**MATH 120E Fundamentals of College Mathematics Expanded**

**Section Number(s): 1003**

**Instructor: Daniel T. Murphree**

**Academic Year: 2021-2022**

**Semester: Fall**

**# of Students: 30**

**Complete and submit your assessment report electronically to your department chair. Course and general education outcomes are counted as achieved if 62% or more of students answered the problems associated with the outcome correctly.** **As needed, please attach supporting documents and/or a narrative description of the assessment activities.**

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| **General Education Objectives** | **Class/Course Outcomes** | **Assessment Measures** | **Course Outcome Assessment Results** | **General Education Outcome Assessment Results** | **Outcome Results Analysis** |
|  | In the boxes below, summarize the outcomes assessed in your class or course during the last year*.* If this is a GenEd class, include the appropriate GenEd objectives. | In the boxes below, list the proctored assignments and which problems on those assignments you used to assess each outcome. | In the boxes below, give the percentage of students who answered the problems correctly and indicate if the course outcome was achieved. | In the boxes below, give the average of the percentages of students who met course learning outcomes and indicate if the general education outcome was achieved. | In the boxes below, please reflect on this outcome’s results and summarize how you plan to use the results to improve student learning. |
| Demonstrate knowledge  Of mathematical notation system | **Outcome #1:**  Solve problems using the basic rules of probability. | Proctored assignment: Proctored Chapter 11 Exam  Problem numbers:  11.1.9  11.4.11  11.3.15 | Results:  11.1.9: 63.16%  11.4.11: 89.47%  11.3.15:94.73 %  Average: 82.45%  Criterion Met: yes | Average percentage: 81.99%  Criterion Met: yes | 1. Results Analysis: These objectives were all met. The lowest scores were on basic set theory. I think my idea from last year of putting my MATH 20 and MATH 120E live classes in a row paid off. We had more time to discuss intricate topics and practice.  2. Action Plan: Set theory is the first topic in the class and is very different than what students are used to in math class. With how well the end of the course went this time, I could use a little more time to get them used to set theory at the beginning. |
| **Outcome #2:**  Solve problems using basic set theory. | Proctored assignment: Proctored Chapter 2 Exam  Problem numbers:  2.4.53  2.3.95  2.3.5  2.3.41 | Results:  2.4.53: 78.26%  2.3.95: 56.52%  2.3.5: 95.65% 2.3.41: 95.65%  Average: 81.52%  Criterion Met: yes |
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| Apply mathematical concepts and operations in proper written or graphical format | **Outcome #3:**  Follow appropriate mathematical format and use proper mathematical notation in solving problems. | Proctored assignment: Proctored Chapter Exam s  Problem numbers:  2.1.25  3.2.5  3.6.19  3.5.23  9.1.17 | Results:  2.1.25: 86.96%  3.2.5: 82.60%  3.6.19: 43.48 %  3.5.23: 65.22%  9.1.17: 100%  Average: 75.65%  Criterion Met: yes | Average percentage: 75.65%  Criterion Met: yes | 1. Results Analysis: These learning outcomes were met well. The students struggled with notation topics from chapter 3 which is on logic.  2. Action Plan: In both of these cases where students struggled here, the topics were parallel to topics from set theory. I need to more strongly emphasize the connection between symbolic logic and set theory so students realize they are not learning something new, but instead applying something already learned. |
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| Apply relevant mathematical skills in solving real-world problems  **Continued:**  Apply relevant mathematical skills in solving real-world problems | **Outcome #4:**  Use mathematical formulas to evaluate problems involving financial data. | Proctored assignment: Proctored Midterm Exam  Problem numbers:  8.3.1  8.4.9  8.5.31  8.6.5 | Results:  8.3.1: 90%  8.4.9: 55%  8.5.31: 80%  8.6.5: 55%  Average: 70%  Criterion Met: yes | Average percentage: 81.16%  Criterion Met: yes | 1. Results Analysis: All learning outcomes were met. I’m actually very happy with the results I see here. Students did much better with evaluating formulas and working with the specific topics than they have in the past.  2. Action Plan: I think that the MATH 20 class actually helped here where I was able to use it to give the students extra time to understand the topics and extra practice while reminding them again and again of MATH 20 topics that we could use in the MATH 120E portion of the course. I think that this was much more successful in this live class than in the same online-asynchronous class. I plan to keep this up in my next live corequisite class. |
| **Outcome #5:**  Solve problems using dimensional analysis | Proctored assignment: Proctored Final Exam  Problem numbers:  9.1.9  9.1.49 | Results:  9.1.9: 100%  9.1.49: 94.12%  Average: 97.06%  Criterion Met: yes |
| **Outcome #6:**  Identify and analyze statistical data. | Proctored assignment: Proctored Final Exam  Problem numbers:  12.1.32  12.2.7  12.3.25  12.4.37 | Results:  12.1.32: 100%  12.2.7: 94.44%  12.3.25: 77.78%  12.4.37: 94.44%  Average: 91.67 %  Criterion Met: yes |
| **Outcome #7:**  Use formal and symbolic logic to analyze arguments and draw valid conclusions. | Proctored assignment: Proctored Midterm Exam  Problem numbers:  3.3.27  3.7.11 | Results:  3.3.29: 91.30%  3.7.7: 65.22%  Average: 78.26 %  Criterion Met: yes |
| **Outcome #8:**  Use trigonometry to solve problems involving right triangles. | Proctored assignment: Proctored Final Exam  Problem numbers:  10.2.25  10.6.5 | Results:  10.2.25: 82.35%  10.6.5: 76.47%  Average: 79.41%  Criterion Met: yes |
| **Outcome #9:**  Calculate perimeter, area, surface area, and volume of various geometric objects. | Proctored assignment: Proctored Final Exam  Problem numbers:  10.4.19  10.5.5  10.5.21 | Results:  10.4.19: 76.47%  10.5.5: 76.47%  10.5.21: 58.82%  Average: 70.59%  Criterion Met: yes |

**Notes: While students that stuck with this class did well at grasping the concepts presented in the course, the class was not a complete success. There were 5 withdrawals, and 8 students failed the course for a total of only a 56.67% success rate for students. Many of the 8 students who failed the course disengaged and stopped attending class or completing assignments before the end of the semester. Integrating the two live classes (MATH 20 and MATH 120E) by having them one right after the other seemed to help the course, giving me more time for review and practice with students and allowing me to connect the concepts more easily in presentation. The biggest challenge in this course was the “online live” format which makes student interaction more difficult. This particular groups of students were good with communicating with me online.**

I have reviewed this report:

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Department Chair Dean

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Vice President of Academic Affairs and Student Services

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