



**THE OHIO STATE UNIVERSITY**  
COLLEGE OF ENGINEERING

# Fundamentals of Environmental Engineering

## ENVENG 3200

**Credit Hours:**

3.00 - 3.00

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**Course Levels:**

Undergraduate (1000-5000 level)

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**Course Components:**

Lecture

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**Course Description:**

Quantitative assessment of water quality, air quality, and solid/hazardous waste management, with an emphasis on minimizing human health and environmental impacts through sustainable design.

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**Prerequisites and Co-requisites:**

Prereq: Chem 1210 or 1250, and CivilEn or EnvEng major or EnvEng minor.

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**Course Goals / Objectives:**

- Be skilled in the derivation and use of mass and energy balance equations to describe pollutant behavior in air, land and water systems
  - Have quantitative and qualitative skills in the management of water quality
  - Have qualitative and quantitative knowledge of the sources, fate, effects and control of air pollution
  - Have qualitative knowledge regarding the management of solid, hazardous and radioactive waste
  - Have qualitative knowledge of risk, environmental regulations, pollution prevention and sustainability
  - Demonstrate knowledge of environmental engineering problems that are of great contemporary concern
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**Course Topics:**

- Thermodynamics, mass balances, and energy balances for environmental systems
  - Water quality control and management
  - Air quality control and management
  - Management of solid and hazardous waste
  - Composition and analyses of air, wastewater and water
  - Environmental rules, regulations and ethics
  - Fundamentals of water and wastewater treatment
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**Designation:**

Required