

APPLIED MATHEMATICS WITH ECONOMICS OPTION, B.SC. MAJOR

Degree Requirements

Four Year Major (Including Co-operative Option if Selected)

Course	Title	Hours
Year 1		
MATH 1220	Linear Algebra 1 ¹	3
MATH 1230	Differential Calculus ¹	3
MATH 1232	Integral Calculus (C+) ¹	3
MATH 1240	Elementary Discrete Mathematics	3
One of the following:		6
ECON 1010 & ECON 1020	Introduction to Microeconomic Principles and Introduction to Macroeconomic Principles	
ECON 1210 & ECON 1220	Introduction to Canadian Economic Issues and Policies and Introduction to Global and Environmental Economic Issues and Policies	
9 credit hours of electives		9
Hours		27
Years 1-2		
3 credit hour "W" course must be taken in Year 1 or Year 2		3
Hours		3
Year 2		
MATH 2080	Introduction to Analysis	3
MATH 2090	Linear Algebra 2	3
MATH 2150	Multivariable Calculus	3
MATH 2160	Numerical Analysis 1	3
MATH 2180	Real Analysis 1	3
Hours		15
Years 2-4		
STAT 1150	Introduction to Statistics and Computing ¹	3
STAT 2150	Statistics and Computing	3
COMP 1010	Introductory Computer Science 1 ¹	3
ECON 2030	Mathematical Economics 1	3
ECON 3030	Mathematical Economics 2	3
6 credit hours from:		6
MATH 2030	Combinatorics 1	
MATH 2040	Curves and Surfaces	
MATH 2170	Number Theory 1	
Any 3000/4000 level MATH course		
6 credit hours from:		6
ECON 2010	Microeconomic Theory 1	
ECON 2020	Macroeconomic Theory 1	
ECON 3010	Microeconomic Theory 2	
ECON 3020	Macroeconomic Theory 2	

24 credit hours of approved electives		24
Hours		51
Years 3-4		
MATH 2070	Graph Theory 1	3
MATH 3340	Complex Analysis 1	3
MATH 3420	Numerical Analysis 2	3
MATH 3440	Ordinary Differential Equations	3
MATH 3460	Partial Differential Equations	3
MATH 3470	Real Analysis 2	3
MATH 3610	Introduction to Mathematical Modelling	3
MATH 4370	Linear Algebra and Matrix Analysis	3
Co-op Requirements (if selected):		
SCI 3980	Co-operative Education Work Term 1	0
SCI 3990	Co-operative Education Work Term 2	0
SCI 4980	Co-operative Education Work Term 3	0
SCI 4990	Co-operative Education Work Term 4 (if a 4th work term is selected)	0
Hours		24
Total Hours		120

¹ Students are strongly advised to take MATH 1220, MATH 1230 and MATH 1232.

The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved:

- MATH 1210 (B) or MATH 1300 (C+) in place of MATH 1220;
- MATH 1500 (B) or MATH 1510 (B) in place of MATH 1230;
- MATH 1700 (B) or MATH 1710 (B) in place of MATH 1232;
- MATH 1690 (C+) in place of MATH 1230 and MATH 1232;
- STAT 1000 (C) and STAT 2000 (B) in place of STAT 1150.

COMP 1012 may be used in place of COMP 1010.

(Letters in brackets indicate minimum prerequisite standing for further study.)