeting. You must get approval prior to missing a test for a makeup test. If you have not missed any unit tests, the instructor has the option of allowing the final exam to be used to replace the lowest unit test grade. **No** quizzes will be dropped, the quiz average **will not** be replaced, and unit tests **will not** be dropped.