

MATHEMATICS, B.A. FOR ASSOCIATE DEGREE FOR TRANSFER (ADT) STUDENTS

Note that all lower-division Mathematics courses will be transferred in from the community college. Students will bring in 18 units of Mathematics (4 units are FE).

Program Learning Outcomes

Graduates of the program will be able to:

- demonstrate facility with analytical and algebraic concepts.
- write proofs.
- apply their mathematical knowledge and critical thinking to solve problems.
- use technology to solve problems.
- speak about their work with precision, clarity, and organization.
- write about their work with precision, clarity, and organization.
- identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
- collaborate effectively in teams.
- understand and create arguments supported by quantitative evidence.
- understand the professional, ethical, and social issues and responsibilities with the implementation and use of mathematical models and technology.

Code	Title	Units
Lower-Division Requirements		
Eighteen (18) units of transferred Mathematics ¹		18
Upper-Division Requirements		
MTH 3012	Number Theory with Proofs	2
MTH 3052	History of Mathematics	2
MTH 3083	Mathematical Probability and Statistics	3
MTH 4024	Real Analysis	4
or MTH 4044	Abstract Algebra	
MTH 4081	Senior Seminar in Computer Science	1
Choose one (1) course from the following:		3
MTH 3033	Differential Equations	
MTH 3043	Discrete Mathematics	
MTH 3073	Mathematical Modeling	
MTH 4013	Complex Analysis	
Choose one (1) sequence from the following:		3
HON 4098	Honors Project I	
and HON 4099	and Honors Project II	
MTH 4102	Independent Research in Mathematics I	
and MTH 4121	and Independent Research in Mathematics II	
MTH 4133	Service Learning in Mathematics	
Elective Courses		
Choose twelve (12) additional units from the following:		12
CSC 1043	Introduction to Computer Programming	
and	and Introduction to Computer Programming Lab	
CSC 1043L		

CSC 1054	Objects and Elementary Data Structures
and	and Objects and Elementary Data Structures Lab
CSC 1054L	
CSC 3003	Python and UNIX
CSC 3011	Machine Learning and Multivariate Modeling in R
CSC 3021	Computational Tools
CSC 3031	Data Visualization and Communication with R
HON 4098	Honors Project I
HON 4099	Honors Project II
MTH 3033	Differential Equations
MTH 3043	Discrete Mathematics
MTH 3073	Mathematical Modeling
MTH 4002	Topics in Geometry
MTH 4013	Complex Analysis
MTH 4024	Real Analysis
MTH 4044	Abstract Algebra
MTH 4071	History of Mathematics Study Tour
MTH 4091	Independent Study in Mathematics
MTH 4092	Special Topics in Mathematics
MTH 4102	Independent Research in Mathematics I
MTH 4121	Independent Research in Mathematics II
MTH 4133	Service Learning in Mathematics
MTH 4162	Project for Data Analytics Minors I
MTH 4171	Project for Data Analytics Minors II

Total Units **48**

¹ Transferred in from the community college; 4 units are FE.

Total Units for Degree: 48 (44 non-FE units)

Note(s): Associate Degree for Transfer (ADT) (<https://pointloma-public.courseleaf.com/prior-catalogs/2023-2024/tug-catalog/colleges-schools-departments/adt/>) students only.