Overview:
- What is usability?
- Usability engineering
- Scenario-based design
- Tools for building interfaces
- Course outline

What is usability?
3 perspectives:
- Human performance: time, errors, etc. I.e., human factors.
- Human cognition: mental models, plans of action, etc. I.e., human/computer interaction.
- Collaboration: group dynamics, context, etc. Current area of research.

Usability engineering
- Planning, achieving, and verifying system usability objectives.
- Objectives must be defined early and should be measurable.
- Assess system repeatedly to ensure achievement.
- Unfortunately, not all objectives are measurable. E.g., legacy systems, portability, maintainability, economics.

Usability engineering
- Would like usability development to be part of the software engineering process.
- Generally cannot specify all of the requirements in advance.
- Some testing and iterative design needed to discover tradeoffs. E.g., beginning users vs. expert users.
- Documenting choices between tradeoffs forms design rationale of system.

Scenario-based Design
- Scenario-based design (SBD) is one software engineering approach to usability design.
- Similar in concept to extreme programming software development.
- Emphasis is on analysis, design, and documentation of user interface. Does not cover all of the work in cognitive science and perception.

Scenario-based Design
Scenarios are stories about people and their activities. Each scenario describes (Table 1.2, p. 18):
- Setting
- Actors
- Task goals
- Plans
- Evaluation
- Actions
- Events
Why use SBD?

Scenarios are useful in making engineering tradeoffs. They are both concrete and flexible. E.g.,
- making decisions (progress) vs. keeping options open
- current practices vs. new practices
- innovation & new features vs. actual use
- action vs. reflection ("what ifs")

Tools for building interfaces

Will look at 3 technologies
- HTML/Perl CGI/CSS
- Visual Basic
- Java Swing

Supplemental on-line reading list on the course webpage.

Course Outline

First half of semester alternate topics.
- SBD – lectures, in-class activities
- Tools – in-class "labs", prototype assignments

Second half of semester
- Finish SBD topics in class
- Group project