

APPLIED ECONOMETRICS AND DATA ANALYTICS GRADUATE CERTIFICATE

Graduate School Policies and Procedures (<http://catalog.ucdenver.edu/cu-denver/graduate/graduate-school-policies-procedures/>) apply to this program

Please click here (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/economics/>) to see Economics department information.

Introduction

The Graduate Certificate in Applied Econometrics & Data Analytics provides students with a strong graduate-level foundation in modern applied econometrics and quantitative analysis. The unique analytic skill set delivered in this certificate is sought out by energy companies, defense contractors, health care agencies, consulting firms, financial institutions and other companies in the Denver area that are looking for employees who know how to use real world data to answer research questions. Upon earning the certificate, students will be able to:

1. Explain the potential outcomes framework and how it informs empirical research.
2. Distinguish between causal and correlational relationships.
3. Set-up randomized experiments and understand factors that could contaminate them.
4. Identify natural experiments and how to apply them in research.
5. Understand the Difference-in-Difference estimator and its applications.
6. Apply matching techniques.
7. Use Panel data models, such as fixed effects estimators.
8. Understand the use of instrumental variables and how they are applied in research.
9. Apply the Regression Discontinuity estimator and apply it in economic research.

These certificate requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their certificate advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Admission Requirements

- Degree: BA/BS
- A minimum GPA of 3.00 is recommended

General Requirements

Click here (<http://catalog.ucdenver.edu/cu-denver/graduate/graduate-school-policies-procedures/>) for information about Academic Policies.

Certificate Requirements

1. Students must complete a minimum of 12 ECON credit hours.
2. Students must complete all courses at the graduate level (5000 or above) to fulfill the requirements of the certificate.
3. Students must earn a minimum grade of B (3.0) in all certificate courses taken at CU Denver and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Students cannot complete certificate or ancillary course requirements as pass/fail.
4. All credit hours for the certificate must be earned at the University of Colorado Denver.

Certificate Restrictions, Allowances and Recommendations

1. Students have 7 years to complete this certificate.
2. Students should evaluate course descriptions to determine if the prerequisites or corequisites have been completed in order to move forward in the certificate.
3. No course may be taken more than twice.
4. Graduate level ECON credit counted towards the Graduate Certificate in Health Economics & Outcomes Research may be subsequently counted towards a CU Denver graduate degree in Economics. Certificate students are not guaranteed admission to the M.S. program in Health Economics. However, certificate students can apply to the M.S. program in economics at any time.
5. Students who complete the Graduate Certificate in Health Economics & Outcomes Research and later apply to the M.S. program in Health Economics at CU Denver may submit their certificate in place of GRE scores and letters of recommendation.
6. Students admitted to the M.A., M.S., or Ph.D. programs in economics at CU Denver may complete the graduate certificate concurrently with their degree program. However, courses that have already been counted towards any degree already awarded (undergraduate or graduate) may not be counted towards the certificate retroactively.

Required Courses

Code	Title	Hours
<i>Complete all the following ECON courses:</i>		12
ECON 5030	Data Analysis with SAS	3
ECON 5813	Econometrics I	3
ECON 5823	Econometrics II	3
ECON 6053 & ECON 6054	Seminar In Applied Economics and Seminar In Applied Economics II (3 credits total across ECON 6053 and 6054)	3

To learn more about the Student Learning Outcomes for this program, please visit our website (<https://clas.ucdenver.edu/economics/programs/graduate-certificate-applied-econometrics-data-analytics/>).