Mathematics Minor Program

The Department of Mathematical Sciences offers an undergraduate minor in mathematics for students majoring in another area. It is offered to students in any college at the University of Cincinnati.

Overall, completion of the major requires:

- At least 24 MATH/STAT credits;
- Grade of C- or better in all courses used to fulfill the 24 credit requirement;
- Completion of coursework satisfying the requirements below.

Note: in the course lists below, all pre-requisites must be completed with a grade of C- or better.

Core Course Requirements

All courses in this list are required for all minors:

Course Number	Course Title	Pre-requisites	Typically Offered	Credit Hours
MATH 1060 or 1061	Calculus I	Placement test or MATH 1022, 1024, or 1026	Fall, Spring, Summer	4
MATH 1062	Calculus II	MATH 1061	Fall, Spring, Summer	4
MATH 2063	Multivariable Calculus	MATH 1062	Fall, Spring, Summer	4
MATH 2076	Linear Algebra	MATH 1062	Fall, Spring, Summer	3

Table 1: Core Course Requirements

Elective Course Options

In addition to core requirements above, students take at least three MATH/STAT courses chosen from the lists below. Note: in this document the elective options are split into MATH and STAT, but they are listed together in Catalyst.

Please note that the following list is not exhaustive. Any MATH or STAT course numbered 3000 or above will be permitted to satisfy the Mathematics minor.

It is recommended that students choose one elective to be STAT 2037 and another to be MATH 2073 or MATH 2074.

Course Number	Course Title	Pre-requisites	Typically Offered	Credit Hours
MATH 2073 or 2074	Differential Equations or Dynamical Systems	MATH 1062	Fall, Spring, Summer	3
MATH 3001	Intro to Abstract Math	MATH 2076	Fall, Spring	3
MATH 3002	Intro to Analysis	MATH 2063 and MATH 3001	Fall, Spring	3
MATH 3004	Intro to Abstract Algebra	MATH 3001	Fall	3
MATH 3005	Intro to Geometry	MATH 3001	Spring	3

MATH 3006	Mathematical Modelling	MATH 2063, MATH 2076, and MATH 2073 or 2074	Fall, Spring	3
MATH 4001	Special Topics	MATH 1062	Rarely	
MATH 4008	Intro to Probability	MATH 2063 and STAT 2037	Fall, Spring	3
MATH 4009	Financial Math for Actuarial Sciences	STAT 2037	Fall, Spring	3
MATH 4011	Intro to Number Theory	MATH 3004	Spring	3
MATH 4012	Differential Geometry and Topology	MATH 2063 and MATH 2076	Spring	3
MATH 4047	Individual Work	Permission of undergrad director	Fall, Spring, Summer	1 - 4
MATH 5101	Advanced Calculus I	MATH 3001	Fall	4
MATH 5102	Advanced Calculus II	MATH 5101	Spring	4
MATH 5103	Abstract Linear Algebra	MATH 3001	Fall	3
MATH 5104	Group Theory	MATH 3004	Spring	3
MATH 5105	Intro to Complex Analysis	MATH 2063 and MATH 2073 or 2074	Fall	3
MATH 5106	Numerical Analysis	MATH 2063, MATH 2076, and MATH 2073 or 2074	Fall	3
MATH 5107	Partial Differential Equations and Fourier Analysis	MATH 2063, MATH 2076, and MATH 2073 or 2074	Spring	3
MATH 5108	Applied Probability and Stochastic Processes	STAT 2037	Fall	3
MATH 5110	Probabilistic Aspects of Financial Modelling	MATH 2063, MATH 2076, and STAT 2037	Spring[i]	3
MATH 5111	Computational Financial Mathematics	MATH 2063, MATH 2076, MATH 2073 or 2074, and STAT 2037	Fall[i]	3
MATH 5112	Applied Linear Algebra	MATH 2063 and MATH 2076	Fall	3
MATH 5115	Mathematical Programing	MATH 2063, MATH 2076, and MATH 2073 or 2074	Spring[i]	3
MATH 5151	Applied Ordinary Differential Equations	MATH 2063, MATH 2076, and MATH 2073 or 2074	Fall[i]	3

Table 2: Math Elective Options

Course Number	Course Title	Pre-requisites	Typically Offered	Credit Hours
STAT 2037	Probability and Statistics I	MATH 1062	Fall, Spring, Summer	3
STAT 3038	Probability and Statistics II	STAT 2037	Fall, Spring	3
STAT 3041	Data Science and Statistics	STAT 2037		3
STAT 4021	Special Topics	Permission of Instructor	Rarely	
STAT 4121	Mathematical Statistics I	MATH 2063, MATH 2076, and STAT 2037	Fall	3
STAT 5122	Mathematical Statistics II	STAT 4121 or STAT 5121	Spring	3

STAT 4131	Regression Analysis and Statistical Learning	MATH 2063, MATH 2076, and STAT 2037	Fall	3
STAT 5132	Design and Analysis of Experiments	STAT 4131 or STAT 5131	Spring	3
STAT 5141	Time Series	STAT 3038 or STAT 5132	Fall[i]	3
STAT 5142	Survival Analysis and Logistic Regression	STAT 5131	Spring[i]	3
STAT 5143	Applied Bayesian Analysis	STAT 5121	Spring[i]	3
STAT 5144	Nonparametric Statistics	STAT 5121	Fall[i]	3
STAT 5145	Statistical Computing with SAS and S-plus	STAT 3038	Irregularly	3
STAT 5151	Statistical Consulting	Permission of instructor	Fall, Spring[i]	3
STAT 5171	Statistics and Machine Learning	STAT 5121 and STAT 5131	Spring	3

Table 3: Statistics/Actuarial Science Elective Options

Contact

For more information, contact our Undergraduate Program Director:

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[i] This course may not be offered every year