ECONOMICS: MATHEMATICAL EMPHASIS

REQUIREMENTS

REQUIREMENTS FOR THE MATHEMATICAL EMPHASIS
MATHEMATICS & STATISTICS

Code	Title	Credits
Mathematics		**15-16**
Option 1–four courses:		
MATH 221	Calculus and Analytic Geometry 1	
MATH 222	Calculus and Analytic Geometry 2	
MATH 234	Calculus--Functions of Several Variables	
MATH 320	Linear Algebra and Differential Equations	
or MATH 340	Elementary Matrix and Linear Algebra	
Option 2–Honors sequence:		
MATH 375	Topics in Multi-Variable Calculus and Linear Algebra	
MATH 376	Topics in Multi-Variable Calculus and Differential Equations	
Statistics (1 course)		**3**
ECON 310	Statistics: Measurement in Economics (Recommended)	
ECON 410	Introductory Econometrics	
MATH/STAT 431	Introduction to the Theory of Probability	
STAT/MATH 309	Introduction to Probability and Mathematical Statistics I	
STAT 311	Introduction to Theory and Methods of Mathematical Statistics I	
STAT 324	Introductory Applied Statistics for Engineers	
STAT 340	Data Science Modeling II	
Total Credits		**18-19**

ECONOMICS

30 credits to include:

Code	Title	Credits
Microeconomics Macroeconomics (complete one):		**4-8**
ECON 101 & ECON 102	Principles of Microeconomics and Principles of Macroeconomics	
ECON 111	Principles of Economics-Accelerated Treatment	
Intermediate Theory (complete one):		**6-8**
ECON 301 & ECON 302	Intermediate Microeconomic Theory and Intermediate Macroeconomic Theory	
ECON 311 & ECON 312	Intermediate Microeconomic Theory – Advanced Treatment and Intermediate Macroeconomic Theory - Advanced Treatment (Honors Econ)	
Introductory Econometrics		
ECON 410	Introductory Econometrics	4
Three Core ECON courses: [1]		**6-12**
ECON 409	Study Abroad in Advanced Economics	
ECON 435	The Financial System	
ECON 441	Analytical Public Finance	
ECON 442	Macroeconomic Policy	
ECON 448	Human Resources and Economic Growth	
ECON 450	Wages and the Labor Market	
ECON 451		
ECON 455	Behavioral Economics	
ECON 458	Industrial Structure and Competitive Strategy	
ECON 460	Economic Forecasting	
ECON 461	International Macroeconomics	
ECON 464	International Trade	
ECON 467	International Industrial Organizations	
ECON 468	Industrial Organization and Imperfect Competition	
ECON 475	Economics of Growth	
ECON/ FINANCE 503	Markets with Frictions	
ECON 521	Game Theory and Economic Analysis	
ECON 522	Law and Economics	
ECON/R M I 530	Insuring Life's Risks: Health, Aging, and Policy	
ECON/ POP HLTH/ PUB AFFR 548	The Economics of Health Care	
ECON 570	Fundamentals of Data Analytics for Economists	
ECON 580	Honors Tutorial in Research Project Design	
ECON 621	Markets and Models	
ECON 623	Population Economics	
ECON 661	Issues in International Macroeconomics	
ECON 664	Issues in International Trade	
ECON 666	Issues in International Finance	
ECON 690	Topics in Economics	
ECON 695	Topics in Economic Data Analysis	
Electives		**0-10**

Complete any core ECON course (above) or one of these courses:	
ECON/ FINANCE 300	Introduction to Finance
ECON/ HIST SCI 305	Development of Economic Thought
ECON/A A E/ REAL EST/ URB R PL 306	The Real Estate Process
ECON 309	Study Abroad in Intermediate Economics
ECON 315	Data Visualization for Economists
ECON/ FINANCE 320	Investment Theory
ECON 321	Sports Economics
ECON 330	Money and Banking
ECON/A A E/ ENVIR ST 343	Environmental Economics
ECON 355	The Economics of Growing-up and Getting Old
ECON 370	Economics of Poverty and Inequality
ECON/A A E 371	Energy, Resources and Economics
ECON 390	Contemporary Economic Issues
ECON/REAL EST/ URB R PL 420	Urban and Regional Economics
ECON/A A E 421	Economic Decision Analysis
ECON/ENVIR ST/ POLI SCI/ URB R PL 449	Government and Natural Resources
ECON/A A E/ INTL BUS 462	Latin American Economic Development
ECON 465	The American Economy to 1865
ECON/ HISTORY 466	The American Economy Since 1865
ECON/A A E 473	Economic Growth and Development in Southeast Asia
ECON/A A E 474	Economic Problems of Developing Areas
ECON/A A E 477	Agricultural and Economic Development in Africa
ECON/ PHILOS 524	Philosophy and Economics
ECON/A A E 526	Quantitative Methods in Agricultural and Applied Economics
ECON/A A E/ F&W ECOL 531	Natural Resource Economics
ECON/SOC 663	Population and Society
ECON/A A E/ ENVIR ST/ URB R PL 671	Energy Economics
Total Credits	**30**

RESIDENCE AND QUALITY OF WORK

- 2.000 GPA in all major and ECON courses
- 2.000 GPA on 15 upper-level major courses taken in residence[2]
- 15 credits in ECON, taken on the UW–Madison campus

HONORS IN THE MAJOR
REQUIREMENTS TO EARN HONORS IN THE ECONOMICS MAJOR

To earn Honors in the Major in Economics, students must be declared in and satisfy the requirements for the Economics–Mathematical Emphasis Option (above), **and** satisfy the following additional requirements:

- Earn a 3.300 University GPA
- Earn a 3.500 GPA for all ECON and major courses
- Complete the following courses, taken for Honors, with grades of B or better in each:

Code	Title	Credits
ECON 311 & ECON 312	Intermediate Microeconomic Theory - Advanced Treatment and Intermediate Macroeconomic Theory - Advanced Treatment	
ECON 580	Honors Tutorial in Research Project Design	
Select one of the following capstone experiences:		
ECON 581	Honors Thesis	
ECON 681 & ECON 682	Senior Honors Thesis and Senior Honors Thesis (Take for a total of 6 credits)	

FOOTNOTES

[1] At least two core ECON courses must be taken in residence at UW–Madison, and not via transfer or a UW–Madison Study Abroad program.

[2] Intermediate and Advanced level ECON courses are Upper Level in the major.