At the conclusion of the course, User Interface Design, Analysis and Prototyping, students are expected to:

1) Understand the rationale for, and be able to articulate the "user-centered" approach to user interface design. They should be able to sketch the design cycle and explain its components. They should be able to contrast this approach with others and list advantages and disadvantages.

2) They should be able to follow the user-centered design process throughout the development of a substantial software application or service. They should be able to work effectively on an interdisciplinary team, recognizing some of the specific challenges of interdisciplinary work, but also the potential benefits of diverse teams. User-centered design involves the collection of skills listed below:
   a. Contextual Inquiry and Needs Assessment. Students should be able to plan and conduct a contextual inquiry, and suitably record the outcomes. They should be able to develop personae, use photos and notes, etc., as generative aids during their subsequent design work.
   b. Brainstorming. Students should be able to plan and manage brainstorming sessions. They should be able to sort and refine the ideas generated.
   c. Rapid Prototyping. Users should be familiar with typical low-fidelity techniques, both paper- and software-based. They should be able to articulate the value of rapid prototyping, use appropriate methods and explain the contexts in which they are most useful.
   d. Evaluation. Students should have a basic understanding of qualitative and quantitative evaluation methods. They perform "toy" evaluation during the course and are not expected to be able to enact these skills in a professional environment, but should appreciate their value and be able to work well with evaluation experts. They should be able to determine what kind and scale of evaluation is needed at different times in a product's life-cycle. In some cases, students may have grasped enough from the course to be able to conduct effective evaluations, but this is not generally true.

3) Students should have a basic grasp of cognitive science as applied to HCI. They should know some simple principles for memory, reaction time, perception, and be able to list design implications from them.

4) Students should understand some basic principles of social psychology and be able to articulate their connection to the design of collaborative information systems. Specifically, they should be able to list design implications from several social psychology principles.

5) Design Patterns. Students should understand the basic structure of a design pattern, and be able to find and use patterns from repositories for user interfaces, web sites, learning environments, games, etc. They should be able to articulate the value and role of patterns in capturing formal and informal design knowledge.
6) Aesthetic principles. Students should gain basic insight into visual and experience
design principles and how these shape user perception of systems. Some specific
skills such as grid-based design, alignment and typography are typically
developed in the course, since these are quite accessible to students who are not
endowed with artistic skills.

7) Application area knowledge. Students are also expected to gain deeper
knowledge and design skills in a particular application area. This varies from
semester to semester, and has included: game design, mobile application design,
web 2.0 application design, etc.