



## PhD in Sustainable Environment

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Doctoral program with a focus on topics related to sustainable environment, including the effects of human development, pollution, and population growth on the environment.



CSE's Sustainable Environment PhD program provides students with extensive knowledge in topics related to sustainable environment issues. These include the effect of human development on the environment; the causes, impact and control of pollution; and the demands of a growing global and regional population and economic development on natural resources and the environment.

Students conduct original and guided environmental research that concentrates on issues surrounding the support of sustainable development.

The multidisciplinary approach to the curricula builds fundamental knowledge that evolves with the developments within the field, equipping graduates with the tools needed to pursue a wide variety of career paths.

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### Program Focus

- Core skills to build a successful career in science, engineering and technology-related areas, including ethics, technical writing, research methods, data analytics, and advanced computing methods.
- Fundamentals of sustainable development and human-environment interactions related to policy, social issues, engineering and technology, and the fundamentals of environmental processes.
- Water demand, resource management, and treatment processes.
- Air emission sources and how these relate to human activity, as well as the impact on human health, economic and social development; and the chemistry, cause and mitigation of key pollutants.
- Explore the impact of human activities such as industrial development, energy generation, water

treatment, food production and manufacturing, transportation on land, water and air, including solid and hazardous waste generation and disposal.

- Social and economic aspects of sustainability including demand side management, efficiency, human capital, financing, and policymaking.

## **Curriculum**

**A 54-credit program, taught in English, typically over three years and requires a master's degree. The program includes:**

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- **Three core courses as per the MS program**
- **Three elective courses**
- **Three semesters of graduate research seminars**
- **A 36-credit research thesis**

Under the supervision of an adviser and a PhD dissertation committee.

PhD students should additionally pass:

- A qualifying examination in their third semester,
  - A candidacy examination (dissertation proposal) in their fifth semester,
  - Successfully defend their final dissertation to the public and their dissertation committee.
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