CS 3240: USABILITY ENGINEERING

Semester Hours: 3.0  
Contact Hours: 3
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Text: Usability Engineering
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Year: 2007

SPECIFIC COURSE INFORMATION

Catalog Description:

Course type: SELECTED ELECTIVE

SPECIFIC COURSE GOALS

- I understand how the user interface characteristics of everyday objects affect their usability.
- I understand the history of user interface design and why it has become increasingly important to software development.
- I understand some human behavioral and perceptual capabilities and limitations that affect interface design.
- I understand different interaction styles and designs, their advantages and disadvantages, and under what circumstances their use is appropriate.
- I understand the dimensions of usability and some possible measurements.
- I understand basic principles of user interface evaluation and the use of standards and guidelines.
- I understand development methodologies and lifecycle models for building user interfaces.
I understand the roles of prototyping in user interface design.

LIST OF TOPICS COVERED

• Introduction
  o Definitions of human-computer interaction and user interface design
  o Importance of interface design in software design
  o Cost/benefit of good interface design

• The Process - Usability Engineering: Stages in the development of user interfaces
  o Needs analysis
  o Systems analysis
  o User profiling
  o Preliminary design, including design notation
  o Rapid prototyping and interactive design
  o Formative evaluation techniques, including usability testing
  o Using standards and guidelines

• The Product
  o Input and output devices
  o Dialog styles
  o Screen layout and design
  o User documentation
  o Evaluative testing