

## Prerequisites for Wayne State Economics MA program

Calculus I (MAT 2010)

Intermediate Microeconomics (ECO 5000)

Intermediate Macroeconomics (ECO 5050)

Introductory Statistics and Econometrics (ECO 5100)

or equivalent courses as approved by the director of the MA Program.

If you cannot document satisfactory performance in calculus, you must take first semester calculus at Wayne State. To do so you must take the Math Placement Exam, which will determine the math class for which you are prepared.

<https://testing.wayne.edu/app/testinfo.cfm?eid=TEMPE>

## Master's Level Courses

### *Core Theory Courses*

6000 Price and Allocation Theory. Cr. 4

Prereq: ECO 5000 or equiv. Math prerequisite for 6000: calculus 1 (MAT 2010 or equiv.)<sup>1</sup>, or permission of instructor and MA Director. Open only to graduate students.

6050 Macroeconomics. Cr. 4

Prereq: ECO 5050 or equiv. Math prerequisite for 6050: calculus 1 (MAT 2010 or equiv.), or permission of instructor and MA Director. Open only to graduate students.

6100 Introduction to Econometrics. Cr. 4

Prereq: ECO 5100 or equiv. Math prerequisite for 6100: calculus 1 (MAT 2010 or equiv.), or permission of instructor and MA Director. Open only to graduate students.

### *Electives*

6120 Statistics and the Law. Cr. 3

Prereq: MAT 1800 or equiv.<sup>2</sup> or consent of instructor. Open only to graduate students.

6200 Advanced Regulation and Regulated Industries. Cr. 4

Prereq: ECO 5000. No credit for ECO 6200 after ECO 5200. Open only to

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<sup>1</sup> From the Wayne State Undergraduate Bulletin. Math 2010: Calculus 1. "Calculus as the study of change. Definitions, concepts, and interpretations of the derivative and the definite and indefinite integrals; differentiation, integration, applications."

<sup>2</sup> From the Wayne State Undergraduate Bulletin. Math 1800: Elementary Functions. "Basic definition and concept of function. Definitions, properties and graphs of polynomial, rational, exponential, logarithmic, trigonometric, and inverse trigonometric functions."

graduate students.

6210 Advanced Market Power and Economic Welfare. Cr. 4

Prereq: ECO 5000. No credit for ECO 6210 after ECO 5210. Open only to graduate students.

6250 Advanced Economic Analysis of Law. Cr. 4

Prereq: ECO 5000. No credit for ECO 6250 after ECO 5250. Open only to graduate students.

6300 Advanced International Trade. Cr. 4

Prereq: ECO 5000. No credit for ECO 6300 after ECO 5300. Open only to graduate students.

6310 Advanced International Finance. Cr. 4

Prereq: ECO 5000 and ECO 5050. No credit after ECO 5310. Open only to graduate students.

6400 Advanced Labor Economics. Cr. 4

Prereq: ECO 5000. No credit for ECO 6400 after ECO 5400. Open only to graduate students.

6415 Advanced Economics of Race and Gender. Cr. 4

Prereq: ECO 5000. No credit for ECO 6415 after ECO 5410. Open only to graduate students.

6420 Labor Relations and Public Policy. Cr. 3

Prereq: ECO 2010 or graduate standing.

6460 Economic Demography. Cr. 4

Prereq: ECO 5000 and ECO 5100 or consent of instructor. No credit for ECO 6460 after ECO 5460. Open only to graduate students.

6510 Advanced Public Finance. Cr. 4

Prereq: ECO 5000. No credit for ECO 6510 after ECO 5500. Open only to graduate students.

6520 Advanced State and Local Public Finance. (U P 6750) Cr. 4

Prereq: ECO 5000. No credit for ECO 6520 after ECO 5520. Open only to graduate students.

6470 (ECO 5470) Advanced Economics of an Aging Society. Cr. 4

Prereq: ECO 5000. No credit for ECO 6470 after ECO 5470. Open only to graduate students.

6550 Advanced Economics of Health Care. Cr. 4  
Prereq: ECO 5000. No credit for ECO 6550 after ECO 5550. Open only to graduate students.

6600 Advanced Development Economics. Cr. 4  
Prereq: ECO 5000. No credit for ECO 6600 after ECO 5600. Open only to graduate students.

6650 Regional, State, and Urban Economic Development: Policy and Administration. (U P 6550) (P S 6440) Cr. 3  
Prereq: graduate standing.

6700 Advanced Money and Banking. Cr. 4  
Prereq: ECO 5050. Open only to graduate students.

6720 Advanced Financial Economics. Cr. 4  
Prereq: ECO 2010, ECO 2020, ECO 5050, and MAT 1500 or equiv. Open only to graduate students.

6730 Economic Growth Cr. 4  
Prereq: ECO 5050. No credit for ECO 6730 after ECO 5730. Open only to graduate students.

6455 Discrimination and Fair Housing. (U P 6455) (AFS 6455) (P S 6455) (SOC 6455) (U S 6455) Cr. 3  
Prereq: Open to graduate students only.

6800 Advanced Urban and Regional Economics. Cr. 4  
Prereq: ECO 5000. No credit after ECO 5800. Open only to graduate students.

***Field Concentration***

*The Economics Masters degree requires students to concentrate in a field at the 7xxx level. Students who have the minimum math preparation for the MA Program, first semester calculus, should concentrate in Industrial Organization or Health Economics.*

7200 Industrial Organization I. Cr. 4  
Prereq: ECO 6000 and calculus 1 (MAT 2010 or equiv.) or consent of instructor. Open only to graduate students.

7210 Industrial Organization I. Cr. 4  
Prereq: ECO 6000 and calculus 1 (MAT 2010 or equiv.) or consent of instructor. Open only to graduate students.

7550 Economics of Health Care I. Cr. 4

Prereq: ECO 6000 and calculus 1 (MAT 2010 or equiv.) or consent of instructor.

7560 Economics of Health Care II. Cr. 4

Prereq: ECO 6000 and calculus 1 (MAT 2010 or equiv.) or consent of instructor. No credit after ECO 5550.

*Students wishing to take particularly quantitative concentrations must have taken at least two semesters of calculus and should consider taking intensive math for PhD students: "Fundamentals of Economic Analysis". The following fields have especially quantitative demands.*

ECO 7000, ECO 7010 — Microeconomics

ECO 7050, ECO 7060 — Macroeconomics

ECO 7100, ECO 7110 — Econometrics

ECO 7300, ECO 7310 — International Trade and Finance

ECO 7400, ECO 7410 — Labor and Human Resources

The following two-course sequence provides sufficient intensive math preparation for MA students wishing to take the foregoing courses. The Economics Department offers it each fall. Students taking these classes must have successfully completed second-semester calculus and would be well served by having taken three semesters of calculus. These courses meet during the day and students should consider taking both.

7020 (ECO 5020) Fundamentals of Economic Analysis I. Cr. 4

Prereq: ECO 5000 and calculus 2 (MAT 2020 or equiv.)<sup>3</sup>

7021 Fundamentals of Economic Analysis II. Cr. 4

Prereq: ECO 5000 and MAT 2020; Coreq: ECO 7020.

### ***Math-Intensive Concentrations***

7000 Microeconomic Theory I. Cr. 4

Prereq: ECO 5000, 7020; calculus 2 (MAT 2010 or MAT 5010 or equiv.)

7010 Microeconomic Theory II. Cr. 4

Prereq: ECO 7000. Continuation of ECO 7000.

7050 Macroeconomic Theory I. Cr. 4

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<sup>3</sup> From the Wayne State Undergraduate Bulletin. Math 2020: "Techniques of integration; approximate integration; improper integrals; applications of integration. Sequences and series. Approximating functions by polynomials and Taylor series."

Prereq: ECO 5050 or equiv. Math prerequisite: calculus 2 (MAT 2020 or equiv.), minimum. Well-prepared students will have taken ECO 7020 and 7021.

7060 Macroeconomic Theory II. Cr. 4

Prereq: ECO 7050 or equiv.

7100 Econometrics I. Cr. 4

Prereq: ECO 6100 or equiv.; ECO 7020 or consent of instructor.

7110 Econometrics II. Cr. 4

Prereq: ECO 7100 or consent of instructor.

7300 International Trade Theory. Cr. 4

Prereq: ECO 6000 or consent of instructor. Math prerequisite: calculus 3 (MAT 2030 or equiv.)<sup>4</sup>. Well-prepared students will have taken ECO 7000 and 7010.

7310 International Monetary Theory. Cr. 4

Prereq: ECO 7050 or consent of instructor; calculus 2 (MAT 2020 or equiv.).

7400 Labor Economics and Human Resources. Cr. 4

Prereq: ECO 6000 or consent of instructor; calculus 2 (MAT 2020 or equiv.) and a rigorous course in statistics, which would include a discussion of probability density functions.<sup>5</sup>

7410 Economics of Human Resources. Cr. 4

Prereq: ECO 6000 and 6100 or consent of instructor.

MA Students may not take ECO 7700 or 7710.

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<sup>4</sup> From the Wayne State Undergraduate Bulletin. Math 2030: "Multivariable calculus with applications. Vectors and vector functions in two and three dimensions; functions of several variables; differentiation; integration; vector calculus."

<sup>5</sup> From the Wayne State Undergraduate Bulletin. Math 2210 (MAT 6150): Probability and Statistics. "Counting techniques, discrete sample spaces and probability, random variables, mean and variance, joint distributions, the binomial and normal distributions, the central limit theorem, estimation and hypothesis testing."