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  
  o Importance to design  
  o Defining and locating  
  o History  
  o User centered design philosophy  
  o General concepts of usefulness  
  o 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