MATHEMATICAL ECONOMICS (MAEC)

Department of Economics and Finance, Gordon S. Lang School of Business and Economics

Most economic theory rests on explicit, formal, mathematical and/or statistical foundations. This specialization articulates and emphasizes these interactions. It is most suitable for students who either have, or wish to develop, a strong analytical background.

Major Requirements (Honours)

This is a major within the degree: Bachelor of Arts (calendar.uoguelph.ca/undergraduate-calendar/degree-programs/bachelor-arts-ba/).

A minimum of 20.00 credits is required, including:

Code	Title	Credits
Semester 1		
CIS*1500	Introduction to Programming	0.50
ECON*1050	Introductory Microeconomics	0.50
MATH*1200	Calculus I	0.50
1.00 electives		1.00
Semester 2		
ECON*1100	Introductory Macroeconomics	0.50
MATH*1210	Calculus II	0.50
1.50 electives		1.50
Semester 3		
ECON*2310	Intermediate Microeconomics	0.50
ECON*2410	Intermediate Macroeconomics	0.50
STAT*2040	Statistics I	0.50
1.00 electives		1.00
Semester 4		
ECON*3740	Introduction to Econometrics	0.50
2.00 electives or restricted electives [1]		2.00
Semester 5		
ECON*3710	Advanced Microeconomics	0.50
2.00 electives or restricted electives [1]		2.00
Semester 6		
ECON*3100	Game Theory	0.50
ECON*3810	Advanced Macroeconomics	0.50
1.50 electives or restricted electives [1]		1.50
Semester 7		
ECON*4640	Advanced Econometrics	0.50
ECON*4710	Advanced Topics in Microeconomics	0.50
ECON*4700	Advanced Mathematical Economics	0.50
1.00 electives or restricted electives [1]		1.00
Semester 8		
ECON*4810	Advanced Topics in Macroeconomics	0.50
0.50 credits in Economics at the 4000 level		0.50
Select 0.50 credits from the following:		
FIN*4100	Financial Econometrics	0.50
MATH*3200	Real Analysis	0.50
STAT*4340	Statistical Inference	0.50
STAT*4350	Applied Multivariate Statistical Methods	0.50
STAT*4360	Applied Time Series Analysis	0.50
1.00 electives		1.00

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At least 1.00 credits of the 4.00 restricted electives credits must be from Mathematics and 1.00 credits must be from Statistics. The remaining 2.00 credits can be from either subject area. Of the 4.00 credits, at least 1.00 credits must be at the 3000 level or above and the remaining 3.00 credits must be at the 2000 level or above.

Note: Courses from MATH or STATS will be allowed with the appropriate prerequisites, or by permission of the instructor.

Co-op Requirements (Honours)

This is a major within the degree: Bachelor of Arts (calendar.uoguelph.ca/undergraduate-calendar/degree-programs/bachelor-arts-ba/).

The Co-op program in Mathematical Economics is a five year program, including five work terms. Students must follow the academic work schedule as outlined below (also found on the Co-operative Education website: https://www.recruitguelph.ca/cecs/).

Academic and Co-op Work Term Schedule

Year	Fall	Winter	Summer
1	Academic Semester 1	Academic Semester 2	Off
2	Academic Semester 3 COOP*1100	Academic Semester 4	COOP*1000 Work Term I
3	COOP*2000 Work Term II	Academic Semester 5	COOP*3000 Work Term III
4	Academic Semester 6	COOP*4000 Work Term IV	COOP*5000 Work Term V
5	Academic Semester 7	Academic Semester 8	N/A

Please refer to the Co-operative Education program policy with respect to work term performance grading, work term report grading and program completion requirements.

For additional program information students should consult with their Co-op Co-ordinator and Co-op Faculty Advisor, listed on the Co-operative Education web site.

Credit Summary

(22.50 Total Credits)

Code	Title	Credits
Required Core Courses		13.00
Humanities credits from at least two subject areas (BA distribution requirement)		1.50
Social Science credit outside of ECON (BA distribution requirement)		0.50
Electives		5.00
Co-op Work Terms		2.50
Total Credits		**22.5**

Recommended Program Sequence

Code	Title	Credits
Semester 1 - Fall		
CIS*1500	Introduction to Programming	0.50
ECON*1050	Introductory Microeconomics	0.50
MATH*1200	Calculus I	0.50
1.00 electives		1.00
Semester 2 - Winter		
ECON*1100	Introductory Macroeconomics	0.50
MATH*1210	Calculus II	0.50
1.50 electives		1.50
Summer Semester		
No academic semester or work term		
Semester 3 - Fall		
COOP*1100	Introduction to Co-operative Education	0.00
ECON*2310	Intermediate Microeconomics	0.50
ECON*2410	Intermediate Macroeconomics	0.50
STAT*2040	Statistics I	0.50
1.00 electives		1.00
Semester 4 - Winter		
ECON*3740	Introduction to Econometrics	0.50
2.00 electives or restricted electives [2]		2.00
Summer		
COOP*1000	Co-op Work Term I	0.50
Fall		
COOP*2000	Co-op Work Term II	0.50
Semester 5 - Winter		
ECON*3100	Game Theory	0.50
ECON*3810	Advanced Macroeconomics	0.50
1.50 electives or restricted electives [2]		1.50
Summer		
COOP*3000	Co-op Work Term III	0.50
Semester 6 - Fall		
ECON*3710	Advanced Microeconomics	0.50
2.00 electives or restricted electives [2]		2.00
Winter		
COOP*4000	Co-op Work Term IV	0.50
Summer		
COOP*5000	Co-op Work Term V	0.50
Semester 7 - Fall		
ECON*4640	Advanced Econometrics	0.50
ECON*4700	Advanced Mathematical Economics	0.50
ECON*4710	Advanced Topics in Microeconomics	0.50
1.00 electives or restricted electives [2]		1.00
Semester 8 - Winter		
ECON*4810	Advanced Topics in Macroeconomics	0.50
0.50 credits at the 4000 level Economics		0.50
Select 0.50 credits from the following:		
FIN*4100	Financial Econometrics	0.50
MATH*3200	Real Analysis	0.50
STAT*4340	Statistical Inference	0.50
STAT*4350	Applied Multivariate Statistical Methods	0.50
STAT*4360	Applied Time Series Analysis	0.50
1.00 electives		1.00

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At least 1.00 credits of the 4.00 restricted electives credits must be from Mathematics and 1.00 credits must be from Statistics. The remaining 2.00 credits can be from either subject area. Of the 4.00 credits, at least 1.00 credits must be at the 3000 level or above and the remaining 3.00 credits must be at the 2000 level or above.

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