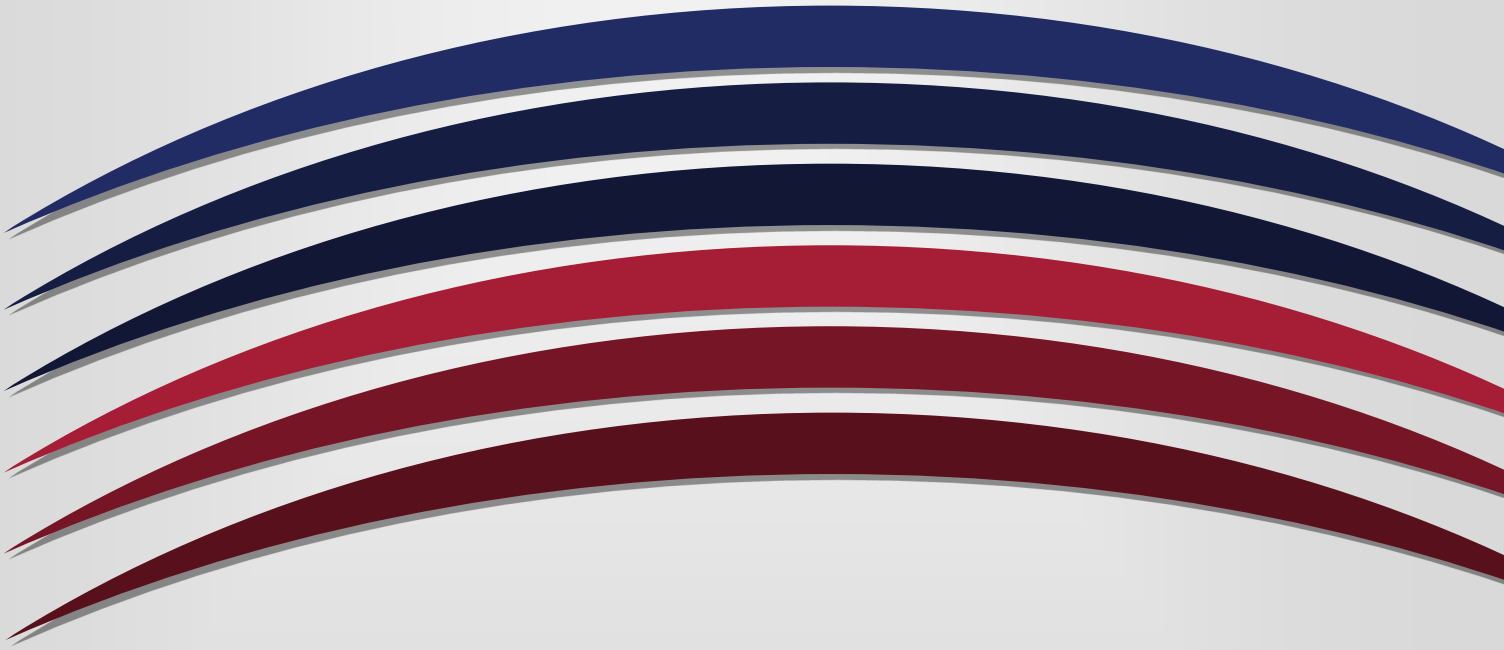
UNIVERSITY OF ARKANSAS
PULASKI TECH

Course-Level Assessment Report
Course: Math 1308
Business Calculus
Academic Year: 2021-2022



1. Name of course: *Math 1308 Business Calculus*

2. Name of individual(s) compiling report: *Cynthia B Fletcher*

3. Date of submission: *September 15, 2022*

4. Academic year: *2021 - 2022*

Course-Level Learning Outcomes

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

CLO #1: Students will calculate rates of change and limits; know the definition of a limit.
CLO #2: Students will calculate the derivative of a function using the definition, differentiation rules and formulas.
CLO #3: Students will recognize functions that are not differentiable.
CLO #4: Students will apply various techniques of integration. Evaluate indefinite and definite integrals using the various techniques of integration.
CLO #5: Students will use differentiation and integration techniques to solve problems in the management sciences and economics; use the calculator to solve these problems.

2. Which CLOs were addressed for the academic year?

All Course Level Outcomes (except SLO 3) were assessed for academic year 2021 – 2022

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

All Course Level Outcomes will be assessed for academic year 2021 - 2022

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.)

Institutional Learning Outcome (5) Quantitative Reasoning maps to General Education Outcome (2) Reason Quantitatively maps to Departmental Learning Outcome (2): Students will use mathematical reasoning and, when appropriate, a general problem-solving process to solve problems maps to Student Learning Outcome (1) The student will calculate the derivative of a function using the definition, differentiation rules and formulas. Corresponds to final exam questions: 4,5,6,7,20,21,25

Institutional Learning Outcome (5) Quantitative Reasoning maps to General Education Outcome (2) Reason Quantitatively maps to Departmental Learning Outcome (3) Students will learn mathematics through modeling real-world situations maps to Student Learning Outcome (5) The student will use differentiation and integration techniques to solve problems in the management sciences and economics; use the calculator to solve these problems. Corresponds to Final exam questions: 11, 16, 17, 23

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.*	
Were indirect assessment methods also used to assess students? If 'yes', please describe the method used.	***Yes***	***No*** *No indirect measures were used*
How do you define success for an individual student on the CLO assessment assignment or measure?	*Student scores are 70% on the questions linked to the CLO*	
How do you define success for the course level outcome? What is the benchmark for the Course Level Outcome?	*70% of students taking the course assessment achieve success on each CLO*	
How many students completed the assessment, and how many were successful?	***Fall*** *40 students assessed* *34 successful* *(84% success rate)*	***Spring*** *40 students assessed* *33 successful* *(83% success rate)*

Return to Top of Document

Academic Year Total (add the numbers from Fall and Spring)	*80 students assessed* *67 successful* *84% success rate*	
Was the benchmark/goal for this academic year met?	***Yes***	***No***
Were standardized rubrics, tests, or checklists used?	***Yes***	***No***

5. What is your analysis of the findings?

Our students are meeting the threshold of 70% on all CLO's assessed except CLO #5: Students will use differentiation and integration techniques to solve problems in the management sciences and economics; use the calculator to solve these problems.
for all course delivery options. Students that make it to the end of the course usually do well on the final exam assessment

CLO #1: Students will calculate rates of change and limits; know the definition of a limit.
Fall 2021 – 80.83%
Spring 2022 – 78.33%

CLO #2: Students will calculate the derivative of a function using the definition, differentiation rules and formulas.
Fall 2021 – 93.75%
Spring 2022 – 91.88%

CLO #3: Students will recognize functions that are not differentiable.
Not Assessed

CLO #4: Students will apply various techniques of integration. Evaluate indefinite and definite integrals using the various techniques of integration.
Fall 2021 – 91.67%
Spring 2022 – 93.75%

CLO #5: Students will use differentiation and integration techniques to solve problems in the management sciences and economics; use the calculator to solve these problems.
Fall 2021 – 62%
Spring 2022 – 61.50%

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

We will continue to administer our final exams virtually each semester. We will periodically meet virtually to discuss assessment result. We will look at the SLO for the

Return to Top of Document

course to ensure we are meeting the needs of the course. Instructors will meet at the end of each semester to review results and data will be examined across modalities to determine any necessary changes for the following semester. Two review assignments were added to aid in the transition from College Algebra and Math Reasoning for Fall 2022. A new final exam will be created for Fall 2022 to include questions for CLO 3: CLO #3: Students will recognize functions that are not differentiable for future assessment.