

Objective 1.2: Quantitative Literacy

Course: MATH 110 College Algebra

Students will recognize quantitative relationships, use multiple approaches to analyze these relationships, and apply knowledge of these relationships to solve practical problems.

| By graduation students will: | Not Proficient 1 Point | Developing Proficiency 2 Points | Proficient 3 Points | Exceeding Proficiency 4 Points |
|---|---|---|---|---|
| Communicate mathematical concepts using appropriate notation and terminology. | Unable to communicate concept(s) with any mathematical notation or terminology. | Correctly communicates some of the concept(s) with proper mathematical notation or terminology. | Correctly communicates most of the concept(s) with proper mathematical notation and terminology. | Correctly communicates all of the concept(s) with proper mathematical notation and terminology. |
| Solve problems graphically, numerically, and algebraically. | Unable to correctly identify a solution using any method | Correctly identifies a solution using one or two of the three methods. | Correctly identifies a solution using all three methods. | Correctly identifies a solution using all of the given methods demonstrating the connections between the three different methods. |
| Apply linear and non-linear models to real-world situations. | Unable to apply either model to the situations. | Able to apply at least one of the models, but not by using a symbolic representation. | Able to apply both the models, using a symbolic representation for at least one of the real-world situations. | Used symbolic representations to accurately apply both of the real-world situations. |

Objective 2.1: Knowledge of the Liberal Arts

Students will possess a broad understanding of how to think about the world, having studied the modes of inquiry characteristic of humanities, mathematics, natural sciences, and social and behavioral sciences.

Outcomes 2.1-C: Mathematical Mode of Inquiry

| By graduation students will: | Not Proficient 1 Point | Developing Proficiency 2 Points | Proficient 3 Points | Exceeding Proficiency 4 Points |
|---|---|---|--|---|
| Express real-world situations using mathematical language (numerals and symbols). | Unable to model the real-world situation. | Able to determine a solution to the real-world situation, but not able to model in mathematical language. | Recognizes the correct mathematical model and expresses the mathematical model in proper notation. | Recognizes the correct mathematical model and is able to correctly apply the model to find a complete solution. |
| Apply appropriate methods to solve mathematical problems. | Correctly applies one or fewer of the steps to the solving process. | Correctly applies only two or three of the steps to the solving process. | Correctly applies all of the steps to the solving process. | Correctly applies all of the steps to the solving process and represents the final solution in exact symbolic form. |
| Correctly interpret the solutions of mathematical problems. | Unable to reasonably interpret the solutions. | Interprets the solution generally but does not include specifics to the context. | Interprets the solution specifically but does not completely tie to the context. | Interprets the solution specifically using well-structured contextual statements. |