



CAROLINA
UNIVERSITY

Mathematics II

GC 112 70

Fall 2024 Syllabus

PROFESSOR: PREMITHA PANSALAWATTE

Office Location: Deeds 315

Office Hours: in-person / via Google Meet

Wednesdays 8:45 AM –10:15 AM (Link: <https://meet.google.com/typ-bmou-tus>)

Thursdays 10:30 AM – Noon (Link: <https://meet.google.com/njs-jsbd-tzz>)

Thursdays 1:00 PM – 2:00 PM (Link: <https://meet.google.com/miq-yjnh-tas>)

Meeting appointments outside office hours can be scheduled via email.

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Carolina University Mission Statement

We are a Christ-centered university committed to student success.

Course Information

Course Prerequisites

GC 111 - Mathematics I

Course Description

This course is a continuation of GC111 that includes properties functions, graphs, and applications of exponential, logarithmic, and trigonometric functions.

Course Delivery and Methods

Lectures will be delivered as pre-recorded lecture videos posted online. The course will utilize student three types of assessments. Interactive Assignment, Homework and Test/ Exam. Three tests and a comprehensive final exam will be given during the 7th week of the session.



Objectives (Course Learning Outcomes)

Upon completion of this course, students will be able to:

1. Define one to one functions and composition of functions and graph exponential and logarithmic functions
2. Construct growth and decay models and solve model-based problems
3. Compute trigonometric function values and use trigonometric functions to solve geometric applications
4. Construct composite and inverse trigonometric functions using transcendental functions
5. Solve simultaneous linear equations and work with partial fractions

Course Resources

Required Texts:

Textbook: *Precalculus, 12th Edition*
Author(s): Sullivan, Michael
Textbook ISBN-13: 9780138279004

Required Resources:

- Lecture notes and lecture recordings
- The textbook
- Students are required to get access to the Pearson MyLab Course using the provided information below.

Note: If you took the Mathematics, I course in the Fall 2024, you already have access to this Pearson MyLab course. You will not need to purchase access again.

To register for Pearson MyLab - Mathematics II:

1. Go to <https://mlm.pearson.com/enrollment/pansalawatte81056>
2. Sign in with your Pearson student account or create your account.
3. For Instructors creating a student account, do not use your instructor credentials.
4. Select any available access option, if asked.
 - Enter a prepaid access code that came with your textbook or from the bookstore.
 - Buy instant access using a credit card or PayPal.
 - Select **Get temporary access without payment.**
5. Select **Go to my course.**
6. Select **GC 112 - Mathematics II** from My Courses.

If you contact Pearson Support, give them the course ID: [pansalawatte81056](#)



To sign in later:

1. Go to <https://mlm.pearson.com>
2. Sign in with the same Pearson account you used before.
3. Select **GC 112 - Mathematics II** from My Courses.

Recommended Resources:

Extra study tools from Pearson

Course Requirements and Assignments

Homework assignments: Homework will be assigned for each section covered in the class every week. The homework assignments will be online either through file upload or via the **Pearson MyLab** course management tool, which is accessible with the link posted in the online MyCu homework assignment. Homework assignments based on weekly material will be due at 11:30 PM each Friday of the week. When instructed, students must upload additional files to show the detailed steps in obtaining answers to problems. A correct answer with incorrect or incomplete procedures, calculations, or notations will not earn full credit.

Each homework will be graded out of 100 points. Take the time to do your homework as close to perfect as possible. This will not only bring your homework grade near perfect, which increases your course average but will also better prepare you for the tests and final exam. Many exam problems will be similar, if not identical, to assigned homework problems. However, during a test, you will not have any other resources available, such as your textbook, lecture notes, email, or tutoring services. Taking the time to master the homework using available resources only when needed is the best way to prepare for exams. Most sections depend heavily upon a previous section, so it is also best to do the homework as it is assigned so that you do not get behind with the course material. No late homework assignments will be accepted.

Copying homework solutions from other students and submitting them will be identified using technological tools and will result in a “zero” grade for the homework for both you and the student whose answers you have copied and submitted. Therefore, submitting original work and not letting other students copy your answers are your responsibilities. Academic dishonesty will be reported according to the university's standard policies, and not letting other students copy your answers is your responsibility. Discussing homework problems with your peers and working on them as a team is fully acceptable and encouraged.

Tests: There will be three tests and the comprehensive final exam that will be covering each chapter of the textbook. All tests will be given online through the Pearson Mylab with the access link provided through MyCU. You are required to use ProctorFree online proctoring system to do all tests. It is your responsibility to provide a device with proper technical requirements and meet the network requirements to run ProctorFree correctly before the test. **If there are any technical issues related to online test that is due to network, students must reach out to University IT department. For ProctorFree related issues students are required to contact ProctorFree student support directly.** Please see the Proctorfree requirements below.



ProctorFree Requirements: All proctored exams will be recorded and reviewed by human auditors, and you risk invalidating your exam session and receiving a grade of zero. During your proctored exam you are required to be seated at a workstation where your full face and at least the top half of your torso is visible and in view of the web camera. If this requirement is not met, you are not eligible to receive credit for the exam, that means you'll get a zero for the test. Please know that the Proctor-free will identify anomalies and provide the instructor with a report of anomalies, and activity it logs for each student along with the recorded video of you taking the test and the view of your screen. The browser will be locked, and you are not able to open other browsers to look for answers online. However, if you have more than one screen connected or try to use other electronic devices to browse internet ProctorFree will detect it, and the instructor can see through the video, therefore will be caught. Any violations of the exam rules such as possessing not-permitted items, speaking to others during the test, or having more than two anomalies identified by Proctor-free will result in a zero grade for the test.

Final exam: The final exam will be a cumulative exam given online during the university's final exam window. Students are required to use ProctorFree for the final exam. Note that you will NOT be allowed to use calculators during any exams.

Interactive Participation: There will be a weekly Interactive Assignment posted on the Pearson MyLab accessible via MyCU learning management system (LMS), which will be discussed in the interactive session each week (Attendance is mandatory). The interactive assignments contain problems on important topics covered each week, contains additional video guidance, and specifically designed to enhance student understanding of the material. These interactive assignments are graded assignments. Students are required to submit the answers to the interactive assignment before the due date to receive interactive participation grade and to succeed in the course.

Pearson MyLab Access: **Getting access to the *Pearson MyLab* on or before end of the first week of the course is mandatory.** Obtaining Pearson MyLab access and maintaining uninterrupted access through the semester is students' responsibility. Professor will not provide extensions to assignment or tests due to not having active status in the Pearson course. If Pearson access is not obtained within the first week of the course, students may get unenrolled in the course. **Please know that Pearson is an external service to the campus. If there is any issue with your Pearson account, you need to contact them to get it resolved.**



Course Schedule

Section	Material covered
5	Exponential and Logarithmic Functions
5.1	Composite Functions
5.2	One-to-One Functions; Inverse Functions
5.3	Exponential Functions
5.4	Logarithmic Functions
5.5	Properties of Logarithms
5.6	Logarithmic and Exponential Equations
5.8	Exponential Growth and Decay Models; Newton's Law; Logistic Growth and Decay Models
5.9	Building Exponential, Logarithmic, and Logistic Models from Data
6	Trigonometric Functions
6.1	Angles, Arc Length, and Circular Motion
6.2	Trigonometric Functions: Unit Circle Approach
6.3	Properties of the Trigonometric Functions
6.4	Graphs of the Sine and Cosine Functions
6.5	Graphs of the Tangent, Cotangent, Cosecant, and Secant Functions
6.6	Phase Shift; Sinusoidal Curve Fitting
7	Analytic Trigonometry
7.1	The Inverse Sine, Cosine, and Tangent Functions
7.2	The Inverse Trigonometric Functions (Continued)
7.3	Trigonometric Equations
7.4	Trigonometric Identities
7.5	Sum and Difference Formulas
7.6	Double-angle and Half-angle Formulas
7.7	Product-to-Sum and Sum-to-Product Formulas
11	Systems of Equations and Inequalities
11.1	Systems of Linear Equations: Substitution and Elimination
11.5	Partial Fraction Decomposition



Tentative Course Schedule:

Week #	Sections Covered	Homework #: Due	Test #: Posted - Due Date
Week 1	5.1, 5.2, 5.3, 5.4	Homework 1	
Week 2	5.5, 5.6, 5.8	Homework 2	Test 1: 10/29/24 - 11/01/24
Week 3	6.1, 6.2, 6.3	Homework 3	
Week 4	6.4, 6.5, 6.6	Homework 4	Test 2: 11/12/24 - 11/15/24
Week 5	7.1, 7.2 7.3, 7.4	Homework 5	
Week 6	7.5, 7.6, 7.7	Homework 6	Test 3: 11/26/24 – 11/29/24
Week 7	11.1, 11.5	Homework 7	Final Exam (12/03 – 12/06/24)

Course Specific Policies

- Late assignments will NOT be accepted.
- Technical issues with personal devices will not be considered a valid reason to miss course assignments, therefore students will not receive extensions to assignments due to such reasons.
- Students are required to maintain uninterrupted access to Pearson MyLab service through the session.

Use of Artificial Intelligence

The use of generative AI tools is permitted in this class for the following activities:

- Brainstorming and refining ideas
- Fine-tuning research questions
- Finding information on a topic
- Drafting an outline
- Checking grammar and style
- AI-specific assignments (per the provided instructions)

The use of generative AI tools is not permitted for the following activities:

- Impersonation in classroom context (e.g. composing discussion board posts)
- Completing group work
- Writing a draft of a writing assignment
- Writing entire sentences, paragraphs, or papers to complete class assignments



Course Grading

Assignment Type	Weight (points or percentage)
Homework	20%
Test 1	15%
Test 2	15%
Test 3	15%
Interactive Participation	10%
Comprehensive Final Exam	25%
Total	100%

Course Assessment Mapping

Assessment	Objective(s) Met
Test 1	01
Test 2	02, 03
Test 3	03, 04
Final Exam	01 - 05



University Policies

Late Assignment Policy

- Students are expected to inform professors prior to a scheduled absence and understand work may be made up at the professor's discretion to ensure full credit.
- Upon an unexpected absence from class, the student should contact the professor immediately to discuss make-up work and submit such work in a timely manner.
- Students should not wait until the end of the session to deal with concerns about absences.

Grading Scale

Grade	Point Value	Range	
		Undergraduate	Graduate
A	4	94-100	96-100
A-	3.7	90-93	93-95
B+	3.3	87-89	90-92
B	3	83-86	87-89
B-	2.7	80-82	85-86
C+	2.3	77-79	82-84
C	2	73-76	79-81
C-	1.7	70-72	77-78
D+	1.3	67-69	74-76
D	1	60-66	70-73
F	0	<60	<70



Instructor Student Interaction & Communication

- Please use email whenever possible.
- Throughout an active course, faculty should respond to all emails and voicemail messages within 24 hours.
- Grading of assignments is to be done within 3 days for regular assignments (this includes attendance) and 7 days for larger assignments.
- Some assignments may require additional time to grade due to the length of the project and the directive to provide substantive feedback that will assist you throughout the learning process. In cases where the assignment is not returned with feedback within the stated period, refer to communication from your professor to facilitate expectations on subsequent assignments. Students are not expected to apply adjustments on subsequent assignments in advance of returned grading and feedback.

All CU faculty and students are provided with means of electronic communication (e.g. email, video conferencing, chat features, discussion boards, etc.) All employees and students are required to use official university electronic accounts for official university correspondence. This policy is meant to include both synchronous and asynchronous communication. **Faculty and staff are not obligated to read, receive, or respond to communications where these guidelines are not followed.** Email must be checked regularly, especially when enrolled in an active course. Adhere to the following guidelines when communicating online with professors, university employees, and other students.

- **Accounts:** Only university email and related systems should be used for institutional communications. Do not use personal email or video conferencing accounts.
- **Names:** Refer to professors and CU employees by their last names with appropriate honorifics (e.g., “Dr.” or “Prof.”). For professors, if you cannot easily verify their degree or status, “Prof.” is most appropriate—not “Ms.” or “Mr.” *Under no circumstance should you use first names unless given explicit permission.*
- **Introductions:** Use subject lines appropriately and begin any course-specific email with your first and last name, the course number, and your exact section number or meeting time (e.g., “101-05,” “9 am MW,” but not “this morning”).
- **Grammar and Style:** All written communications must conform to standard English. Emails and discussion board posts should not resemble text message, chat, or social media posts. Use complete sentences with correct capitalization, spelling, punctuation, and grammar.
- **Coordination:** All members of a synchronous, online interaction should participate by the same mode of interaction when possible. For example, join video conferences with video. This is especially true for one-on-one meetings with your professor and small group video discussions in or outside of class.
- **“Class” Conduct:** When participating in synchronous classes or meetings (especially when using video), conduct yourself as if in the classroom. Be on-time and mentally present. Be seated at a desk or table. Dress according to classroom standards. Do not introduce distractions into the interactions and be prepared to stay for the duration of the session per normal classroom behavior.
- **Complexity:** In general, asynchronous communication is appropriate for simple questions and activities. Complex questions that require more than one simple response should be addressed synchronously—during class is often best. If you are unable to ask your question



during class, or it is too personal to do so, use an asynchronous method to arrange a synchronous meeting.

- **Boundaries:** Synchronous communication is less formal than asynchronous. However, the appropriate use of names, language, acronyms, and emojis must still conform to classroom standards. Since we do not all share the same online culture, be prepared to explain yourself if your acronym or emoji is not understood. Be polite and respectful when asking for clarification, and gracious when misunderstandings occur.

Student Complaints

Informal Resolution

Carolina University seeks to provide an excellent educational experience for all students. If a student wishes to make a complaint of an academic nature, in the first instance, they should seek to resolve the matter by informal discussion with the faculty member.

If the discussion is in person, it is recommended that the student follow up with an email summarizing the discussion (complaint and resolution if one is reached).

If the discussion with the faculty member does not resolve the issue, the student may also contact Prof. Murchtricia Jones ([Murchtricia Jones <jonesm_2@carolinau.edu>](mailto:Murchtricia.Jones@carolinau.edu)) Interim Chair of the School of Computing, Applied Science & Engineering.

Filing a Formal Complaint

If informal discussions do not resolve the complaint, a student may file a formal complaint. No student shall suffer retaliation or other punitive action for the sole reason of filing a complaint or participating in a related process. A student must be enrolled at the institution to file a complaint under this policy. A student may file a complaint about a matter related to teaching, learning, assessment, grading, or student performance in a course.

A student must complete and submit the Student Academic Complaint Form to the Registrar's Office no later than 7 days after the events that are alleged to have caused the complaint. Any supporting evidence must be attached to the form. A vague complaint stating unsupported allegations, obvious falsehoods, based on differences of opinion about academic content or faculty expertise, or is unrelated to academic matters is liable to be dismissed summarily.

For the full text and a thorough explanation of the university's complaint policy, visit: <https://catalog.carolinau.edu/student-academic-complaints>



Course Attendance and Participation

All courses follow specific attendance policies found in the [Academic Catalog](#) for that course level and format. It is the student's responsibility to be familiar with these policies and to keep track of their own attendance. Per the university attendance policy, accrued absences may contribute negatively toward a student's final grade. Attendance and participation may be used by instructors to determine a portion of a student's grade for a particular course. Whereas attendance is typically defined by statuses identifying a student's presence in a class, participation typically includes the assessment of activity within that course. In some cases, the methodology, subject matter, learning environment, or other factors may require attendance.

Traditional in-class attendance will be recorded for hybrid courses, whereas attendance for online courses will be gauged by regular academic engagement. Students should refer to the course syllabus for the course's grade weighting table and course-specific policies regarding the grade percentages attributable to each component in a course, which may include attendance and participation. It is the student's responsibility to be familiar with these policies and to keep track of their own attendance and comply with the rules.

Disability Assistance

Carolina University welcomes students, faculty, staff and visitors with disabilities to our campus and to our programs. Our goal at CU is to ensure an accessible, inclusive welcoming learning and working environment for individuals with disabilities while complying with federal and state regulations.

Students with disabilities are encouraged to reach out to University Accessibility Services (UAS) as soon as possible to explore possible accommodations. UAS serves as a central resource on disability-related information, procedures and services for the university community and partners will work with the student and any other campus partners to identify barriers and implement plans for access. More information about UAS can be found at <https://carolinau.edu/university-accessibility-services>

Academic Integrity and Misconduct

The Student Handbook has a detailed list of different ways students show a lack of academic integrity, including academic technology misuse, cheating, complicity, fabrication or invention, falsification, forgery, multiple submissions, plagiarism, and sabotage.

Academic integrity is the honest and responsible conduct of studies, scholarship, research, information collection, and presentation. The university expects students to submit assignments that are original to them and to properly cite and reference other peoples' ideas using the prescribed style guide. The very foundation of a good university education is academic integrity. Learning how to express original ideas, cite sources, work independently, and report results accurately and honestly are skills that carry students beyond their academic careers. If a



student is uncertain about an issue of academic honesty, they should consult the faculty member to resolve questions in any situation prior to the submission of the academic exercise.

Maintaining your academic integrity involves:

- Creating and expressing your own ideas in course work.
- Acknowledging all sources of information including verbal, written, digital, and graphic.
- Completing assignments independently or acknowledging collaboration.
- Attending classes, exams, and required academic events.
- Accurately reporting results when conducting your own research.
- Honesty during examinations.
- Not tampering with or misusing technology.
- Not aiding or abetting other students in violating any academic rules or policies.

Courses at Carolina University will utilize proctoring for select exams to ensure exam integrity. Per Carolina University directives, all exams that represent 25% or more of a course grade are required to be proctored. Instances of cheating or inappropriate behavior will be considered violations of the Academic Integrity policy and will result in disciplinary action.

Plagiarism is the use of another person's distinctive ideas or words without acknowledgment. All researchers are expected to acknowledge the use of another author's words by the use of quotation marks around those words in the text of a paper and by appropriate citations.

Plagiarism can occur in an oral, written, or media project submitted for academic credit or for some other benefit. Examples of plagiarism include (but are not limited to), the following:

- Word-for-word copying of another person's ideas or words;
- Mosaic (interspersing of one's own words here and there while, in essence, copying another's work);
- Paraphrasing without citation (the rewriting of another's work, yet still using their fundamental idea or theory);
- Submission of another's work as one's own;
- Having another person write a paper;
- Buying or procuring a ready-made paper from a research paper "service" on the Internet or from another such service;
- Neglecting quotation marks on material that is otherwise acknowledged;
- Fabrication of references (inventing or counterfeiting sources)