**HEALTH ECONOMICS AND OUTCOMES RESEARCH GRADUATE CERTIFICATE**

Graduate School Policies and Procedures ([http://catalog.ucdenver.edu/cu-denver/graduate/graduate-school-policies-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/](http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/economics/)) to see Economics department information.

**Introduction**

Graduate Certificate in Health Economics & Outcomes Research is designed to train scientists to engage in modern economic research related to questions pertinent to health policy, health behaviors, and health care services. The unique analytic skill set delivered in this certificate is sought out by health care agencies, state agencies, and consulting firms in the Denver area that are looking for employees who know how to use health data to answer research questions. Upon earning this certificate, students will:

1. Have sufficient knowledge of econometric theory and techniques to make them an effective consumer and producer of empirical research in health economics.
2. Understand the challenges in identifying causal relationships using health data.
3. Understand the fundamentals of the potential outcomes framework, randomized experiments, natural experiments, panel data models, matching, instrumental variables and regression discontinuity designs.
4. Understand the economic approach to studying the healthcare sector, health behaviors, and health outcomes.
5. Understand how different markets function in the health care sector, such as the market for health care, health insurance, health labor (such as physicians and nursing), and pharmaceuticals.

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/](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 earn a minimum grade of B- (2.7) 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.
3. 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**

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>ECON 4812 or ECON 5823</td>
<td>Advanced Econometric Methods or Econometrics II</td>
<td>3</td>
</tr>
<tr>
<td>ECON 5030</td>
<td>Data Analysis with SAS</td>
<td>3</td>
</tr>
<tr>
<td>ECON 7661</td>
<td>Health Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ECON 7662</td>
<td>Health Economics II</td>
<td>3</td>
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To learn more about the Student Learning Outcomes for this program, please visit our website ([https://clas.ucdenver.edu/economics/programs/graduate-certificate-health-economics-outcomes-research/](https://clas.ucdenver.edu/economics/programs/graduate-certificate-health-economics-outcomes-research/)).