

MGF 1130: Mathematical Thinking

I. Semester Information

Course Information: MGF 1130: Mathematical Thinking

Credit Hours/Contact Hours: 3 credit hours, 3 hours lecture

Pre-Requisites: Successful completion of developmental courses, appropriate placement test scores, or meet State exemption requirement

Current Semester/CRN: Spring 2026 / 15350

II. Contact Information

Instructor: Matthew Hairston, Assistant Professor of Mathematics, Gulf Coast State College

Instructor Credentials:

B.S. in Applied Mathematics, Winston Salem State University

M.S. in Applied Mathematics, North Carolina A&T State University

Instructor Phone: 850-769-1551x3396

Instructor Email: mhairston@gulfcoast.edu

Division Chair: Angelia Reynolds, areynolds@gulfcoast.edu; 850-872-3852

Division Administrative Assistant: Scott Spencer, sspencer@gulfcoast.edu; 850-747-3229

III. Approved (Required) Course Materials and Resources

- a. MyLab Math with Pearson eText for Thinking Mathematically, 8/e, by Blitzer ISBN-13: 9780137551354 or ISBN-13: 9780137551361 or ISBN-13: 9780137551224

- b. A handheld calculator

Note: While calculators with fewer features are acceptable, the GCSC Mathematics Division recommends the TI-83 or TI-84 calculator. Each student is expected to have his/her own calculator. Cell phones and computers **may not** be used as a calculator.

- c. Computer and Internet Access: Students must have access to an internet-connected computer. Access to a printer is also recommended. Computers are available for student use in the college library.

IV. Curriculum

Course Description: Through this course, students will utilize multiple means of problem-solving through student-centered mathematical exploration. The course is designed to teach students to think more effectively and vastly increase their problem-solving ability through practical application and divergent thinking. This course is appropriate for students in a wide range of disciplines/programs. Topics included are logic, set theory, geometry, and personal finance.

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Method of Instruction:

Rather than attending live lectures, students will view online course videos and then complete assigned homework and quizzes using MyMathLab. Consequently, **access to an internet-connected computer is required**. Students should check Canvas frequently for e-mails and announcements. Although course content will be delivered online, **the four tests must be completed in a GCSC-approved proctored environment**. Deadlines for the tests are provided in Canvas.

Broad Goals of the Course:

- To develop students' mathematical problem-solving skills
- To enhance students' calculation skills
- To deepen students' logical and deductive reasoning skills

Student Learning Outcomes:

- 1) Students will determine efficient means of solving a problem through investigation of multiple mathematical models.
- 2) Students will apply logic in contextual situations to formulate and determine the validity of logical statements using a variety of methods.
- 3) Students will apply mathematical concepts visually and contextually to represent, interpret, and reason about geometric figures.
- 4) Students will recognize the characteristics of numbers and utilize numbers along with their operations appropriately in context.
- 5) Students will analyze and interpret representations of data to draw reasonable conclusions.

V. Student Expectations of the Instructor

Office Hours: The instructor will be accessible via email, phone, and if needed Zoom.

Email/voicemail response time: The instructor will respond to emails within 24-48 hours with the possible exception of weekends and holidays. Sending an email to your instructor through Canvas is the fastest way to get a response.

Learning Management System Usage: All of the course content, including course lectures and the access point for My MathLab assignments, will be provided through Canvas. Additionally, the Canvas gradebook will be set up to calculate current averages with the caveat that if an assignment has not been completed, it is not factored into the course average displayed. Course evaluations will also be administered via Canvas.

VI. Expectations of the Student

Students are expected to

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- purchase a MyMathLab code
- have the ability to access and complete assignments in MyMathLab through Canvas
- keep up with the course material
- do their own work (see Academic Integrity)
- communicate with the instructor if they are having trouble with the material or if they are unable to complete an assignment
- read course announcements posted in Canvas

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, the use of any unauthorized assistance in completing coursework. "Plagiarism" includes, but is 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 incidents of academic misconduct, depending on the severity of the incident 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.

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. Before receiving accommodations, you must register with Student Accessibility Services and inform them that you want accommodations for this class. 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.

Withdrawal Policy: Two withdrawals are permitted per 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.

There are two types of withdrawals:

- **Student Withdrawal:** Students may withdraw from a course prior to the scheduled withdrawal deadline published in the academic calendar. The form the student must complete and submit to withdraw from a course is available on the GCSC Admissions webpage. Withdrawals initiated prior to the published withdrawal deadline will be recorded as "W". After the withdrawal deadline, a student cannot withdraw from the course and will receive a grade.
- **Administrative Withdrawal:** This withdrawal is completed by an instructor for failure to make adequate progress in the course or by the Dean for extenuating circumstances.

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Grade Forgiveness: A student may repeat a course when a grade of "D" or "F" has been earned. The last grade counts. However, universities may count forgiven grades in calculating the grade point average. Forgiven grades may also be calculated in determining financial aid eligibility.

Attempts: This course, which is a college credit course, may be attempted three times. On the third attempt, 100% of the full cost of instruction will be charged. Students with major extenuating circumstances may submit a letter of appeal stating the circumstances to the Counseling Center. All grades from the third and subsequent attempts will be calculated in the grade point average.

VII. Measures of Student Performance

Method of Assessment: There will be four proctored tests, and the average of these 4 tests will be worth 75% of your final grade. **Each of the tests must be completed in a GCSC-approved proctored environment.** There will also be assigned homework and a quiz for each section of the course. The average of the assigned homework will be worth 15% of your final grade, and the average of the assigned quizzes will be worth 10%. The quizzes and homework need not be proctored so may be completed from any location.

GCSC Grading Scale: The college catalog will be used to convert the numerical average to a letter grade. The college grading scale is A (100-90), B (89-80), C (79-70), D (69-60), and F (59-0).