

# CLIMATE CHANGE, ENERGY, AND ENVIRONMENTAL SUSTAINABILITY, GRADUATE CERTIFICATE

EN.575.733	Energy and the Environment	3
EN.575.734	Smart Growth Strategies for Sustainable Cities	3
EN.575.735	Energy Policy and Planning Modeling	3
EN.575.736	Designing for Sustainability: Applying a Decision Framework	3
EN.575.738	Transportation, Innovation, and Climate Change	3
EN.575.743	Atmospheric Chemistry	3
EN.575.623	Industrial Processes and Pollution Prevention	3

As the world's population increases and technological advances accelerate, demands for natural resources and energy continue to threaten Earth's physical and ecological systems. Johns Hopkins Engineering for Professionals' Climate Change, Energy, and Environmental Sustainability graduate certificate program provides valuable knowledge to engineers, scientists, and managers to design and implement solutions to these environmental, social, and economic challenges. The program provides students with the expertise needed to enter or advance in public and private sector roles related to energy, sustainability, and climate. Students gain advanced knowledge in areas such as climate change, energy planning, alternative energy technologies, transportation innovation to curtail atmospheric pollution, sustainable development, next generation buildings, air resources management, pollution control technologies, and related public health considerations.

Applicants interested in the Climate Change, Energy, and Environmental Sustainability Graduate Certificate Program must meet the general requirements for admission to graduate study, as outlined in the Admission Requirements (<https://e-catalogue.jhu.edu/engineering/engineering-professionals/admission-requirements/>) section. The applicant's prior education must include (1) an undergraduate degree from a regionally accredited four-year college or university and (2) successful completion of one year of college-level calculus. Successful completion of college-level courses in physics, chemistry, biology, geology, and statistics is strongly recommended. Applicants whose prior education does not include the prerequisites listed above may still be admitted under provisional status, followed by full admission once they have completed the missing prerequisites. Missing prerequisites may be completed with Johns Hopkins Engineering for Professionals or at another regionally accredited institution. Admitted students typically have earned a grade point average of at least 3.0 on a 4.0 scale (B or above) in the latter half of their undergraduate studies. Transcripts from all college studies must be submitted. When reviewing an application, the candidate's academic and professional background will be considered.

The Graduate Certificate in Climate Change, Energy, and Environmental Sustainability requires the successful completions of five core courses (15 EP credits or equivalent) selected from the list below. The certificate program must be accomplished within three years. Only grades of B<sup>-</sup> or above can count toward the graduate certificate. Any deviation from this program, including transfer of courses and any other requisites specified in the student's admission letter, will not be approved by the program chair.

## Courses

Code	Title	Credits
EN.575.711	Climate Change and Global Environmental Sustainability	3
EN.575.720	Air Resources Management and Modeling	3
EN.575.721	Air Quality Control Technologies	3
EN.575.723	Environmental Sustainability and Next Generation Buildings	3