Assessment: Course Four Column

Courses (MATH) - Math

MATH 123:Stat/Geomtl Cpt Elem Tchr

Course Outcomes	Assessment Measures	Results	Actions
Analyze situations where probability is involved - Analyze situations where probability is involved Find measures of central tendency and variation, understanding their similarities and distinctions Perform statistical measurements and explain their meaning Create and use appropriate graphical representations of statistical data Demonstrate a deeper understanding of how statistics may be used **Course Outcome Status:** Active **Next Assessment:** 2022-2023	**Exam -** Midterm Exam #1 **Criterion:** Scoring 70% or higher on exam. The exam covered chapters 9 and 10 of the text book	**Reporting Period:** 2017-2018 **Criterion Met:** Yes The exam average was 82%, with 80% of the students scoring 70% of higher. Ten out 25 students scored 90% or higher. (01/14/2019)	**Action:** This was an in-class exam and students were allowed two-page of notes. Few students had difficulty with probability, permutation, combination, and simulation concepts. I thought, these concepts were explained far better than the first time I taught this class in Spring 2016. I used online tools like applets to explain, particularly, simulations but it seemed some students were still confused with simulations and probability in general. I will spend more time explaining these concepts next time I teach it. It is also important to note that some students may have test anxiety and might have contributed to low scores for five the students who scored less than 70% (01/15/2019)
Prove geometric results involving parallel lines and congruence - Prove geometric results involving parallel lines and congruence	**Exam -** Midterm Exam #2 **Criterion:** Scoring 70% or higher on exam. The exam covered chapters 9 and 10 of the textbook.	**Reporting Period:** 2017-2018 **Criterion Met:** Yes The exam average was 89%, with 23 out of 25 students scoring 70% of higher. Ten students scored 90% or above.	**Action:** This was a take-home exam. In addition, students had opportunity (just like previous semesters) to earn extra points by

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Recognize and give examples of different classes of curves Demonstrate a familiarity with the triangle and quadrilateral polygons Work successfully with polyhedra, including prisms and pyramids, cylinders, cones, and spheres Draw geometric objects with specified properties, including two-dimensional Representations of three-dimensional Objects Use networks to solve problems **Course Outcome Status:** Active **Next Assessment:** 2020-2021 **Start Date:** 09/27/2016		(01/15/2019)	practicing geometric proofs. There were six questions for a total of 12 points. However, 11 students did not take this opportunity. Few students had some difficulty on items #9 and #24 on exam. Item #9 tested students on reflection and 5 students had this incorrect. Item #24 required students to decide and explain whether two given right triangles were similar or not. Eight students answered this incorrectly. There is still a confusion on difference between two geometric figures being congruent and similar. I observed that some students had difficulty in constructing angle bisectors, line bisectors, and perpendicular bisectors. I will spend a little bit more time on these concepts next time I teach this course. Probably, I will develop specific assignments to emphasize these concepts. (01/15/2019)
Examine objects for symmetries - Examine objects for symmetries Make classical constructions using a straightedge and compass Create arguments using geometric ideas and relationships, including similarity and the Pythagorean Theorem Apply geometry and its principles to areas outside of mathematics **Course Outcome Status:** Active	**Exam -** Final Exam **Criterion:** Scoring 70% or higher on exam. The exam covered chapters 9 and 10 of the text book	**Reporting Period:** 2017-2018 **Criterion Met:** Yes The exam average was 78%, with 85% of students scoring 70% of higher. Only one out of 13 students scored 90% or above (see notes for the explanation on why total number of students was 13, instead of 25) (01/15/2019)	**Action:** This was in-class exam and only students whose grades going into the final exam were below 94% (i.e., an A) were required to take the final. Thirteen students took the final and one students did not show up. This student had some family issues this semester and was not attending class in the last few weeks of the semester.

Course Outcomes	Assessment Measures	Results		Actions

Next Assessment: 2020-2021
Start Date: 09/27/2016

I observed that most students had item #2 on the exam wrong. This item asked students to find the equation of perpendicular line through a given point. This concept is from MATH 122 or MATH 96. It seemed that students who did take MATH 122 before this class or do not remember MATH 96 material had some level of difficulty. Perhaps, allowing students to take MATH 123 before MATH 122 is not helping some students.

Action plan: I will not assume students should know this concept at all in the future. I will spend few minutes explaining this concept. (01/15/2019)

Follow-Up: This was my third time teaching this class. I am more confident teaching this class now than, particularly, the first time I taught this class. Students are getting used to my style of teaching and liking it better each semester. This may be the reason why my enrollment increases each semester. I stayed on schedule most of the time this semester and explained concepts better than previous semester. Students were not, though, as enthusiastic, engaging, and ready to learn as students in spring 2017. One student was disrespectful only one time in class. I believe the student was frustrated with transformation and did not like the way I taught

it but would not ask questions in class despite how I tried to engage students in class.

I continued with conducting an exit survey which was part of participation grade. The exit survey asked students to respond to three questions in exit survey; 1) What was your most favorite part(s) in this class? 2) Did the class meet your expectations? and 3) Do you feel you are more confident in doing math now than before this class? The responses were encouraging.
What was done differently?

Student Participation: I implemented a new strategy but did not enforce it throughout the semester. I assigned numbers to students and called them out randomly in class to respond to questions. I tallied how many times they responded to questions. My facilitators were tasked to tally while teaching for me. However, some students would not respond when I called their numbers out. This was frustrating, so I decided not to call out on students. Going forward, I will continue this approach as some students really liked it only this time I will put a "price tag" on this. I will make class participation mandatory by adding this to students' participation grade. (01/15/2019)