

## CS 6650 : HUMAN ISSUES IN COMPUTING

---

<i>Semester Hours:</i>	3.0	<i>Contact Hours:</i> 3
<i>Coordinator</i>	Joseph T. Chao	
<i>Text</i>	TBD	
<i>Authors:</i>	TBD	
<i>Year</i>	TBD	

### SPECIFIC COURSE INFORMATION

#### *Catalog Description:*

Behavioral aspects of computing, including topics such as programming style, language features, computer-aided instruction, computer science expertise, training, computing for universal access. Usability engineering. Research methodology. Prerequisite: Admission to MS in CS program, or consent of department.

Course type:           **ELECTIVE**

### SPECIFIC COURSE GOALS

- I can develop principles about how people interact with their environment and how that interaction affects their behavior.
- I can derive performance predictions for the development of design guidelines and legally enforceable standards.

### LIST OF TOPICS COVERED

- Human Factors
  - Importance to design
  - Defining and locating
  - History
  - User centered design philosophy
  - General concepts of usefulness
  - Concepts of error and failures
- User Relevant Characteristics for Design
  - Anthropometrics
  - Behavioral, cognitive, and social issues

- Psychology of a Human Operator
  - Sensory and perceptual issues
    - Introduction to the visual and auditory systems
    - Design of VR systems and alarms
  - Cognitive issues
    - Problem solving, learning and memory
    - Implications of menu design
    - Implications of expert versus novice users
  - Language, social, and organizational issues
- Design and Evaluation methods
  - Methods for analyzing tasks
  - Methods for evaluating designs
  - Integrated cognitive frameworks, models, and guidelines
  - The design cycle
    - Analytic methods
    - Empirical methods
    - Integrated frameworks