

Mathematics (3450)

B.S. - Bachelor of Science Applied Mathematics and M.A. - Master of Arts Economics

Major: Applied Mathematics (3450??BS and 3250??MA)

Buchtel College of Arts and Sciences

Learning Outcomes

Students will demonstrate a working knowledge of standard topics in: calculus, linear algebra, differential equations and advanced calculus (theory and analysis of basic rules of calculus).

Students will demonstrate a working knowledge of standard topics in: applied numerical methods, mathematical models and statistics.

Students will demonstrate a working knowledge of standard topics in economics and business.

Students will demonstrate an ability to communicate mathematical results in written form.

Students will be able to formulate, analyze and solve mathematical models.

Students will be able to apply mathematical theories to solving routine and non-routine mathematical models.

Year 1: Fall	Crs	Spring	Crs
3450:221 Analytic Geometry-Calculus I	4	3450:222 Analytic Geometry-Calculus II	4
3300:111 English Composition I	4	3300:112 English Composition II	3
Beginning Foreign Language I	4	Beginning Foreign Language II	4
7600:105 Introduction to Public Speaking	3	3250:244 Intro to Economic Analysis	3
Natural Science Requirement	4	Physical Education/Wellness	1
Total	19	Total	15

		Summer: Social Science Requirement	3
Year 2: Fall	Crs	Spring	Crs
3450:223 Analytic Geometry-Calculus III	4	3450:335 Introduction to ODEs	3
Intermediate Foreign Language I	3	3450:312 Linear Algebra	3
Area Studies and Cultural Diversity	2	6200:202 Accounting Principles II	3
Area Studies and Cultural Diversity	2	Natural Science Requirement	4
3460:209 Computer Science I	4	Intermediate Foreign Language II	3
6200:201 Accounting Principles I	3	3450:307 Fundamentals of Adv Math	3
Total	18	Total	19
		Summer: 6200:250 Spreadsheet Modeling	3
		Humanities Elective	3
Year 3: Fall	Crs	Spring	Crs
3450:427 Applied Numerical Methods I	3	3450:428 Applied Numerical Methods II	3
3450:421 Advanced Calculus I	3	3450:436 Mathematical Models	3
3250:410 Intermediate Microeconomics	3	3250:400 Intermediate Macroeconomics	3
3470:461 Applied Statistics	4	3250:426 Applied Econometrics	3
3400: 210 Humanities In Western Tradition I	4	3450: 422 Advanced Calculus II	3
Total	17	Total	15
		Summer: Humanities Elective	3

Year 4: Fall	Crs	Spring	Crs
3250:620 Application of Math Models to Econ**	3	3250:611 Microeconomic Theory I	3
3250:5xx Economics Elective**	3	3250:5xx or 6xx Economics Elective	3
3250: 5xx Economics Elective	3	3250:5xx or 6xx Economics Elective	3
Total	9	Total	9
Year 5: Fall	Crs	Spring	Crs
3250: 602 Macroeconomic Analysis I	3	3250:627 Econometrics	3
3250:626 Statistics for Econometrics	3	3250:5xx or 6xx Economics Elective	3
Electives*	4	Electives*	3
Total	10	Total	9

Note: Courses marked with * are possibly graduate level courses to be applied toward the elective requirement of the bachelor's degree. Courses marked with ** are to be applied to the elective requirements of **both** the bachelor's and master's degree. All general education and college requirements are satisfied in this accelerated five-year BS/MS program.

Degree Distribution Requirements

This curriculum guide is a recommended plan of study. Students with questions about degree requirements should contact an academic advisor.

7700:101,102,201,202 & 222 may be substituted for Modern Language (35xx) courses.

The following credit hour requirements apply to this 5yr degree: Undergraduate - 120 minimum total credits; 32 credits in residence; the final 32 credits must be taken from The University of Akron. Graduate – 30 minimum total credits; 20 credits in residence.