CS 6650 : HUMAN ISSUES IN COMPUTING

 Semester Hours: 3.0  
 Contact Hours: 3  
 Coordinator: Joseph T. Chao  
 Text: TBD  
 Authors: TBD  
 Year: 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
  o Sensory and perceptual issues
    ▪ Introduction to the visual and auditory systems
    ▪ Design of VR systems and alarms
  o Cognitive issues
    ▪ Problem solving, learning and memory
    ▪ Implications of menu design
    ▪ Implications of expert versus novice users
  o Language, social, and organizational issues
• Design and Evaluation methods
  o Methods for analyzing tasks
  o Methods for evaluating designs
  o Integrated cognitive frameworks, models, and guidelines
  o The design cycle
    ▪ Analytic methods
    ▪ Empirical methods
    ▪ Integrated frameworks