MISSOURI S&T

Environmental Science + Economics

Expand Your Career Opportunities

Become more competitive in today's job market with industry-focused certificates

ENERGY ECONOMICS CERTIFICATE

This certificate equips you to tackle today's and tomorrow's energy challenges head-on. It delves deep into energy choices, policies, and technologies, examining their impacts on economic sustainability, societal welfare, and environmental conditions. It boosts your competitiveness for a fulfilling CAREER in the ENERGY SECTOR.

The certificate requires a total of four (4) courses (12 hours)

Required two (2) Economics courses (six hours):

- ECON 4440 Environmental and Natural Resource Economics (fall & spring semesters)
- ECON 4540 Energy Economics (fall & spring semesters)

Select two (2) of the following Engineering courses (six hours):

- CHEM ENG 5325 Carbon Capture Process Engineering
- ELEC ENG 3540 Power System Design And Analysis
- ELEC ENG 5150 Photovoltaic Systems Engineering
- ELEC ENG 5510 Electric-Drive Vehicles
- ENG MGT 5513 Energy and Sustainability Management Engineering
- ENV ENG 5642 Sustainability, Population, Energy, Water, and Materials
- MECH ENG 5541 Applied Energy Conversion
- MECH ENG 5543 Energy Efficiency of Vehicles
- MIN ENG 3512 (ECON 3512) or MIN ENG 5532 Mining Industry Economics
- MS&E 5230 Energy Materials
- PET ENG 4531 Natural Gas Engineering
- PET ENG 4590 Subsurface Energy Economics
- PET ENG 5050 Carbon Storage
- PET ENG 5801 Petroleum Data Analytics
- NUC ENG 4207 Nuclear Fuel Cycle
- NUC ENG 4281 Probabilistic Risk Assessment

GUIDE
for ENVIRONMENTAL SCIENCE MAJORS to Add Economics as a Secondary Major

ECONOMICS AS A SECONDARY MAJOR:

For environmental science students seeking to elevate their studies, S&T's STEM Economics program empowers them to become future leaders. They learn to apply core economic principles and quantitative methods to articulate and shape policy recommendations aligned with present and future economic landscapes. With expertise in market structure, global business, data analytics, and public policies, they gain the essential tools for strategic decision-making, pivotal for the success of any organization.

Required a total of 10 courses (30 credit hours):

For an environmental science major, adding only five (5) Economics courses will earn you Economics as a secondary major:

1. ECON 1100 Principles of Microeconomics
2. ECON 1200 Principles of Macroeconomics **(Add)**
3. ECON 4440 Environmental and Natural Resource Economics
4. ECON 4540 Energy Economics
5. ENV ENG 5642 Sustainability, Population, Energy, Water, and Materials
6. An Engineering course from the reversed page **(Add)**

3-6 are for the Energy Economics Certificate

7. ECON 3300 Introduction to Econometrics **(Add)** **(fall semester)**
8. ECON 3333 Computation Economics **(Add)** **(spring semester)**
   [This course can be substituted by a qualified programming course.]
9. ECON 5360 Data-Driven Strategic Insights **(Add)** **(fall semester)**
10. STAT 3113, STAT 3115, STAT 3425, or a higher-level statistics course.

TO PROCEED

Contact **Dr. Melody Lo**, the Economics department chair, at melodylo@mst.edu or 573-341-4618.

Additional Economics Industry-Focused Certificates to Consider:

Decision Data Analytics

- ECON 3300 Introduction to Econometrics
- ECON 3333 Computational Economics
- ECON 5360 Data-Driven Strategic Insights
- ECON 5380 Data Intelligence Using Case Studies

Financial Economics & Technology

- ECON 3333 Computational Economics
- ECON 4383 Financial Economics
- MATH 5737 Financial Mathematics
- ECON 5360 Data-Driven Strategic Insights

Note: ECON 5360 & ECON 5380 are **Taught by Industry Executives.**