MAC1147 - Precalculus With Trigonometry Summer B 2025 Syllabus

The information in this syllabus is preliminary and subject to change. Any such changes will be communicated via Canvas.

Contact Information

The course home page is located in Canvas.
The Inbox in Canvas is the preferred method for communication for the class.

Instructor

Name: David Maynoldi
Email: david.maynoldi@ufl.edu
Office: LIT431
Office Hours: Monday and Wednesday, 12:30 - 1:45PM

Teaching Assistant (TA)

Name: Abhiram Hegade
Email: a.hegade@ufl.edu
Office: LIT481
Office Hours: TBD

Introduction

Course Description and Objectives

In this course you will gain understanding of algebraic functions, coordinate geometry, exponential and logarithmic functions, and trigonometry.
This **fast-paced course** is designed as a review to prepare you for calculus. If you prefer, you can take it over two semesters by taking MAC1140 Precalculus Algebra and then taking MAC1114 Trigonometry. You have until the end of the drop/add period to change your schedule.

Learning Outcomes

The following outcomes will be assessed using the course assignments: homework, quizzes, and exams.

- **Content:** You will demonstrate competence in the terminology, concepts, theories, and methodologies used within the discipline. After completing this course students will be able to employ strategies in solving problems involving algebraic functions, exponential and logarithmic functions, and trigonometric functions. The homework, quizzes, and exams will assess your content outcome.
- **Communication:** You will communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the discipline. Throughout this course you will formulate and solve mathematical models using algebraic functions, exponential and logarithmic functions, and trigonometric functions. The exams will assess your communication outcome.
- **Critical Thinking:** You will analyze information carefully and logically from multiple perspectives, using discipline-specific methods, and develop reasoned solutions to problems. In this course, you will reason in abstract mathematical systems and apply mathematical models using algebraic functions, exponential and logarithmic functions, and trigonometric functions. The homework, quizzes, and exams will assess your critical thinking outcome.

Prerequisite, Course Sequence, and Credit

This course covers 4 credit hours of General Education Mathematics (M) requirements. A minimum score of 61% on the ALEKS exam or prior MAC1147 credit (or higher) is required. This course assumes prior knowledge of intermediate algebra (Algebra 2) and trigonometry and the ability to do arithmetic without a calculator.This course is designed for students who intend to take MAC2311. If your goal is to take MAC2233, then you should consider talking to your advisor about taking MAC1140 instead of this course since there is no trigonometry requirement for MAC2233.
If you are taking this course for general education credit or the pure math portion of the Math requirement, but you do not need precalculus for your major or as preparation for calculus, you should consider taking MGF 1106, MGF 1107, or MAC1105. For more information on math courses and math advisors go to the Math Department website. A minimum grade of C (not C-) in MAC1147 satisfies four hours of the general education requirement and also satisfies the pure math portion of the state Writing/Math requirement. Note: You can receive at most four credits for taking both MAC1147, and MAC1140 or MAC1114, and at most five credit hours for taking MAC1147, MAC1140, and MAC1114. After you successfully complete this course (C or better) you can advance to MAC2311 Calculus 1, or into MAC2233 Survey of Calculus.

Required Materials

The course text will be available for free in Canvas. There is no textbook purchase required.

- Precalculus 2e, by Abramson et al. Published by OpenStax
- Supplemental notes by Carmichael

E-Learning and Canvas

Canvas is the central website for our class. Log in with your Gatorlink credentials. All class announcements, assignments, lecture outlines, and other information will be posted there. You are responsible for verifying that your grades are accurate.
Your grades for assignments will also be posted on Canvas. I am always happy to discuss the content of an assignment, but grade issues must be dealt with in a timely manner. **You have one week after a score has been posted to contact your instructor/TA if you believe there has been a grading or a recording error.**

Lectures

Lecture days are indicated on the calendar. Prerecorded lectures are available in Canvas.
If you are feeling sick, stay home. Attending class is not worth endangering your or your classmates' health.

Calculator Policy

No calculators or other electronic devices will be allowed on quizzes or exams.
A calculator will sometimes be needed to complete homework questions. Desmos is a good online calculator.

Discussion Session

Your TA will hold a discussion session twice a week during the time indicated on your schedule. This is a time for you to ask questions, do problems, and see examples from your TA. Attendance in discussion is mandatory as this is where assessment of your skills will take place.

People Who Can Help

- **Your Instructor** during office hours. You are encouraged to come and ask questions.
- **Your Teaching Assistant (TA)** during discussion and office hours. You are encouraged to ask questions.
- Academic Resources offers free online tutoring on weekdays. Go to the Academic Resources Website to find the hours. You can also request free one-on-one tutoring.
- Math department TAs hold drop-in hours in Little Hall every weekday. You can check the Tutoring Website for details.
- For help resolving technical issues (computer problems, Gatorlink, etc.) contact the UF Computing Help Desk online, or by phone 352-392-HELP.
- Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Success

Success in MAC1147 comes from your effort and attitude. Keeping up with the material is critical. Research indicates that it is more effective to do a small amount of math every day rather than a large amount in a single day. Studies have also shown that the most important factor for success in math is class attendance and participation. Students who come to class succeed much more often than those who do not.
That said, most of the learning you will do in this course will come from the work you do. Mathematics is not a spectator sport. Watching someone solve a problem is very different from being able to solve it yourself. In order to succeed you must be willing to put in the time and effort to answer questions independently.

Course Elements

Homework

Each lecture has a corresponding homework assignment; see Canvas for the due dates. Finishing these assignments is the most important activity you can do to succeed in the class. The homework will solidify the concepts introduced in the lecture and prepare you for quizzes and exams. These assignments will assess your critical thinking and communication of the lecture content.

Discussion Quizzes

There will be six quizzes during discussion on the dates in the course schedule below. Quizzes will be free response and graded based on the accuracy of your work shown. You should treat the quizzes as practice for the exams. These assignments will assess your critical thinking and communication of the lecture content.

Attendance

There will be six attendance checks that will count towards your grade. Three of them will be in discussion, and the other three will be in lecture. The dates for these are in the course schedule below.

Exams

There will be three exams. Exams will be done in-person and will assess your critical thinking and communication of the lecture content.

- Exams will be taken on the dates and times in the course schedule below. Exams 1 and 2 will be held in LIT207. Exam 3 will be held in LIT217.
- You are responsible for material covered in the lectures, including example problems from lectures, all assigned homework problems, and all review material.
- You should bring to each test **only** a pen or pencil and eraser.
- No calculator or other electronic device is allowed.
- Failure to abide by exam rules will result in a failing grade for the course.

Extra Credit

There are two ways to earn extra credit in this class. Each can earn you a bonus of up to 1% on your course grade.

- Canvas discussion boards: There will be three discussion boards (one for each exam). To receive full credit on a discussion board, you must make 2 meaningful contributions. A meaningful contribution includes:

  (i) Asking a coherent mathematical question including details of your own attempt. (So "How do you do question 12?" doesn't count)

  (ii) Providing a substantive and understandable solution to a fellow student's question. (So "The answer is 8." doesn't count)

- Practice exam questions: A few days before each exam, you will be given a set of practice exam questions. Your solutions to these will be collected on exam day during lecture. You must show your work to receive credit. They will be graded based on completion.

Grading

Course Grade Breakdown

Item	Grade %	Comments
Homework	15%	Lowest two scores dropped
Discussion Quizzes	15%	Lowest score dropped
Attendance	5%	Lowest score dropped
Best Two Exams	50%	Worth 25% each
Lowest Exam	15%	
Extra Credit	Up to 2%	

Note: Some scores may not be added to Canvas until the end of the semester.
Your course letter grade is based on the overall percentage you earn according to the items above. Final percent scores within 0.50% of a cutoff will be rounded up (e.g. 89.50% is an A, 89.49% is an A-).

A	90%	B-	77%	D+	64%
A-	87%	C+	74%	D	60%
B+	84%	C	70%	D-	57%
B	80%	C-	67%	E	Below 57%

Note that a grade of C- does **not** give General Education credit. A grade of C or better is required to advance to the next course.
For information on dropping courses and withdrawals go to this website
For information about UF grades and grading policies go to this website

Make-up Policies

All makeup work must be completed before the last exam (Exam 3).

- **Exams 1 and 2** - If you have a conflict due to a UF sponsored event or an assembly exam in another course with a higher course number, you must bring documentation of it to the instructor at least one week (otherwise 5% penalty) before the exam to sign up for the make-up, which will be given soon after the test date or at the end of the semester.

  If you miss for any other valid reason you must notify the instructor within 24 hours of the exam (otherwise 5% penalty). I cannot make a full list of valid reasons to miss an exam, but a valid reason is something that is unavoidable, not an activity you can choose to partake in or not. You must provide appropriate documentation to take a makeup Exam 1 or 2 (otherwise, 15% penalty). Makeup Exams 1 and 2 must be done as soon as possible, and no later than August 6.

- **Exam 3** - No makeups unless you have a valid documented reason.

- **Class conflict** - University policy states that an assembly exam takes precedence over an evening class and the evening class instructor must provide make-up work and cannot penalize students who miss because of an assembly exam.

- **Quizzes** - The lowest discussion quiz will be dropped. This is not a free pass to skip a quiz. A makeup quiz will only be given if you notify the instructor within 24 hours of the quiz and send documentation of a valid excuse.

- **Attendance** - The lowest attendance grade will be dropped. This is not a free pass to skip class. You will only be allowed to make up the missed attendance check if you notify the instructor within 24 hours of the missed class and send documentation of a valid excuse.

- **Homework** - Late homework will not be accepted unless an extension is requested before the deadline. For an extension of more than 2 days, you must provide documentation of a valid excuse. Last minute tech issues are not a valid excuse. No homework will be accepted after August 8.

- **Extra Credit** - No makeups.

- **Absences and Make-up Work** - Requirements for class attendance and make-up exams, assignments, and other work are consistent with university policies that can be found at this website.

Incomplete/Concerns/Complaints

- **Incomplete** - A grade of I (incomplete) will be considered only if you meet the Math Department criteria. If you meet the criteria you must contact your instructor before finals week to be considered for an I. An I only allows you to make up your incomplete work, not redo your work.

- **Concerns/Complaints** - If you have concerns/complaints about the course you may voice your concerns to the instructor, the Mathematics Department Associate Chair, and then the University Ombuds.

Instructor Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at this website. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via this website. Summaries of course evaluation results are available to students on the public results website.

Additional Information

Academic Honesty

UF students are bound by The Honor Pledge which states: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. See the UF Conduct Code website for more information. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Courtesy In Communication

In all communication with your instructor, teaching assistants, and classmates you are expected to be respectful and follow proper netiquette.

Privacy and Data Security

This courses uses the MyOpenMath software for assignments. MyOpenMath does not sell or transmit personal data and deletes all student information after an appropriate amount of time.

Students With Disabilities

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Class Recordings

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor. Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section.

Schedule

- Jun 30: L1-2 ("Lectures 1-2")
- Jul 1: L2-3
- Jul 2: L4-5
  L1-3 HW due ("Lectures 1-3 Homework due")
- Jul 3: L5-6
  Quiz 1 (covers L1-3)
  L4 HW due
- Jul 7: L7-8
  Attendance 1 (in lecture)
  L5-6 HW due
- Jul 8: L8-9
  Quiz 2 (covers L4-6)
  L7 HW due
- Jul 9: L10-11
  L8-9 HW due
- Jul 10: L11-12
  Attendance 2 (in discussion)
  L10 HW due
- Jul 11: L13-14
  L11 HW due
- Jul 14: L14-15
  L12 HW due
- Jul 15: Catch up or Q/A
  Exam 1, 12:30-1:45PM (covers L1-12)
  L13 HW due
- Jul 16: L16-17
  L14-15 HW due
- Jul 17: L17-18
  Quiz 3 (covers L13-15)
  L16 HW due
- Jul 18: L19-20
  Attendance 3 (in lecture)
  L17-18 HW due
- Jul 21: L20-21
  L19 HW due
- Jul 22: L22-23
  Quiz 4 (covers L16-19)
  L20-21 HW due
- Jul 23: L23-24
  L22 HW due
- Jul 24: L25-26
  Attendance 4 (in discussion)
  L23 HW due
- Jul 25: L26-27
  L24 HW due
- Jul 28: L28-29
  L25 HW due
- Jul 29: Catch-up or Q/A
  Exam 2, 12:30-1:45PM (covers L13-25)
  L26 HW due
- Jul 30: L29-30
  L27-28 HW due
- Jul 31: L31-32
  Quiz 5 (covers L26-28)
  L29-30 HW due
- Aug 1: L32-33
  Attendance 5 (in lecture)
  L31 HW due
- Aug 4: L34-35
  L32 HW due
- Aug 5: L35-36
  Quiz 6 (covers L29-32)
  L33-34 HW due
- Aug 6: L37
  L35-36 HW due
- Aug 7: Q/A
  Attendance 6 (in discussion)
  L37 HW due
- Aug 8: **Exam 3**, 11:00AM-12:15PM (on L26-37)

Lectures and Text

- Lecture 1 Introduction
  Introduction (10 pages)
- Lecture 2 Exponents and Radicals
  Exponents and Radicals (15 pages)
- Lecture 3 Polynomial Expressions
  Polynomial Expressions (20 pages)
- Lecture 4 Rectangular Coordinates
  Rectangular Coordinates (19 pages)
- Lecture 5 Functions
  Functions (17 pages)
- Lecture 6 Graphs of Functions
  Graphs of Functions (26 pages)
- Lecture 7 Combinations of Functions
  Combinations of Functions (9 pages)
- Lecture 8 Basic Functions/Transformations
  Basic Functions & Transformations (19 pages)
- Lecture 9 Inverse Functions
  Inverse Functions (20 pages)
- Lecture 10 Linear Functions
  Precalculus 2.1
  Precalculus 2.2
  Precalculus 2.3
- Lecture 11 Quadratic Functions
  Precalculus 3.2
- Lecture 12 Polynomial Functions
  Precalculus 3.3
  Precalculus 3.4
  Precalculus 3.5
- Lecture 13 Complex Numbers
  Precalculus 3.1
- Lecture 14 Rational Roots
  Precalculus 3.6
- Lecture 15 Rational Expressions
  College Algebra 1.6
- Lecture 16 Rational Functions
  Precalculus 3.7
- Lecture 17 Linear Inequalities
  College Algebra 2.7
- Lecture 18 Nonlinear Inequalities
  Nonlinear Inequalities (14 pages)
- Lecture 19 Systems of Equations
  Precalculus 9.1
  Precalculus 9.3
- Lecture 20 Exponential Functions
  Precalculus 4.1
  Precalculus 4.2
- Lecture 21 More Exponential Functions
  Precalculus 4.1
  Precalculus 4.2
- Lecture 22 Logarithmic Functions
  Precalculus 4.3
  Precalculus 4.4
- Lecture 23 Properties of Logarithms
  Precalculus 4.5
- Lecture 24 Exponential/Log Equations
  Precalculus 4.6
- Lecture 25 Exponential/Log Modeling
  Precalculus 4.7
- Lecture 26 Angles
  Precalculus 5.1
- Lecture 27 Unit Circle/Trig Functions
  Precalculus 5.2
  Precalculus 5.3
- Lecture 28 Right Angle Trigonometry
  Precalculus 5.4

- Lecture 29 Graphs of Sine/Cosine
  Precalculus 6.1
- Lecture 30 Graphs of Other Trig Functions
  Precalculus 6.2
- Lecture 31 Inverse Trig Functions
  Precalculus 6.3
- Lecture 32 Applications and Models
  Precalculus 6.1
- Lecture 33 Using Fundamental Identities
  Precalculus 7.1
- Lecture 34 Solving Trig Equations
  Precalculus 7.5
- Lecture 35 Laws of Sines/Cosines
  Precalculus 8.1
  Precalculus 8.2
- Lecture 36 Sum/Difference Formulas
  Precalculus 7.2
- Lecture 37 Double/Half Angle Formulas
  Precalculus 7.3