



NAME

Math Studio: Advanced Topics in Mathematics

DESCRIPTION

This course is intended for students who are currently enrolled in, or have already completed Integrated Math 3 or are almost finished with Integrated Math 2 (Aleks). The course allows students the opportunity to choose advanced work in one of three tracks, Functions, Trigonometry, or Statistics/Analytic Geometry. Students will receive personalized instruction in their chosen track and be given guidance as they develop projects that demonstrate their mastery of their chosen topics. Students are allowed to take this course multiple times as they pursue completion of the three tracks. Math Studio is designed to provide a flexible environment for students to develop their mathematical understanding and skills in a supportive setting. Instructional interactions will be structured to provide students needed knowledge ‘just in time’ rather than ‘just in case.’ Another important aspect of this design is to allow students exposure to and input on other student’s work and projects.

DRIVING QUESTION

Can an understanding of advanced math topics shape the way that we view, understand and ultimately interact with the world around us?

FINAL PROJECT OPTIONS *(Students can submit their own final project proposal.)*

Development of a Mathematical Formula

Students will prepare, present and defend a paper demonstrating the development of a mathematical formula.

Successful Products will include:

- An approved project proposal.
- Abstract
- Paper including in paper citations, bibliography, demonstration of methodology and appropriate appendices.

Mathematical Analysis of a Real World Phenomenon

Students will study a real-world occurrence and prepare and present a paper providing a detailed mathematical analysis of it.

Successful products will include:

- An approved project proposal
- Approved data collection tool
- Paper including data analysis, in paper citations, bibliography and appropriate appendices.

<ul style="list-style-type: none"> • A five-minute presentation using Ignite format or other similar presentation with an outline of presentation. • In seminar defense of work. 	<ul style="list-style-type: none"> • A five-minute presentation using Ignite format or other similar presentation with an outline of the presentation. • In seminar question and answer.
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ACADEMIC MASTERY CREDIT PATHWAYS

Mathematical Reasoning, Advanced Topics in Math, Mastery Math Credit, Statistics & Probability

MILESTONES *(Subject to change, see myLC for assigned tasks in real time.)*

Week	Milestone
1	Math Journal Students will set up Math Journal and include their work and notes for seminar 1.
2	Math Journal Students will complete an entry about why they selected their chosen track and what they hope to learn from pursuing it. The student will design a decision making flowchart for a problem style of their choice and include it in their journal. It will also include their work and notes for Seminar 2.
3	Math Journal Students will write one entry in their math journal documenting their progress by demonstrating their understanding of the standards they have been working on. It will also include their work and notes for Seminar 3.
4	Math Journal Students will document their progress by demonstrating their understanding of the standards they have been working on. It will also include their work and notes for Seminar 4.
5	Math Journal Students will document their progress by demonstrating their understanding of the standards they have been working on. They will also include their final project proposal and the brainstorming document developed in choosing their project topic. It will also include their work and notes for Seminar 5. Final Project Selection
6	Math Journal Students will document their progress by demonstrating their understanding of the standards they have been working on. Their journal entry will discuss they process by which they chose their final project and their objectives for learning from it. It will also include their work and notes for Seminar 6.

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Math Journal

Students will document their progress by demonstrating their understanding of the standards they have been working on.