



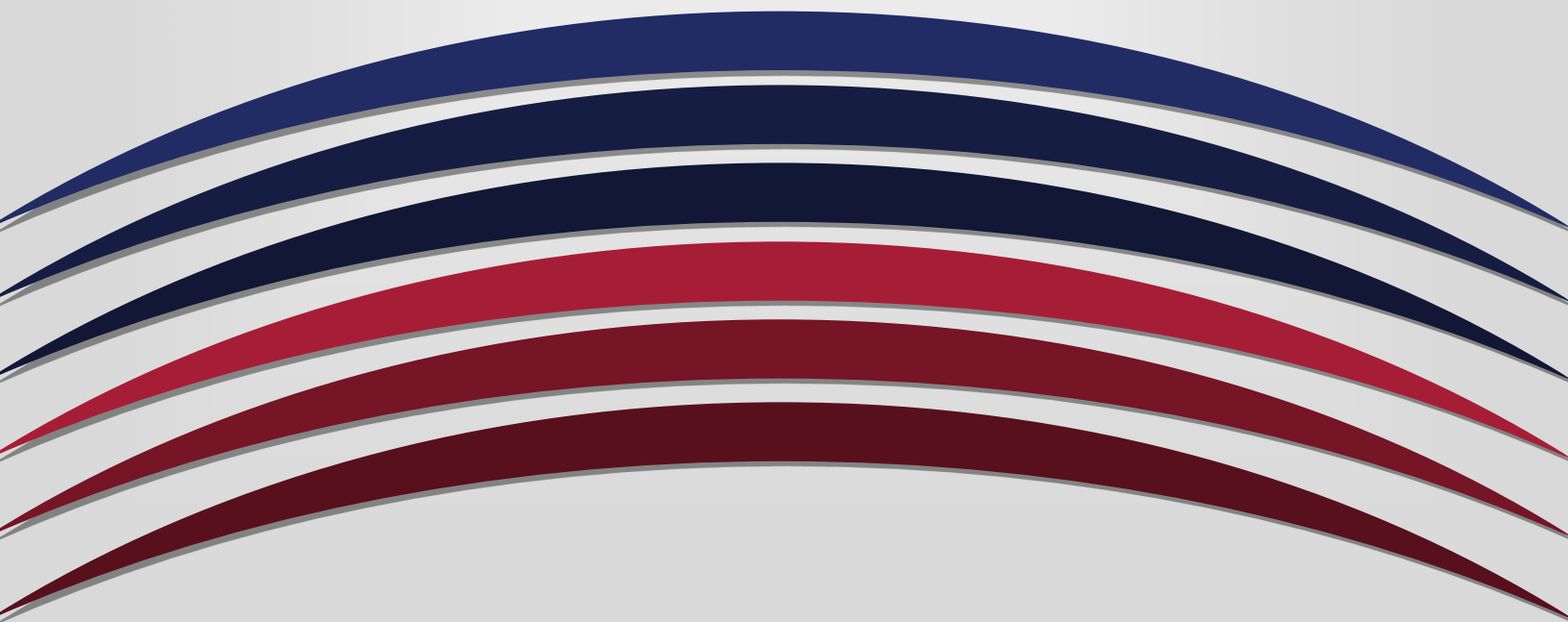
UNIVERSITY OF ARKANSAS  
**PULASKI TECH**

## **Course-Level Assessment Report**

**Course: Trigonometry**

**Academic Year: 2021-2022**

**Due to Chair/Program Director and Faculty Assessment Chair by  
September 1**



1. Name of course: Trigonometry
2. Name of individual(s) compiling report: Kim Kullander
3. Date of submission: 9/8/2022
4. Academic year: 2021-2022

## Course-Level Learning Outcomes

### 1. What are the Course-Level Outcomes (CLOs)?

The student will:

1. Develop an understanding of trigonometric functions
2. Use trigonometric relations in solving problems including circular motion
3. Develop an understanding of complex numbers and their trigonometric representation
4. Use appropriate technology
5. Demonstrate an understanding of trigonometric identities, equations, and applications

### 2. Which CLOs were addressed for the academic year?

CLO #1 – Develop an understanding of trigonometric functions

CLO #3 – Develop an understanding of complex numbers and their trigonometric representation

### 3. Which CLOs are being addressed in your assessment plan in the upcoming academic year?

CLO #2 – Use trigonometric relations in solving problems including circular motion

CLO #4 - Use appropriate technology

### 4. How does this report connect or map to program-level or institutional-level outcomes?

(ILO link: <https://uaptc.edu/college-academics/resources/student-learning-outcomes>

PLO list will vary depending on your Program.)

MATH 1303 – Trigonometry is an ACTS #MATH 1203 course.

Students will demonstrate the following institutional level outcomes (ILO):

- ✓ ILO #2 - Appropriately apply a variety of technology tools within one's discipline. (Technology Literacy)  
Our students solve and apply real world problems involving trigonometry and communicate results.
- ✓ ILO #4 - Apply critical thinking skills to achieve a desired goal. (Critical Thinking)  
Our students apply appropriate methods to solve problems and use mathematics to justify conclusions.
- ✓ ILO #5 - Use quantitative methods to solve problems. (Quantitative Reasoning)  
Our students analyze and interpret quantitative information and apply quantitative skills to solve real world problems.

For each Course Level Outcome assessed this academic year, please complete the chart below, providing the assessment data for both fall and spring, and then a total for the academic year.

Assessment Methods- How did you assess student learning (define direct assessment methods used) in relation to the course level outcome being reported?	Students across all sections completed a common comprehensive final exam. Questions were linked to specific course learning outcomes. Item analysis was performed to determine proficiency.  CLO #1 – Develop an understanding of trigonometric functions  CLO #3 – Develop an understanding of complex numbers and their trigonometric representation	
Were indirect assessment methods also used to assess students? If 'yes', please describe the method used.		No
How do you define success for an individual student on the CLO assessment assignment?	Student scores 70% on the questions linked to CLO#1 and CLO#3.	
How do you define success for the course level outcome? What is the benchmark for the CLO?	70% of students in the course achieve success on the item analysis of CLO#1 and CLO#3 on the final exam assessment.	
How many students completed the assessment, and how many were successful?	<b>Fall</b> - 50 students assessed CLO #1 46 successful (91.3% success rate)  CLO #3 39 successful (77.6% success rate)	<b>Spring</b> - 43 students assessed CLO #1 39 successful (91.2% success rate)  CLO #3 32 successful (74% success rate)

Academic Year Total (add the numbers from Fall and Spring)	93 students assessed CLO #1 85 successful (91.3% success rate)  CLO #3 71 successful (75.9% success rate)	
Was the benchmark/goal for this academic year met?	Yes	
Were standardized rubrics, tests, or checklists used?	Yes	

## 5. What is your analysis of the findings?

For CLO #1 – Develop an understanding of trigonometric functions, both semesters show a pass rate of over 70% for all methods of course delivery (traditional, online, hybrid, concurrent). Our goals were met for this learning objective. This CLO#1 relies heavily on students understanding and applying the Unit Circle. Instructors placed continued emphasis on this learning outcome during this academic year.

For CLO #3 – Develop an understanding of complex numbers and their trigonometric representation, both semesters show a pass rate of over 70% for two methods of course delivery (online and concurrent). The Spring semester shows two methods of course delivery did not pass at a rate of over 70% (traditional and hybrid). Overall, our goals were met for this learning objective. However, the traditional and hybrid courses will continue to analyze this outcome. This CLO#3 presents a difficult situation because of the necessity to teach this material at the end of the semester. It is important for instructors to allow plenty of time for this material at the end of the semester.

## 6. What is the action plan for the upcoming academic year?

### Explain.

For CLO#1, Develop an understanding of trigonometric functions, instructors will continue to develop the Unit Circle and apply it throughout the semester.

For CLO #3, Develop an understanding of complex numbers and their trigonometric representation, instructors will use pacing guides to insure enough time will be spent on this material. This learning objective is an application of material taught throughout the semester.

CLO #2, Use trigonometric relations in solving problems including circular motion and CLO #4, Use appropriate technology, will be the focus on the 2022-2023 academic year. Instructors will meet at the end of the fall and spring semesters to review results and data will be examined across modalities to consider necessary adjustments for the next academic year.