

APPLIED ECONOMETRICS AND DATA ANALYSIS, GRADUATE CERTIFICATE

The certificate program in applied econometrics and data analysis is designed to prepare students for the job market that emphasizes quantitative data skills. Job applicants with econometrics skills are in high demand in many occupations in business and government. In the business world, a few examples of areas in which those with econometrics training work are policy analysis, financial analysis, forecasting, market research, logistics, and quality control. Econometrics training is also useful for government jobs. Policymakers need hard evidence on which to base their decisions; data must be collected, analyzed, and presented in a convincing way. State and Federal Government departments, such as the Federal Reserve and the Bureau of Labor Statistics, regularly seek graduates with econometric and data skills.

Admission Requirements

Application Deadlines

Application deadlines vary by program, please review the application deadline chart (<http://uwm.edu/graduateschool/program-deadlines/>) for specific programs. Other important dates and deadlines can be found by using the One Stop calendars (<https://uwm.edu/onestop/dates-and-deadlines/>).

Application

- Admission to a graduate certificate program requires formal student application through the Graduate School admissions application (<https://uwm.edu/applygrad/>) system, including the required admissions application fee.
- Certificate programs will inform the Graduate School of their admission recommendation for an applicant. The final admission decision is made by the Graduate School.
- Early application to the certificate program is recommended; late application is possible, but may incur delays for certificate conferral related to time required for credit tracking.
- Applicants must possess a baccalaureate degree and have a minimum 2.75 cumulative undergraduate grade point average to be admitted into a certificate program.

Admission

Adequate preparation at the undergraduate level equivalent to two semesters of course work in intermediate microeconomic theory (ECON 301 or equivalent) and intermediate macro-economic theory (ECON 302 or equivalent), one semester of statistics, and one semester of calculus.

Applicants must possess a baccalaureate degree and have a minimum 3.0 GPA at the undergraduate level, be admitted to another UWM graduate program and have an minimum 3.0 GPA, or 6 or more graduate credits in Economics with a minimum 3.0 GPA.

Credits and Courses

To obtain the certificate, students must complete 16 credits in approved courses in applied econometrics and data sciences as listed below, with a

minimum grade point average of 3.0. Courses for the certificate may not be taken on a credit/no credit basis.

Students currently enrolled at UWM who have fulfilled some of the program's requirements prior to the program's approval may have their credits applied retroactively to the certificate program.

Code	Title	Credits
Required		
ECON 703	Econometrics	4
Electives		
Select four from the following:		12
ECON 710	Applied Econometrics	
ECON 734	Econometrics and Machine Learning Methods	
ECON 735	Causal Inference and Panel Data Econometrics	
ECON 835	Time Series and Financial Econometrics	
ECON 915	Seminar: Econometric Methods:	
ECON 999	Independent Work ¹	
ECON 310G	Introduction to Econometrics and Data Science	
ECON 411G	Economic Forecasting Methods	
ECON 413G	Statistics for Economists	
ECON 513G	Introduction to Econometrics	
ECON 751	Labor Economics I	
ECON 752	Labor Economics II	
ECON 905	Seminar: Banking and Monetary Theory.	
BUS ADM 995	Doctoral Seminar in Decision Sciences:	
MTHSTAT 566G	Computational Statistics	
MTHSTAT 766	Computational Statistics	
Total Credits		16

¹ A maximum of 3 credits in ECON 999 can apply to the certificate.

Additional Requirements

Transfer Credit

Credits earned at other institutions equivalent to courses in the certificate program may be accepted in partial fulfillment of the program requirements, subject to review by the Graduate Committee of the Department of Economics. A maximum of three (3) credits may be transferred to count toward the Applied Econometrics and Data Analysis certificate program's 16-credit requirement.

Grade Point Average Requirement

A minimum cumulative 3.00 grade point average in certificate courses taken at UWM is required.

Articulation with Degree Programs

1. Credits and courses required for a certificate may double count toward meeting UWM graduate degree requirements subject to the following restrictions:
 - Degree programs must approve the courses from certificates that can double count toward the degree.

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- All credits taken in completion of certificate requirements may count towards a UWM graduate degree as long as they do not contribute more than 90% of the total credits needed to obtain the degree. (Note: Students in PhD programs must still complete the minimum residency requirements)
 - Certificate courses used toward meeting degree requirements must be completed within the time limit for transfer credit.
2. Courses completed for a degree may be counted toward a subsequent certificate, subject to all certificate policy requirements.
 3. A course may count toward no more than one certificate and one degree.
 4. Students may not earn a certificate subsequent to a concentration in the same area.

Time Limit

Certificate program time limits shall be established as follows:

- 18 or fewer credits/Three years from initial enrollment in the certificate sequence.
- 19 or more credits/Four years from initial enrollment in the certificate sequence.

For certificates that are designed as add-ons to degree programs and are awarded concurrent with the degree, the time limit shall be the same as that of the degree program.