

# MA 1221 - THE ART OF MATH

Credits: 3

This course will use the mathematical model of inquiry to pose and answer questions relating to art and design, music, nature, and history. The course will progress from ancient Egypt and Greece to the Renaissance and into the twenty-first century. Topics include Algebra, Geometry; ratios; abstract mathematical thinking through sequences, series, and patterns; modular arithmetic; and relations. The material is mathematical. However, its topics, as well as many of the examples and the work students do, will be drawn from the fields of art and design, dance, film, and music. Upon successful completion of the course, students will complete a significant project that applies mathematics to their area of interest.

Prerequisites: none

Course Learning Outcomes:	Exceeding	Meeting	Developing	Not meeting	Program Outcomes	Institutional Outcomes
Understand how to apply mathematics logically and critically to analysis.	Synthesizes the application of mathematics to think logically and critically.	Applies mathematics to think logically and critically.	Recognizes the importance of applying mathematics to think logically and critically.	Does not understand the application of mathematics to think logically and critically.	LA1, LA6	Critical Thinking
Understand mathematical patterns.	Synthesizes mathematical patterns into student work.	Applies mathematical patterns.	Recognizes mathematical patterns.	Does not recognize mathematical patterns.	LA1, LA6	Critical Thinking
Understand the different branches of mathematics.	Utilizes the different branches of mathematics.	Recognizes the different branches of mathematics.	Developing an understanding of the different branches of mathematics.	Does not understand the different branches of mathematics.	LA6	Critical Thinking
Understand mathematics as a problem-solving tool.	Integrates mathematics as a problem-solving tool.	Uses mathematics as a problem-solving tool.	Recognizes mathematics as a problem-solving tool.	Does not understand mathematics as a problem-solving tool.	LA1, LA6	Critical Thinking Communication Competence
Understand the importance of mathematics in society, nature, the arts and design.	Synthesizes mathematics into the student's understanding of society, nature, the arts and design.	Recognizes the importance of mathematics in society, nature, the arts and design.	Developing an understanding of the importance of mathematics in society, nature, the arts and design.	Does not understand the importance of mathematics in society, nature, the arts and design.	LA1, LA6	Critical Thinking Communication Competence
Understand the connect of mathematics to the student's field of study.	Synthesizes mathematics to the student's field of study.	Includes mathematics to the student's field of study.	Recognizes mathematics to the student's field of study.	Does not relate mathematics to the student's field of study.	LA1, LA6	Critical Thinking Communication Competence