

# UNIVERSITY OF ARKANSAS PULASKI TECH

### Assessment Report: 2018-2019 EDUC 2330 Math for Teachers 1





### Course-Level Learning Outcomes-

#### EDUC 2330: Math for Teachers 1

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

CLO #1. Apply Polya's problem-solving process and strategies; Build new mathematical knowledge through solving problems and in context.

CLO #2. Apply and adapt a variety of appropriate strategies to solve problems.

CLO #3. Develop geometric concepts by recognizing, analyzing, measuring, and reasoning about two and three-dimensional shapes.

CLO #4. Formulate and solve problems that involve collecting and analyzing data.

CLO #5. Apply technology whenever appropriate.

CLO #6. Create and use representations to organize, record, and communicate mathematical ideas.

CLO #7. Communicate mathematical thinking coherently and clearly.

CLO #8. Explore basic concepts of probability.

CLO #9. Apply the use of patterns and symbolic notation to introduce algebraic relationships.

### 2. Which CLOs were addressed for this academic year? (2018-2019)

CLOs 1, 2, 4, 5, 6, 7, and 9 were addressed.

### 3. Which CLOs are being addressed in your assessment plan next academic year? (2019-2020)

CLOs 1, 2, 4, 5, 6, 7, and 9 were addressed.

#### 4. Explain the assessment cycle.

Assessment data was/is collected in the fall semester only.



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

Direct- students are evaluated using a rubric to grade the course project.

#### 6. What are the assessment goal(s)?

Students will achieve 75% or better proficiency on the grading rubric.

#### 7. What were the findings for this academic year? (2018-2019)

For Fall 2018, 5 of 8 (62.5%) of students met the goal of 75% proficiency.

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

In the Math for Teachers 1 course, students struggle with applying Polya's problem-solving process and strategies. They are more comfortable with being told how to solve problems. Learning to build new mathematical knowledge through solving problems and within a given context is a new skill, and the students often enter the course with a fixed mindset. They do not believe they are capable of accomplishing this. It is a challenge for them to apply and adapt strategies to solve problems. They are more comfortable with using technology, however. They learn to create and use representations to organize, record, and communicate mathematical ideas eventually, and most learn to communicate mathematical thinking coherently and clearly by the end of the semester.

# 9. What is the action plan for the next academic year? (2019-2020) Explain.

Instructor will continue to show examples of high quality projects and mathematical activities from previous students. Instructor will plan multiple activities where students have an opportunity in class to work in small groups. They will experience new problem types and collaborate within their group to find solutions and have opportunities to communicate their mathematical thinking, sometimes using technology, to their peers. This would provide them with opportunities to practice and receive feedback from their peers and also the instructor, who will offer support and guidance. Students will have earlier and incremental deadlines for their project, to reduce procrastination and help students produce a better executed final product.

These results will also be discussed with other faculty members in the Education/Reading department.



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