THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Complementarity Theory & Applications

ISE 5220

Credit Hours:
3.00 - 3.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate

Course Components:
Lecture

Course Description:
Describes complementarity models and their solution techniques. It includes optimality conditions, equilibria, mathematical programs with equilibrium constraints and equilibrium problems with equilibrium constraints.

Prerequisites and Co-requisites:
Prereq: 3200, or permission of instructor.

Course Goals / Objectives:
- To understand the algebra and the geometry of optimality conditions. To formulate and solve equilibrium problems (EPs).
- To formulate and solve mathematical programs with equilibrium constraints (MPECs). To formulate and solve equilibrium problems with equilibrium constraints (EPECs).
- To get familiar with energy applications of the above models.

Course Topics:
- Optimality conditions
- Equilibria
- Mathematical programs with equilibrium constraints, MPECs
- Equilibrium problems with equilibrium constraints, EPECs
- Applications in energy

Designation:
Elective