THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Cognitive Systems Engineering: Advanced Topics

ISE 7700

Credit Hours:
3.00 - 3.00

Course Levels:
Graduate

Course Components:
Lecture

Course Description:
Seminar on emerging themes about human-machine systems and how these relate to current societal issues.

Prerequisites and Co-requisites:
Prereq: Grad standing.

Course Goals / Objectives:
- Analyze current societal issues in terms of findings, models and methods of cognitive and collaborative work systems
- Develop predictions for how episodes of technology change will influence decision making and human performance in that setting
- Prepare and present recommendations on technology change and the predicted effects of changes underway in preparation for communication to societal stakeholders

Course Topics:
- Introduction to Theme and Societal Problem
- Identify Relevant Human-Machine System Concepts
- Consider Alternative Distributed Decision Architectures
- Identify Factors Leading to Failure and Error
- Identify Requirements for Expertise
- Project Effects of Technology Change on Cognitive and Collaborative Work
- How to Manage the Risk of Creeping Complexity
- Identify Requirements for Design Alternatives
- Integrate Findings to Make Predictions and Recommendations

Designation:
Elective