



THOMAS MORE UNIVERSITY

Mathematics

Dual-Credit Pathway

Pathway Description:

Mathematics is a rigorous and demanding study of the structures found in the real world: the nature of numbers, functions and their relationships. It is the foundation of all the hard sciences and underlies our best explanations of the universe. The love of getting correct answers, solving difficult problems and finding clarity in complicated situations is attractive to mathematics students.

Pathway Courses (to be taken in order):

Unlike other dual-credit pathways, this pathway is an option for students who are further in their math curriculum and/or interested in pursuing mathematics further in college beyond the general-education level.

Students would begin by taking either AP Calculus or a dual-credit calculus course through their high school. Following the completion of that course, students would enroll in the following course during the spring semester through Thomas More.

<u>Course</u>	<u>Title</u>
MAT 231	Foundations of Mathematics

If after the completion of this course a student is interested in pursuing further mathematics courses, they would work with Thomas More to be advised into additional courses.

Pathway Course Descriptions:

- **MAT 231 – Foundations of Mathematics**
 - Prerequisite: a calculus course (either dual-credit or AP)
 - Description: An introduction to higher mathematics and how to write proofs. Topics include symbolic logic, methods of proof, basic set theory, mathematical induction, equivalence relations, functions as relations, and countable and uncountable sets.

Additional Notes:

- MAT 231 can be offered as an in-person course, an online course or can be taught by a high school-credentialed teacher (pending department approval).

Links:

- Program website: <https://www.thomasmore.edu/program/mathematics/>