UNIVERSITY OF ARKANSAS
PULASKI TECH

Assessment Report:
2019-2020:
MATH 1404 Calculus I

1. Name of individual compiling report: *Robert Habimana*

2. Date of submission: *September 29, 2020*

3. Is the assessment plan

☐ an initial plan for the program ☐ a revision of an old plan ☒ unaltered from previous year

Course-Level Learning Outcomes-

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

We use Student Learning Outcomes (SLOs).

SLO #1: Functions, including sketching, slopes, minimum, maximum, relative extrema, inflection points, asymptotes, and other analysis
SLO #2: Limits
SLO #3: Continuity
SLO #4: Differentiation
SLO #5: Implicit differentiation
SLO #6: Exponential, trigonometric, and logarithmic functions
SLO #7: Exponential Growth and Decay
SLO #8: Application of derivatives includes application of topics such as:
- Slope and rates of change
- Maximum and minimum values and optimum solutions to problems

SLO #9: Antiderivatives
SLO #10: Definite and indefinite integration, including the Fundamental Theorem of Calculus
SLO #11: Area between curves

2. Which CLOs were addressed for this academic year? (2019-2020)

All Student Learning Outcomes were addressed during the academic year 2019 – 2020.

3. Which CLOs are being addressed in your assessment plan next academic year? (2020-2021)

All Student Learning Outcomes will be addressed in our assessment plan during the 2019 – 2020 academic year.

4. Explain the assessment cycle.

Students in the course are given a common final exam at the conclusion of each semester to ensure mastery of the student learning outcomes for the course. The results are tabulated and a discussion occurs with the course level instructors to analyze the results. Decisions are made only after thorough discussions and validity of results analyzed in more than one semester to ensure consistency.

5. What are the assessment methods? Are they direct or indirect?

The assessment for this course is a direct measure using a common final exam for all sections and students in the course during each semester. The final exam is normally a paper/pencil assessment given in a proctored environment, but due to Covid – 19 pandemic which resulted in all sections of calculus being moved to virtual environment, the final exam was given in online platform.

6. What are the assessment goal(s)?

To ensure mastery within the course, our goal is a 70% threshold for each student learning outcome. This may be raised in future semesters once we have established a baseline for the course.

7. What were the findings for this academic year? (2019-2020)

All but five of the Student Learning Outcomes were met in the fall 2019 semester. All student learning outcomes were met in the spring 2020 except SLO #11. SLO #2, SLO #5, and SLO # 7, SLO #8, and SLO #11 were not meet in the fall 2019, but they were met in the spring 2020 except SLO # 11. We have made tremendous progress from fall 2019 to spring 2020. We will continue to do our best to improve our success in the future semesters.

8. What is your analysis of the findings?

The results show that the action plan we took after analyzing results from previous year worked. We standardized the course across all sections and we implemented same final exam for all course sections. We went from meeting about a half of all students learning outcomes in the fall 2019 to meeting more than 90 % in the spring.

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9. What is the action plan for the next academic year? (2020-2021) Explain.

Although we are excited about our results from spring 2020, we would like to see if we can replicate them over sustainable period because the environment in which students are assessed changed from in person to online. We will also continue to use the same assessment plan for the 2020 – 2021 academic year so that we have several years of assessment findings to analyze.