



Syllabus

Course Title: Math for Health-Related Professions

Math for Health-Related Professions: MTB 1370, CRN 84269, Fall 2026

1 Credit Hour

Prerequisite: Knowledge of basic arithmetic

Contact Information

Instructor

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Office Hours: Posted in Canvas and at office

Response Time:

Email – Within 1 business day

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Division Chair

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Course Information

Catalog Description:

Math for Health-Related Professions is designed for students completing a degree or certificate in a health-related field. The course is not intended to satisfy general education requirements in mathematics. Topics covered include: 1. Arithmetic; 2. The metric system; 3. Apothecary measurements; 4. Techniques of health-data analysis; 5. Applications to various fields in the health-care system.

Student Learning Outcomes:

The student will:

SLO1: Perform operations involving fractions, decimals, percents, and proportions.

SLO2: Perform conversions within and between the metric, apothecary, and household systems of measure.

SLO3: Compute the number of dosage units or the volume required to administer the correct dose of a medication.

SLO4: Interpret information on medication labels and in prescribers' medication orders.

SLO5: Determine body surface area (BSA), and calculate dosages based on BSA and on weight.

SLO6: Perform intravenous therapy calculations.

Course Materials & Resources:

1. **Textbook:** The on-line textbook (*Health Math*, by J. Lloyd Harris, 2014), is posted in Canvas. There is no additional charge to access the textbook.
2. **Calculator:** A basic calculator (addition, subtraction, multiplication, division, square root) will be needed on all proctored tests and exams. Graphing calculators, scientific calculators, and cell phone calculators will not be permitted.
3. **Internet and Printer Access:** Students must have access to an internet-connected computer. Printer access is highly recommended. (Computers are available for student use in the college library. Items may be printed in the college library on a pay-for-print basis.)

Delivery Method:

This is a web-based course. All online courses at GCSC utilize the Canvas Learning System. Students should read all information presented in the Canvas course site and should periodically check for updates—at least every 48 hours. Rather than attending live lectures, students will receive instruction via course videos, which are embedded in Canvas.

Remember: This course is not one in which students may work at their own pace. Each week there are learning modules, assignments, online lectures, online discussions, and/or exams with due dates. Refer to the schedule within this syllabus and within Canvas for more information.

Each test must be taken **on or before the due date, in a proctored environment**. There are two testing options:

- **Option 1:** Students who live in Bay, Gulf, and Franklin counties are expected to take their tests at the Panama City campus Testing Center or at the Port St. Joe Gulf-Franklin campus.
- **Option 2:** Students may test at an alternative testing center or with a private proctor. This option is subject to approval by the Testing Center and the instructor and must be requested well in advance. Proctors not associated with Gulf Coast State College might charge fees, and the student would be responsible for those fees.

Student Expectations

In this course, communication and feedback might occur through various channels, including GCSC email, Canvas Inbox, Canvas Announcements, Canvas Discussions, Microsoft Teams or Zoom, assignment feedback, and instructor office hours. Review the statements below so that you understand the expectations for communication.

As a student at Gulf Coast State College, you are expected to:

- **Adhere to Course Guidelines:** Follow the guidelines detailed in the course syllabus, along with any additional instructions provided by the instructor. This includes understanding and complying with the course objectives, grading criteria, and academic policies.
- **Maintain Regular Contact:** Keep in touch with your instructor and classmates via your GCSC email or other designated communication channels. Regular contact helps clarify doubts, share ideas, and foster a collaborative learning environment.
- **Active Participation:** Engage actively in class discussions and submit assignments on time. Your active participation is crucial for your academic success and contributes to a vibrant learning community.

As your instructor, my commitment to you is to:

- **Provide Timely Feedback:** I will review and provide feedback on your assignments and submissions promptly. My goal is to help you understand your strengths and areas for improvement, which is crucial for your academic growth.
- **Respond Via Canvas Inbox:** I will respond to your emails or messages within 24-48 hours (excluding weekends), unless otherwise noted. I understand the importance of clear and timely communication in addressing your questions and concerns.
- **Post Regular Announcements:** To keep you updated and help you manage your time effectively, I will send out regular reminders via announcements and/or email. These reminders will include important dates, upcoming assignments, and any changes to the course schedule.
- **Maintain Weekly Office Hours:** I will maintain regular weekly office hours, but I can also be available by appointment. This is to ensure I'm available for any questions or concerns that may come up during the week.

Course Schedule

The semester is divided into 4 units. The contents of each unit, referenced by textbook sections (called “sessions”), are given below. Each unit will have several on-line at-home quizzes and a proctored unit test. Unit test due dates will be spaced approximately every two weeks. (A detailed schedule, which includes specific quiz and test deadlines, will be posted in Canvas on the first day of class.) At the end of the semester, a comprehensive final exam will be given.

Unit 1

- Session 1.2: Introduction to Fractions
- Session 1.3: Addition and Subtraction of Fractions
- Session 1.4: Multiplication and Division of Fractions
- Session 2.2: Decimals – Place Values and Rounding
- Session 2.3: Adding, Subtracting, Multiplying, and Dividing Decimals
- Session 2.4: Converting a Decimal to a Fraction and Vice Versa
- Section 3.2: Proportions
- Session 3.3: Percent
- Session 3.4: Percent Equations

Unit 2

- Session 4.2: Metric System
- Session 4.3: Apothecary and Household Systems
- Session 4.4: More Conversions
- Session 5.2: Abbreviations and Understanding Medication Orders
- Session 5.3: Reading Medication Labels

Unit 3

- Sessions 5.4 and 5.5: Dosage Calculations Using Ratio/Proportion and Dimensional Analysis
- Session 6.2: Oral Medications
- Session 6.3: Parenteral Medications
- Session 6.4: Reconstitution of Solutions

Unit 4

- Session 7.2: Pediatric and Adult Dosage Calculations
- Session 7.3: IV Calculations
- Session 7.4: Heparin Calculations
- Supplemental Session: Basic Insulin Calculations

Grading

GCSC Grading Scale

All grades will be posted in the student grade book in Canvas and will be assigned according to the following scale:

A	90%-100%
B	80%-89%
C	70%-79%
D	60%-69%
F	59% and below

Calculation of Grades

Test average = 60%; Quiz Average = 15%; Final Exam = 25%

At the discretion of the instructor, the final exam score can substitute for the lowest unit test grade, if that substitution improves the student's final average.

The college grading scale is: A (100-90), B (89-80), C (79-70), D (69-60), and F (59-0).

Course Policies

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 Resources. Appropriate academic accommodations will be determined based on the documented needs of the student. Please visit [GCSC's Student Accessibility Resource \(SAR\) webpage](#) to learn more. For information regarding the registration process, email sar@gulfcoast.edu or call 850-747-3243.

Attendance Policy

As this is an online class, there is no attendance policy *per se*. However, students are expected to make regular progress with at-home assignments and must meet all quiz and test deadlines. **The instructor reserves the right to withdraw students who have missed the first two tests without permission.**

Instructors will monitor assignment submission at the beginning of each semester. If you submit no assignments during this period, you may be withdrawn from the course. You will be financially responsible for the course and a "W or NS" will appear on your transcript. Withdrawal from a course may also have implications for financial aid.

Make-Up Work Policy

Students who miss a test must contact the instructor as soon as possible. If you miss a unit test and you provide a valid, documented excuse (for example, illness with a doctor's note), the instructor may, at his/her discretion, permit a make-up test.

Withdrawal Policy

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 (financial aid, scholarships, grants, etc.). There are two kinds of withdrawals---student and administrative.

- *Student Withdrawal (W1)* - Students wishing to withdraw must complete the online Student Withdrawal Form before the scheduled withdrawal deadline as published in the College catalog. Student withdrawals initiated prior to the scheduled withdrawal deadline will be recorded as a grade of "W." The withdrawal deadline for an off-term or condensed term is one week after midterm.
- *Administrative Withdrawal (W2)* – A faculty member may withdraw a student up to the published withdrawal deadline for violation of the class attendance policy in which case the student will receive a grade of "W." The withdrawal deadline for an off-term or condensed term is one week after midterm.

Students cannot withdraw from developmental studies courses (college-preparatory classes) after the drop/add period without written permission from their instructor and/or their academic advisor.

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. GCSC professors report every instance of student academic misconduct to the college for inclusion on the student's records.

Most course syllabi include an academic honesty policy and the consequences for violating this policy. Familiarize yourself with course policies regarding authorized or unauthorized use of AI to avoid the pitfalls of academic dishonesty.

The following definitions will apply:

"Cheating"

includes but is not limited to use of any unauthorized assistance in taking quizzes, tests, or examinations; dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; the acquisition without permission of tests or other academic materials belonging to a member of the College's faculty.

"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 as well as the purchase of papers or projects. It can also include overuse of an editing program like Grammarly or submitting work written by an Artificial Intelligence (AI) generator like ChatGPT. Make certain to consult your course syllabi for your instructor's guidelines of AI material.

"Self-plagiarism"

occurs when a student submits the same or considerably similar document to fulfill requirements in different classes. For example, if a student submits a term paper in Religion they originally wrote for an English class, this is self-plagiarism. Once a paper receives a grade in one class, it cannot be submitted again for another class.

"Generative Artificial Intelligence (AI)"

is technology that uses machine learning to create new content, such as text, images or code, based on user input. These systems are trained on vast amounts of data, including large language models and image or code generators. Common examples include ChatGPT, GitHub, Copilot, Google Gemini, Perplexity, and the Grammarly AI function.

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 0) for the test, assignment, or activity, to failure of the course, to suspension or dismissal from the college.

Classroom Recording

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 in the GCSC Student Handbook.

Generative Artificial Intelligence (AI) Policy

The use of generative AI tools in academic work requires clear guidelines to maintain academic integrity. Please review the policy selected for this course regarding the use of AI tools such as ChatGPT, Copilot, Grammarly's AI features, and similar platforms for assignments, research, and other coursework.

See the student handbook for further information. Students with questions about acceptable use should consult their instructor.

Prohibited Use of AI

The use of AI-generated content is strictly prohibited in all assignments, coursework, and throughout all stages of the work process, such as brainstorming, outlining, or drafting. This includes but is not limited to, tools such as ChatGPT, Copilot, and Grammarly's AI function. Use of AI tools will be treated as a violation of academic integrity and may result in penalties, including a zero on the assignment and additional disciplinary actions as outlined in the college's academic integrity policy.

Anti-Discrimination Policy

Gulf Coast State College does not discriminate against any person in its programs, activities, policies or procedures on the basis of race, ethnicity, color, national origin, marital status, religion, age, gender, sex, pregnancy, sexual orientation, gender identity, genetic information, disability, or veteran status. All questions or inquiries regarding compliance with laws relating to non-discrimination and all complaints regarding sexual misconduct or discrimination may be directed to Amanda Reed, Executive Director of Human Resources/Title II/504/Title IX Coordinator and Employment Equity Officer, Gulf Coast State College, 5230 W. US Highway 98, Panama City, FL 32401; 850-769-1551, ext. 3516. Rules, policies, fees, and courses described in this catalog are subject to change without notice.

Syllabus Policy

For any syllabus posted prior to the beginning of the term, the instructor reserves the right to make minor changes prior to or during the term. The instructor will notify students via e-mail or Canvas announcement when changes are made in the requirements and/or grading of the course.

Student Support Resources

Gulf Coast State College is committed to providing you with the resources you need for success as a student and beyond. View all the academic and student support resources provided at GCSC on the [Student Services web page](#).

Course Technology & Support

To successfully participate in this online course, students must have basic computer and digital information literacy skills and meet the following technology requirements:

- **Computer:** Up-to-date web browser that supports the Canvas learning management system; please refer to the system requirements for compatibility and information on using the Canvas app on mobile devices.
- **Internet Speed:** Minimum bandwidth of 8 Mbps upload/download speed to effectively engage in online activities and access multimedia.

- **Office 365 software:** Available for free download through GCSC Information Technology Services (ITS).

If you need technical support, contact the ITS Help Desk, available 24/7 at (850) 913-3303.

Additional Encouragement and Resources

Study Strategy: Studying requires discipline, tenacity, and hard work. View this course as a job. A good strategy is as follows:

1. First, watch the course video for the Session you want to work on. Take notes, just as if you were in class. When the video asks you to pause and work out a problem, do so. Keep your notes organized in a notebook.
2. Second, work ***all*** of the assigned practice and homework problems from the textbook, checking your answers as you go along. (All of the answers are found in the textbook.) Keep your worked problems organized in a notebook, in a separate tab from your notes.
3. As needed, visit or e-mail your instructor with specific questions. You should ask about specific homework or practice problems, or specific problems worked in the video or in the textbook. When referencing homework/practice problems or textbook examples, be sure to give your instructor the problem number, the module/session number, and the page number. If referencing a video, give the module and session numbers, as well as the time in the video that the problem occurs (for example, 3:52). The more specific you are, the better able your instructor will be to render assistance.
4. After you've done all of the above, then attempt the quizzes.

Available help:

1. **Your Instructor:** Your instructor has dedicated office hours during which he is available either face-to-face or virtually. Students having difficulty are strongly encouraged to contact the instructor for additional help. Students who contact the instructor via e-mail can expect a reply within 1 business day. Voicemail will be returned within 1 to 3 business days.
2. **Math Lab:** Math tutors are available face-to-face and virtually via the Math Lab. There is no charge for Gulf Coast State College students enrolled in this course. See the GCSC Math Lab website for hours of operation.
3. **Counseling Center:** The Counseling Center is located on the first floor of Student Union East.