# MA 1215 - APPLIED MATHEMATICS

Credits: 3

This course introduces students to aspects of mathematics that are particularly relevant to art and design. A basic knowledge of mathematics is required (first year of high school level). Topics include: numeric and geometric patterns in art and nature (Fibonacci series, tiling), symmetry, perspective, polyhedra, equations and graphs of trajectories, computer graphics, and fractals. Upon successful completion of this course, students will be able to apply mathematical equations to solve problems related to the topics listed above.

Prerequisites: none

| Course Learning Outcomes: | Exceeding | Meeting | Developing | Not meeting | Program Outcomes | Institutional Outcomes |
|---|---|---|---|---|---|---|
| Understand real numbers, basic algebra, geometry, and trigonometry. | Applies real numbers, basic algebra, geometry, and trigonometry with few or no errors. | Applies real numbers, basic algebra, geometry, and trigonometry with some errors. | Recognizes real numbers, basic algebra, geometry, and trigonometry. | Does not understand real numbers, basic algebra, geometry, and trigonometry. | LA1, LA6 | Crticial Thinking |
| Understand the philosophy of mathematics in the context of art and design. | Applies the philosophy of mathematics in the context of art and design. | Explains the philosophy of mathematics in the context of art and design. | Recognizes the philosophy of mathematics in the context of art and design. | Does not understand the philosophy of mathematics in the context of art and design. | LA1, LA6 | Crticial Thinking |
| Understands basic math calculations. | Performs basic math calculations with no errors. | Perform basic math calculations with some errors. | Perform basic math calculations with no errors. | Does not understand basic math calculations. | LA1, LA6 | Crticial Thinking |
| Understands the importance of mathematics for creative fields of study. | Analyzes the importance of mathematics for creative fields of study. | Articulates the importance of mathematics for creative fields of study. | Recognizes the importance of mathematics for creative fields of study. | Does not understand the importance of mathematics for creative fields of study. | LA1, LA2, LA4, LA6 | Critical Thinking Communication Competence |