UNIVERSITY OF ARKANSAS
PULASKI TECH

Course-Level Assessment Report
Course: MATH 1404 Calculus I
Academic Year: 2021 – 2022

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

1. Name of course: **Calculus I MATH 1404**

2. Name of individual(s) compiling report: **Joe Sundell**

3. Date of submission: **September 1st, 2022**

4. Academic year: **Fall 2021 – Spring 2022**

Course-Level Learning Outcomes

What are the Course-Level Outcomes (CLOs)?

1. Functions, including sketching, slopes, minimum, maximum, relative extrema, inflection points, asymptotes, and other analysis
2. Limits
3. Continuity
4. Differentiation
5. Implicit differentiation
6. Exponential, trigonometric, and logarithmic functions
7. Exponential growth and decay
8. Course includes application of above topics, such as:
    a. Slope and rates of change
    b. Maximum and minimum values and optimum solutions to problems
9. Antiderivatives
10. Definite and indefinite integration, including the Fundamental Theorem of Calculus
11. Area between curves

Which CLOs were addressed for the academic year?

1. Functions, including sketching, slopes, minimum, maximum, relative extrema, inflection points, asymptotes, and other analysis
2. Limits
3. Continuity
4. Differentiation

Return to Top of Document

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

5. Implicit differentiation
6. Exponential, trigonometric, and logarithmic functions
7. Exponential growth and decay
8. Course includes application of above topics, such as:
    a. Slope and rates of change
    b. Maximum and minimum values and optimum solutions to problems

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

CLOs 1 – 4 map to the following ILOs:

- ILO #2: Appropriately apply a variety of technology tools within one's discipline.
- ILO #5: Use quantitative methods to solve problems.

CLOs 1 – 4 map to the following Departmental Learning Outcomes (DLOs):

- DLO #1: Students will demonstrate the ability to use symbolic, graphical, numerical and written representations of mathematical ideas.
- DLO #2: Students will use mathematical reasoning and, when appropriate, a general problem solving process to solve problems.
- DLO #3: Students will learn mathematics through modeling real-world situations.
- DLO #4: Students will use appropriate technology to enhance their mathematical thinking and understanding, solve mathematical problems, and judge the reasonableness of their results.

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)	*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.*

Return to Top of Document

in relation to the course level outcome being reported?		
Were indirect assessment methods also used to assess students? If 'yes', please describe the method used.	***Yes***	***No***
How do you define success for an individual student on the CLO assessment assignment or measure?	*Student correctly answers Final Exam questions that correlate to a given CLO.*	
How do you define success for the course level outcome? What is the benchmark for the Course Level Outcome?	*70% of students in the course correctly answer Final Exam questions that correlate to a given CLO.*	
How many students completed the assessment, and how many were successful?	CLO #1	
	Fall *17 students assessed* *15 successful* *(90% success rate)*	***Spring*** *21 students assessed* *16 successful* *(77% success rate)*
Academic Year Total (add the numbers from Fall and Spring)	*38 students assessed* *31 successful* *(82% success rate)*	
Was the benchmark/goal for this academic year met?	***Yes***	***No***
Were standardized rubrics, tests, or checklists used?	***Yes***	***No***
How many students completed the assessment, and how many were successful?	CLO #2	
	Fall *17 students assessed* *14 successful* *(82% success rate)*	***Spring*** *21 students assessed* *19 successful* *(89% success rate)*

Return to Top of Document

Academic Year Total (add the numbers from Fall and Spring)	*38 students assessed* *33 successful* *(87% success rate)*	
Was the benchmark/goal for this academic year met?	***Yes***	***No***
Were standardized rubrics, tests, or checklists used?	***Yes***	***No***
How many students completed the assessment, and how many were successful?	CLO #3	
	Fall *17 students assessed* *16 successful* *(94% success rate)*	***Spring*** *21 students assessed* *17 successful* *(81% success rate)*
Academic Year Total (add the numbers from Fall and Spring)	*38 students assessed* *33 successful* *(87% success rate)*	
Was the benchmark/goal for this academic year met?	***Yes***	***No***
Were standardized rubrics, tests, or checklists used?	***Yes***	***No***
How many students completed the assessment, and how many were successful?	CLO #4	
	Fall *17 students assessed* *16 successful* *(95% success rate)*	***Spring*** *21 students assessed* *20 successful* *(94% success rate)*
Academic Year Total (add the numbers from Fall and Spring)	*38 students assessed* *36 successful* *(95% success rate)*	
Was the benchmark/goal for this academic year met?	***Yes***	***No***
Were standardized rubrics, tests, or checklists used?	***Yes***	***No***

Return to Top of Document

9. What is your analysis of the findings?

All four CLOs evaluated for the Fall 2021 – Spring 2022 school year were achieved by students. This is very much in keeping with previous year's results.

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

No changes are planned at this time. However, instructors will meet during the Fall 2022 and Spring 2023 semesters to revisit teaching strategies, compare results across modalities and discuss the effects of a new common Final Exam which was introduced in Spring 2022.

Return to Top of Document