



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Analytic Frameworks for Analysis of Science, Engineering, and Policy

ENVENG 6610

Credit Hours:

3.00 - 3.00

Course Levels:

Graduate

Course Components:

Lecture

Course Description:

Introduces a number of analytic frameworks and tools that are used to address issues where science and engineering are important considerations for public policy. Complements EnvEng/PubAfrs 5600 'Science, Engineering, and Public Policy', which is a survey of the interconnectedness of science, engineering, and public policy.

Prerequisites and Co-requisites:

Prereq: Grad standing, or permission of instructor.

Course Goals / Objectives:

- Develop the ability to dissect and synthesize issues of sustainability, resilience, and uncertainty.
 - Develop the ability to dissect consistencies and inconsistencies between approaches in engineering, economics, and ecology
 - Develop the ability to apply various analytic approaches for policy analysis situations where science and engineering matter
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Course Topics:

- 1. Introduction and Overview 2.Sustainability, Resilience, Uncertainty 3.Engineering-Economics-Ecology Quandary
 - 4.Techno-Economic Based Approaches 5.Techno-Economic Cases and Best Practices
 - 6.Optimal Approaches 7.Optimal Cases and Best Practices
 - 8.Systems Approaches 9.Systems Cases and Best Practices
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Designation:

Elective