MAC1147 - Precalculus With Trigonometry Summer 2024 Online Syllabus

The information in this syllabus is preliminary and subject to change before the term begins.

Contact Information

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

Coordinator

Name: Michelle Baker & Himanshu Yadav

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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.
- **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.
- **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.

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 made available for free in Canvas. There is no textbook purchase required.

- Precalculus, 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.** Grades are not eligible to be changed after that.

Lectures

Lecture days and topics are indicated on the calendar. Prerecorded lectures will be available in Canvas.

Calculator Policy

A basic calculator will be provided on exams. No other calculator or electronic device is allowed on exams.
A calculator will sometimes be needed to complete homework questions. Desmos is a good online calculator.

People Who Can Help

- **Your instructor** during office hours.
- 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.
- You can check the Tutoring Website for other resources.
- 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 has shown 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

Lecture Participation

Lectures will be opened in Canvas on the days specified by the course calendar. 'Attendance' is required and will be taken in the form of questions asked periodically during the lecture. These will count towards your grade, and you must complete them to unlock the homework assignments.

Homework

Each lecture has a corresponding homework assignment, which will usually be due two days after the lecture. 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.

Quizzes

There will be a quiz each week, usually on Monday. It will cover lectures from the previous week. Quizzes are designed to be done multiple times and will present different questions for each attempt. The best of your attempts is the one that will count towards your grade. You should treat the quizzes as practice for the exams. These assignments will assess your critical thinking and communication of the lecture content.

Exams

There will be four midterm exams as well as a cumulative final exam. Exams will be done in Canvas and will be similar in format to the weekly quizzes. Exams will assess your critical thinking and communication of the lecture content.

- Exams will be open for a 36-hour window as indicated on the class schedule.
- You may take two attempts at each midterm exam during its window. The best of your scores will count.

- You may take only one attempt at the final exam.
- Exams will be monitored using the HonorLock system. In order to use HonorLock you will need a web cam, the Google Chrome browser, and an isolated space where you can take your test.
- You must remain in one location the entire time you are taking an exam. Moving to a different location during a test is a violation of exam rules.
- You should bring to each test **only** your UF Gator One card, a pen or pencil, and blank scratch paper.
- A basic calculator will be provided by the Honorlock system. All electronic devices, including phones, must be put away. Using or possessing any such device during an exam is a violation of exam rules, regardless of whether or how it is used.

Extra Credit

Each lecture/homework has a discussion board in Canvas. You may earn a bonus of up to 1.5% on your course grade through participation in these discussions. Participation includes:

- Asking a coherent mathematical question including details of your own attempts. (So "How do you do question 12?" doesn't count)
- Providing a substantive and understandable solution to a fellow student's question. (So "The answer is 8." doesn't count)

Grading

Course Grade

Here is a breakdown of the items that will determine your grade in this course:

Item	Grade %	Comments
Homework	14%	Lowest two scores dropped.
Quizzes	14%	Lowest two scores dropped.
Lecture Participation	7%	No scores dropped.
Exams	50%	Four midterm exams. Two attempts on each exam.
Final Exam	15%	Cumulative final exam. One attempt only.
Extra Credit	Up to 1.5%	

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 will **not** be rounded.

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 Gordon Rule or 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 final exam.

- **Exams** - 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 course coordinator 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 course coordinator within a week 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. Makeups will only be allowed if appropriate documentation is provided.
- **Final Exam** - There is a 10% penalty for missing the final due to negligence.
- **Homework/Quiz** – At the beginning of the semester you are assigned 20 Late Passes. You may use a Late Pass to extend a homework or quiz deadline by 24 hours. You may extend a deadline up to two days at a cost of two Late Passes.
- **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 coordinator 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 course coordinator, 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 Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct

to appropriate personnel. 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 such 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

	Monday	Tues	Thurs	Friday
May 12 - 16	Lecture 1 Introduction	Lecture 2 Exponents	Lecture 3 Polynomial Expressions	Lecture 4 Cartesian Coordinates
May 19 - 23	Lecture 5 Functions	Lecture 6 Graphs of Functions	Lecture 7 Combining Functions	Lecture 8 Transformations
May 26 - 30	**Holiday** **Memorial Day**	Lecture 9 Inverses	Exam Review	**Exam 1**
Jun 2 - 6	Lecture 10 Linear Functions	Lecture 11 Quadratic Functions	Lecture 12 Polynomial Functions	Lecture 13 Complex Numbers
Jun 9 - 13	Lecture 14 Zeros of Polynomials	Lecture 15 Rational Expressions	Lecture 16 Rational Functions	Lecture 17 Linear Inequalities
Jun 16 - 20	Lecture 18 Nonlinear Inequalities	Lecture 19 Systems of Equations	**Holiday** **Juneteenth**	**Exam 2**
Jun 23 - 27	**Summer** **Break**	**Summer** **Break**	**Summer** **Break**	**Summer** **Break**
Jun 30 - Jul 4	Lecture 20 Exponential Functions	Lecture 21 More Exp Functions	Lecture 22 Logarithmic Functions	**Holiday** **Independence Day**
Jul 7 - 11	Lecture 23 Properties of Logarithms	Lecture 24 Exp and Log Equations	Lecture 25 Exp and Log Modeling	Lecture 26 Angles
Jul 14 - 18	Lecture 27 Unit Circle	Exam Review	**Exam 3**	Lecture 28 Right Angle Trig
Jul 21 - 25	Lecture 29 Graphs of Sin and Cos	Lecture 30 Other Trig Graphs	Lecture 31 Inverse Trig Functions	Lecture 32 Applications
Jul 28 - Aug 1	Lecture 33 Using Fundamental Identities	Lecture 34 Trig Equations	Lecture 35 Laws of Sin and Cos	Exam Review
Aug 4 - 8	**Exam 4**	Lecture 36 Sum/Difference Formulas	Exam Review	**Final Exam**