FLORIDA POLYTECHNIC UNIVERSITY

Precalculus Algebra and Trigonometry

This course covers fundamental mathematical skills and concepts that are critical and widely used in all STEM fields. The topics and methods presented in this course are foundational and provide essential preparation to succeed in Calculus, Physics, Computer Science, and Engineering. In particular, the course emphasizes problem-solving, logical reasoning, careful use of notation, and affinity with algebraic and trigonometric skills.

Academic Integrity: Students are expected to adhere to the highest standards of academic integrity. Violations of academic integrity, particularly cheating and plagiarism, undermine the central mission of the university and negatively impact the value of Florida Poly degrees. Suspected violations will be fully investigated, possibly resulting in academic integrity hearing and sanctions against the accused student. More information about Florida Poly's academic integrity policies and procedures can be found within this online resource.

Exams: Exam dates will be finalized early in the semester and those dates/times will be posted to our Canvas course site once available. Exam dates are subject to change, and you should refer to the Academic Calendar website for the most up-to-date exam schedules. Exam dates will also be announced in class at least one week prior to the scheduled event.

Official Email Address: Florida Polytechnic University email is the official method of communication for the University. Students are required to check their email frequently (at least once per day). We cannot reply to any email received from an address other than those that end in floridapoly.edu.

Course Information

- **Course Number and Title: MAC 1147 Precalculus Algebra and Trigonometry**
- **Credit Hours: 4**
- **Academic Term: Spring 2026**

Course Delivery and Course Description

- **Delivery Mode**: Face-to-face
- **Class Meetings**: Section 01 meets MTWF 2:00pm – 2:50pm in IST-1049
- **Course Website**: Canvas course site
    - Students are expected to check the Canvas course site **DAILY**.

Official Catalog Course Description: A study of families of functions, their properties, and applications. Emphasis is on linear, polynomial, rational, exponential, logarithmic, and trigonometric functions. Additional topics may include absolute values, inequalities, and systems of equations. A significant focus is on mathematical modeling and the problem-solving process. This course is intended to provide the mathematical skills and conceptual understanding of functions needed for the calculus sequence.

- **Course Pre and/or Co-Requisites:** None
- **Communication/Computation Skills Requirement (6A-10.030):** No

Instructor Information

- **Instructor:** Dr. Catherine Kenyon
- **Office Location:** IST 2026
- **Office Hours:** Mon/Tues/Wed/Fri 1:00pm – 1:50pm and by appointment
- **Email address:** ckenyon@floridapoly.edu
    - Students with a concern or issue should feel free to email their instructor at the email address above. Instructors will make every effort to respond by the end of the next school day. In the event the issue is not resolved, then the student may email the department chair, Dr. Mike Brilleslyper at mbrilleslyper@floridapoly.edu. Students may request an appointment with the department chair for further discussion if needed.

Required Texts and Materials

- Textbook: OpenStax Precalculus
- We will often need technology that can adequately run Desmos.com or Excel. Office 365 with Excel is available through the MyApps Florida Poly portal.
- Graphing calculators are not allowed.
- **The required calculator for this class is the TI-30XIIS. No other calculators are allowed.**

Course Objectives and Outcomes

Course Objectives

- Students will gain a solid foundation in mathematical reasoning by acquiring important mathematical concepts and skills. Students will apply principles of mathematical modeling, along with algebraic and trigonometric skills to solve applied problems across a variety of STEM fields.

Course Learning Outcomes

1. Illustrate the different representations (verbal, symbolic, tabular, and graphical) of critical classes of STEM functions: linear, power, exponential, logarithmic, and trigonometric.
2. Describe function behavior using precise mathematical language, to include domain, range, asymptotes, zeros, intercepts, and invertibility.
3. Recognize the connections between zeros of polynomials and the factorization of polynomials.
4. Show proficiency in algebra and function properties required to solve equations involving exponential and logarithmic functions.
5. Construct the solution of triangles and model sinusoidal behavior by utilizing the right triangle and unit circle representations of the sine and cosine functions.
6. Use algebraic and graphical techniques to solve equations involving STEM functions.
7. Effectively use scientific calculators and visualization software to explore mathematical ideas and to assist in solving problems.
8. Clearly communicate solutions to multi-step mathematics problems through careful, organized, and well-annotated work.

This course supports the following General Education competencies:

- Demonstrate fluency in mathematical concepts.
- Interpret quantitative data to derive logical conclusions.
- Determine appropriate mathematical and computation models and methods in problem-solving.
- Apply appropriate mathematical and computational models and methods in problem-solving to produce valid results.

Course Policies

Attendance

- Students are expected "to attend all of their scheduled University classes and to satisfy all academic objectives as defined by the instructor" (University Policy, FPU-5.0010AP).
- Students are expected to attend class **on time** and stay for the full duration of class time.
- Attendance will be tracked using a daily sign-in sheet and will be tracked digitally by the instructor through the A+ Attendance system. Students are expected to remain in class for the entire session. Coming to class solely to sign the attendance sheet and then leaving is not permitted. Additionally, signing for another student who is not present in class constitutes a **violation of the Academic Integrity Policy**.
- Please note that up to **four unexcused absences** will not count against your grade.

Participation

- Students are expected to participate in the classroom experience. **The use of laptops, cellphones, and earbuds/headphones during class is specifically not allowed.** Students who engage in this behavior may be asked to leave the class for the day (noting exceptions for authorized accommodation through the Office of Disability Services). Persistent problems with participation may result in a code of conduct referral.
- All students are expected to take written notes during class, ask and answer appropriate questions, and participate in class activities.

Grading Scale

Grade	A	B+	B	B-	C+	C	D	F
Percentage	90%	87%	83%	80%	77%	70%	60%	< 60%
GPA	4.0	3.33	3.0	2.67	2.33	2.0	1.0	0.0

Assignment/Evaluation Methods

Assignment Group	**Percentage of Course Grade**
Homework	15%
Instructor Check-Ins	5%
Quizzes	10%
Activities & Reflections	10%
Attendance	4%
Midterm Exams	36% (3 exams at 12% each)
Comprehensive Final Exam	20%
Total	**100%**

The table above shows the distribution of each graded assignment group for the course. Descriptions for each graded assignment group and their associated student expectations are provided on the next page.

Assignment/Evaluation Methods Descriptions

- **Homework**: Written Homework will be due twice a week (typically Tuesday and Thursday) and **will not be accepted late**. At the end of the semester, the two lowest written homework scores will be dropped to allow for occasional extenuating circumstances (student illness, emergencies, technical difficulties, etc.). The homework must be completed according to the directions provided and will be graded for completeness, accuracy, and appropriate mathematical notation.
- **Instructor Check-Ins**: Students will be randomly selected throughout the semester to meet with their instructor during office hours or during an agreed upon time by the instructor and student. **Students will be contacted about these Instructor Check-In meetings via their Florida Poly Student email address.** It is imperative students regularly check their email and respond in a timely manner. During this meeting, the instructor will check the student's class notes for completion and effort as well as discuss the student's course progress. The notes will be graded using a rubric that is available to students on Canvas.
- **Activities & Reflections:** During class time, students will be asked to work with their peers on activities related to the lecture lessons. Students can use their notes during these activities as well as assistance from their peers and instructor. These activities are expected to be completed during class time. Reflections will be used throughout the semester for students to reflect on their preparation and understanding after an assessment.
- **Quizzes**: Individual quizzes will be given in class approximately every week (tentatively Wednesday). Your two lowest quiz scores will be dropped to allow for occasional extenuating circumstances.
- **Attendance:** Daily class attendance and participation are required. (See Attendance Policy above.)
- **Midterm exams**: There will be three evening midterm exams given on the common exam schedule.
- **Comprehensive final exam**: There will be a common, comprehensive exam at the end of the semester given at the time listed on the final exam schedule. Your lowest exam score may be replaced by your final exam score if that improves it, up to a maximum of 80%. The final exam score still counts for the final exam portion of the course grade listed above. Note: The final may not be used to replace a missed exam or a score of zero. It may only be used to replace a score for an exam on which you made a legitimate effort.

Late Work/Make-up Work

- **Homework:** Written Homework will **not** be accepted late for any reason. Failure to submit by the deadline due to a technical issue is still considered late and will not be accepted. It is your responsibility to ensure that you are sending the correct file. You will not be able to submit the correct file after the due date passes regardless of the reason why you submitted the incorrect file in the first place.
- **Instructor Check-Ins:** If a student misses their meeting for an Instructor Check-In, their grade for that check-in will be a "0" and no make-up meeting will be permitted. If a student does not respond to an Instructor Check-In meeting request within 24 hours, the meeting will not be scheduled and their grade for that check-in will be a "0".
- **Activities & Reflections:** Any missing work from the Activities & Reflections assignment group will be entered as a "0" for any absences without a documented excuse. It is your responsibility to attend class regularly to not miss out on activity assignments in this category as is your responsibility to get reflections done and submitted within the appropriate time frame.
- **Quizzes:** Make-up quizzes will be given only in extreme circumstances with a **documented** excuse. The student must provide appropriate documentation to be granted a make-up quiz. Communicate with your instructor **before** the quiz if you have a documented excuse. No make-up quizzes will be permitted if the quiz has already been returned to students (typically the next class period).
- **Exams:** If a student misses an exam, their grade for that exam is a "0". A make-up exam will be given only in extreme circumstances with a **documented** excuse that is provided by the student to the instructor **before the exam date** or **within 24 hours of the missed exam**. If you miss an exam because you are participating in a college-sponsored activity, inform your instructor before the exam and provide them with documentation. No make-up exams will be permitted past the immediate Friday following the exam date.
- Due dates for assignments are posted on Canvas. Students are responsible for checking Canvas regularly to be aware of assignment deadlines and other class information. Extensions without penalty may be granted on a case-by-case basis. Please communicate with your instructor.

Course Schedule (Subject to Change)

Week	Topics Covered in Class	Notes and Important Dates
Week 1 Jan 12 – Jan 16	1.1: Functions and Function Notation 1.2: Domain and Range 1.3: Rates of Change and Graph Behavior	**Jan 12: First Day of Classes** **Jan 14: Quiz 1**
Week 2 Jan 19 – Jan 23	1.4: Composition of Functions 1.5: Transformations of Functions	**Jan 19: No Classes** **Jan 21: Quiz 2**
Week 3 Jan 26 – Jan 30	1.7: Inverse Functions 2.1 - 2.2: Linear Functions 2.3: Modeling with Linear Functions	**Jan 28: Quiz 3**
Week 4 Feb 2 – Feb 6	2.3: Modeling with Linear Functions **Exam 1 (6:00pm – 7:30pm)**	**Feb 4: Exam 1**
Week 5 Feb 9 – Feb 13	3.2: Quadratic Functions 3.7: Rational Functions	**Feb 10: No Classes** **Feb 11: Quiz 4**
Week 6 Feb 16 – Feb 20	3.7: Rational Functions 4.1: Exponential Functions 4.2: Graphs of Exponential Functions 4.3: Logarithmic Functions 4.4: Graphs of Logarithmic Functions	**Feb 18: Quiz 5**
Week 7 Feb 23 – Feb 27	4.4: Graphs of Logarithmic Functions 4.5: Logarithmic Properties 4.6: Exponential and Logarithmic Equations 4.7: Exponential and Logarithmic Models	**Feb 25: Quiz 6**
Week 8 Mar 2 – Mar 6	4.7: Exponential and Logarithmic Models **Exam 2 (6:00pm – 7:30pm)**	**Mar 4: Exam 2**
Week 9 Mar 9 – Mar 13	5.1: Angles 5.2: Unit Circle: Sine and Cosine Functions	**Mar 11: Quiz 7**
Week 10 Mar 16 – Mar 20	**Spring Break**	**No Classes**
Week 11 Mar 23 – Mar 27	5.3: Other Trigonometric Functions 5.4: Right Angle Trigonometry	**Mar 25: Quiz 8**
Week 12 Mar 30 – Apr 3	6.1: Graphs of Sine and Cosine Functions 6.2: Graphs of Other Trigonometric Functions 6.3: Inverse Trigonometric Functions	**Apr 1: Quiz 9**
Week 13 Apr 6 – Apr 10	6.3: Inverse Trigonometric Functions **Exam 3 (6:00pm – 7:30pm)**	**Apr 8: Exam 3**
Week 14 Apr 13 – Apr 17	7.5: Solving Trigonometric Equations 7.1: Simplifying and Verifying Trigonometric Identities	**Apr 15: Quiz 10**
Week 15 Apr 20 – Apr 24	7.2 - 7.3: More Trigonometric Identities 7.6: Modeling with Trigonometric Functions 8.8: Vectors	**Apr 22: Quiz 11**
Week 16 Apr 27 – May 1	Review	**Apr 27: Quiz 12** **Apr 28: Last Day of Classes** **Apr 29 – May 1: No Classes**
Week 17 **May 4 – May 8**	Final Exam Week **Final Exam (date/time TBA by university)**	**Final Exam Date TBA**

Civility and Collegiality

Faculty and students come to the university for the same reason, which is to participate in a highly professional educational environment. To that end, both students and faculty are expected to treat each other with mutual regard and civility. In more general terms, collegiality means respecting the right of both faculty and students to participate fully and fairly in the educational enterprise.

University Policies

Reasonable Accommodations

The University is committed to ensuring equal access to all educational opportunities. The Office of Disability Services (ODS), facilitates reasonable accommodations for students with disabilities and documented eligibility. It is the student's responsibility to self-identify as a student with disabilities and register with ODS to request accommodations. If you have already registered with ODS, please ensure that you have requested an accommodation letter for this course through the ODS student portal, and communicate with your instructor about your approved accommodations as soon as possible. Arrangements for testing accommodations must be made in advance. Accommodations are not retroactive. If you are not registered with ODS but believe you have a temporary health condition or permanent disability requiring an accommodation, please contact ODS as soon as possible: DisabilityServices@floridapoly.edu; (863) 874-8770

Accommodation for Religious Observances, Practices and Beliefs

The University will reasonably accommodate the religious observances, practices, and beliefs of individuals in regard to admissions, class attendance, and the scheduling of examinations and work assignments. (See University Policy.)

Title IX

Florida Polytechnic University is committed to ensuring a safe, productive learning environment on our campus that prohibits sex discrimination and sexual misconduct, including sexual harassment, sexual assault, dating violence, domestic violence and stalking. Resources are available if you or someone you know needs assistance. Any faculty or staff member you speak to is required to report the incident to the Title IX Coordinator. Please know, however, that your information will be kept private to the greatest extent possible. You will not be required to share your experience. If you want to speak to someone who is permitted to keep your disclosure confidential, please seek assistance from the Florida Polytechnic University Ombuds Office, BayCare's Student Assistance Program, 1-800-878-5470, and locally within the community at Peace River Center, 863-413-2707 (24-hour hotline) or 863-413-2708 to schedule an appointment. The Title IX Coordinator is available for any questions to discuss resources and options available.

Academic Integrity

Violations of academic integrity regulation include actions such as cheating, plagiarism, use of unauthorized resources (including but not limited to use of Artificial Intelligence tools), illegal use of intellectual property, and inappropriately aiding other students. Such actions undermine the central mission of the university and negatively impact the value of your Florida Poly degree. Suspected violations will be fully investigated, possibly resulting in sanctions up to and including expulsion from the university.

Recording Lectures

Students may, without prior notice, record video or audio of a class lecture for a class in which the student is enrolled for their own personal educational use. Recordings may not be used as a substitute for class participation or class attendance. Recordings may not be published or shared in any way, either intentionally or accidentally, without the written consent of the faculty member. Failure to adhere to these requirements is a violation of state law (subject to civil penalty) and the student code of conduct (subject to disciplinary action). Recording class activities including, but not limited to, lab sessions, student presentations (whether individually or part of a group), class discussion (except when incidental to and incorporated within a class lecture), and invited guest speakers is prohibited.

Academic Support Resources

- **Library:** Students can access the Florida Polytechnic University Library through the University website and Canvas, on and off campus. Students may direct questions to library@floridapoly.edu.
- **Tutoring and Learning Center:** The Tutoring and Learning Center (The TLC) provides tutoring to all Florida Poly students who may need additional academic support. The TLC is staffed by students who have excelled in the courses they tutor. They offer support by reviewing concepts and materials from class, clarifying points of confusion and providing assistance with learning strategies. While the focus of TLC is to provide support to students in freshman-level courses, upper-level courses are also tutored at the Center. The TLC is located in the IST Room 1046.
- **Knack Tutoring:** Students looking for additional assistance outside of the classroom are advised to consider working with a peer tutor through Knack. Florida Polytechnic University has partnered with Knack to provide students with access to verified peer tutors who have previously aced this course. To view available tutors, visit floridapoly.joinknack.com and sign in with your student account.
- **Academic Success Coaches:** All students at Florida Poly are assigned an Academic Success Coach. Your Academic Success Coach can assist you with academic success strategies. Please visit the Student Success Center on the second floor of the IST building to meet with an Academic Success Coach.
- **Writing Center:** Located on the second floor of the IST (2059/2061), the Writing Center helps students to develop their writing and presentation skills. Consultations are available in person and virtually. For more detail, visit the Writing Center's webpage.

Please note aspects of this course, including content coverage, delivery mode (in-person or online), grading policies, assignment deadlines, and other instructional components—may be subject to change during the semester. Such changes may be necessary due to the pace of the class, instructor illness, inclement weather, or other unforeseen and unfavorable circumstances. Any adjustments will be made with the goal of maintaining the integrity of the course and will be communicated to students as promptly as possible.