Mathematical Economics BA (CLA)

Overview

The College of Liberal Arts' Department of Economics and the College of Science and Technology's Department of Mathematics jointly offer the **Bachelor of Arts in Mathematical Economics** as a platform for systematic concentration in the mathematical approach to economics. Economics has progressed in the last several decades by making extensive use of mathematical techniques. As a result, students who wish to pursue graduate study in economics, finance, accounting and other disciplines that make an extensive use of economics need a thorough grounding in both economics and mathematical Economics curriculum provides this grounding with a broad selection of courses that cover all important areas of economics and the mathematical tools required for a critical, deep mastery of these areas. This program is especially recommended for those students who intend to pursue graduate studies in economics.

Campus Location: Main

Program Code: LA-MECN-BA

Residency Requirements

Students must satisfy general Temple University residency requirements.

At least 10 courses required for the major must be completed at Temple. At least 5 Mathematics courses and 4 Economics courses must be completed at Temple.

Distinction in Major

For distinction in Mathematical Economics, a student must have an overall GPA of 3.25 or higher. A student must also have a GPA of 3.50 or higher in the 3000+ Mathematics courses and a GPA of 3.60 or higher in the 3000+ Economics courses.

Contact Information

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Learn more about the Bachelor of Arts in Mathematical Economics.

These requirements are for students who matriculated in academic year 2023-2024. Students who matriculated prior to fall 2023 should refer to the Archives to view the requirements for their Bulletin year.

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Summary of Degree Requirements

University Requirements

- MATH 0701 and/or ENG 0701, if required by placement testing.
- All Temple students must take a minimum of two writing-intensive courses as part of their major. All students must take ECON 3598 as their capstone experience. The following is a list of courses that can be used to satisfy the remaining writing-intensive requirement:

Code	Title	Credit Hours
ECON 3596	Energy, Ecology, and Economy	3
ECON 3597	Health Economics	3
ECON 3696	Behavioral Economics	3
ECON 3697	The Economics of Sports	3
ECON 3698	Economic Inequality	3
MATH 3096	Introduction to Modern Algebra	3
or MATH 3098	Modern Algebra	
MATH 4096	Senior Problem Solving	3

• Students must complete the General Education (GenEd) requirements. Students who complete this major typically receive a waiver for 1 Quantitative Literacy (GQ) GenEd course.

College Requirements

Completion of a minimum of 123 credits, including:

- 90 credits within the College of Science & Technology (CST) or the College of Liberal Arts (CLA).
- 45 Upper-Level (2000+) credits within the College of Science & Technology (CST) or the College of Liberal Arts (CLA).
- Two (2) Upper-Level (2000+) Liberal Art courses.
- Second (2nd) Level of a Foreign Language (1002).

Major Requirements (60-62 credits)

Code	Title	Credit Hours
Computer & Information Science		
Select one of the following:		3-4
CIS 1051	Introduction to Problem Solving and Programming in Python	
or CIS 1951	Honors Introduction to Problem Solving and Programming in Python	
CIS 1057	Computer Programming in C	
CIS 1068	Program Design and Abstraction	
or CIS 1968	Honors Program Design and Abstraction	
MATH 1033 & MATH 1034	Computing in MATLAB and Applications in MATLAB	
Mathematics		
MATH 1041	Calculus I	4
or MATH 1941	Honors Calculus I	
MATH 1042	Calculus II	4
or MATH 1942	Honors Calculus II	
MATH 2043	Calculus III	4
or MATH 2943	Honors Calculus III	
MATH 2101	Linear Algebra	3
MATH 2111	Basic Concepts of Math	3
MATH 3031	Probability Theory I	3
MATH 3032	Mathematical Statistics (S)	3
Select one of the following sequences:		6-7
MATH 3043 & MATH 3044	Numerical Analysis I and Numerical Analysis II	

MATH 3137 & MATH 3138	Real & Complex Analysis I and Real & Complex Analysis II	
MATH 3141 & MATH 3142	Advanced Calculus I and Advanced Calculus II	
One Mathematics elective	at the 3000 level or above ^{1,2}	3
Economics		
ECON 1102	Microeconomic Principles	3
or ECON 1902	Honors Microeconomic Principles	
ECON 3501	Intermediate Microeconomic Analysis	3
or ECON 3701	Intermediate Microeconomic Analysis with Calculus	
ECON 3502	Intermediate Macroeconomic Analysis	3
or ECON 3702	Intermediate Macroeconomic Analysis with Calculus	
ECON 3503	Introduction to Econometrics	3
or ECON 3703	Econometric Theory	
ECON 3504	Mathematical Economics	3
ECON 3598	Economics Writing Seminar	3
Two Economics electives at the 3000 level or above, with permission from advisor ²		6
Total Credit Hours		60-62
Code	Title	Credit
(F) - Fall only course.		Hours

(S) - Spring only course.

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MATH 2041, MATH 2941, MATH 2045, or MATH 2121 may be used to fulfill the Mathematics elective at the 3000 level or above.

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One of the Mathematics or Economics electives must be a writing-intensive course in order to satisfy the University requirement that each student must fulfill two writing-intensive courses within the major.

Suggested Academic Plan

Bachelor of Arts in Mathematical Economics

Suggested Plan for New Students Starting in the 2023-2024 Academic Year

	Credit Hours	16
General Education/Electi	ve Credits	9
MATH 1042 or MATH 1942	Calculus II or Honors Calculus II	4
ECON 1102 or ECON 1902	Microeconomic Principles or Honors Microeconomic Principles	3
Spring	Credit Hours	15
General Education/Electi	ve Credits ¹	8-7
MATH 1041 or MATH 1941	Calculus I or Honors Calculus I	4
MATH 1033 & MATH 1034	Computing in MATLAB and Applications in MATLAB	
CIS 1068 or CIS 1968	Program Design and Abstraction or Honors Program Design and Abstraction	
CIS 1057	Computer Programming in C	
CIS 1051 or CIS 1951	Introduction to Problem Solving and Programming in Python or Honors Introduction to Problem Solving and Programming in Python	
Select one of the followin	ıg:	3-4
Fall		Credit Hours
Year 1		

Year 2		
Fall		
ECON 3501 or ECON 3701	Intermediate Microeconomic Analysis or Intermediate Microeconomic Analysis with Calculus	3
MATH 2043 or MATH 2943	Calculus III or Honors Calculus III	4
General Education/Elective C	Credits	9
	Credit Hours	16
Spring		
ECON 3502 or ECON 3702	Intermediate Macroeconomic Analysis or Intermediate Macroeconomic Analysis with Calculus	3
MATH 2111	Basic Concepts of Math	3
General Education/Elective C	Credits	9
	Credit Hours	15
Year 3		
Fall		
3000+ Economics Elective, w	vith permission from advisor ²	3
MATH 2101	Linear Algebra	3
MATH 3031	Probability Theory I	3
General Education/Elective C	Credits	6
	Credit Hours	15
Spring		
ECON 3504	Mathematical Economics	3
MATH 3032	Mathematical Statistics (S)	3
3000+ Mathematics Elective	2,3	3
General Education/Elective C	Credits	6
	Credit Hours	15
Year 4		
Fall		
ECON 3503 or ECON 3703	Introduction to Econometrics or Econometric Theory	3
Select one of the following: 4		3-4
MATH 3043	Numerical Analysis I (F)	
MATH 3137	Real & Complex Analysis I	
MATH 3141	Advanced Calculus I	
General Education/Elective C	Credits	10-9
	Credit Hours	16
Spring ECON 3598	Economics Writing Seminar	3
3000+ Economics Elective, w	ith permission from advisor ²	3
Select one of the following: ⁴	·	3
MATH 3044	Numerical Analysis II	
MATH 3138	Real & Complex Analysis II	
MATH 3142	Advanced Calculus II	
General Education/Elective C	Credits	6
	Credit Hours	15
	Total Credit Hours	123
Code	Title	Credit Hours
(F) - Fall only course		
(S) - Spring only course		

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All students in the College of Liberal Arts are required to take a 1 credit seminar in professional development. CLA 1002 Professional Development for Liberal Arts Majors is the appropriate course option for this major. Other courses that fulfill this requirement are ENG 1801 Career Seminar and PSY 1002 Careers in Psychology.

2

One of the Mathematics or Economics electives must be a writing-intensive course in order to satisfy the University requirement that each student must fulfill two writing-intensive courses within the major.

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MATH 2041, MATH 2041, MATH 2045, or MATH 2121 may be used to fulfill the Mathematics elective at the 3000 level or above.

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You must complete the year-long sequence of either MATH 3043 and MATH 3044; or MATH 3137 and MATH 3138; or MATH 3141 and MATH 3142.