At the successful completion of the course, you will demonstrate the ability to:

- Identify and define the usability goals for a software application and specify how these can be measured.
- Identify universal usability issues in applications: aspects of the design that take into account the diversity of potential users (e.g., expertise, culture, disabilities) and hardware/software (e.g., operating systems, browsers, bandwidth).
- Apply principles, heuristics and guidelines for designing software APIs, including web-specific guidelines.
- Apply knowledge of human cognition and performance to explain how humans succeed and fail to interact with software systems. In particular, being able to articulate the conceptual model of a system and how it may differ from a user's mental model.
- Apply contextual inquiry and task analysis techniques for understanding how your target users perform tasks.
- Articulate profiles of your intended users, claims and assumptions about how you will improve upon existing systems and scenarios using storyboarding of how these users will interact with the system you will design.
- Distinguish between different interface styles & identify when a particular interface style is suitable for a given task.
- Build low, medium, and high-fidelity prototypes and mockups, and understand their role in the development process.
- Perform qualitative evaluations of interfaces that do not involve user involvement, such as heuristic evaluations and cognitive walkthroughs.
- Design and run user studies to evaluate interfaces by observing how intended users interact with them using methods such as performance testing and talk-aloud.

Course Description: The goal of this course is to teach students how to design and evaluate interfaces for interactive software applications. The course will focus on four main themes:

- Understand how people interact with systems. We will discuss usability issues, principles of cognition as they apply to HCI, and how to gather requirements by understanding how users perform tasks.
- Understand principles of interactive design. We will discuss principles, guidelines and heuristics for designing interactive systems in general, as well as web-specific issues.
- Apply methods and tools for developing interfaces. We will discuss techniques for building interfaces such as scenarios and prototyping, as well as tools that support this process.
- Evaluation methods for interactive systems. We will discuss evaluation by using experts, usability testing with intended users, quantitative methods, and post-release evaluation methods.

Required course texts:

Recommended Reading:
Grading

**Term Project (56%).** Teams (3-4 members) will participate in a project that will be carried out throughout the semester. Most milestones will require a report.

**Tentative milestones for project:**
1. Phase 1 (Project Proposal) - 5 points
2. Phase 2 (Requirements) - 10 points
3. Phase 3 (low/hi-fi prototype) - 10 points
4. Cognitive Walkthroughs (2) - 8 points
5. Hi-Lo prototype reflections - 3 points
6. Phase 4 (final Implementation & User testing) - 20 points

For each phase you will also evaluate the topics in that phase and your peers

**Homework and Assignments (21%)**:
- **Hall of fame/shame (3pts)**: You will be required to present an example of a web interface that belongs in the “user interface hall of fame” or “user interface hall of shame”. This will involve a 3-5 minute presentation/discussion at the beginning of a lecture.
- **Design process book (12 pts)**: Through the class, you will design an application to create a ticket kiosk system based on the materials from the in-class activities as well as additional design. You will create a process book of all the activities and present this and a report.
- **Reflection (2%)**: a 500 words report on what was the most difficult aspect of the design project.
- **Readings and Discussion (2%)**

**Exams (20%)**

**Peer and Instructor evaluation (3%)**: The class is discussion focused. You will be evaluated by the instructor on your class participation and performance. You will also be evaluated by your peers for each deliverable.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>100</td>
</tr>
<tr>
<td>A:</td>
<td>95-100</td>
</tr>
<tr>
<td>A-</td>
<td>91-94</td>
</tr>
<tr>
<td>B+</td>
<td>87-90</td>
</tr>
<tr>
<td>B:</td>
<td>83-86</td>
</tr>
<tr>
<td>B-</td>
<td>80-82</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
</tr>
<tr>
<td>C:</td>
<td>73-76</td>
</tr>
<tr>
<td>C-</td>
<td>70-72</td>
</tr>
<tr>
<td>D+</td>
<td>67-69</td>
</tr>
<tr>
<td>D:</td>
<td>63-66</td>
</tr>
<tr>
<td>D-</td>
<td>60-62</td>
</tr>
<tr>
<td>F:</td>
<td>0-59</td>
</tr>
</tbody>
</table>

**A minimum grade of C is required to get a Pass in the course (a grade ‘C’ does NOT get you a pass)**

**A minimum grade of C is required for the course to count toward a CS/CE major or minor**

Grading will be strictly on the above criteria, no curving.

**Submissions**: All work is due before the beginning of class on the due date. No late work will be accepted. All reports will be handed through WebHandin. WebHandin: [http://cse.unl.edu/~cse378/handin/](http://cse.unl.edu/~cse378/handin/)

**Gadget policy**: Please do not use your smart phones, media players, or Laptops in class unless needed for in class exercises. Failure to follow will lead to penalty.

**Other Announcements**
- The CSE Department has an anonymous suggestion box that you may use to voice your concerns about any problems in the course or department if you do not wish to be identified. [http://cse.unl.edu/department/suggestion.php](http://cse.unl.edu/department/suggestion.php)
- It is CSE Department policy that all students in CSE courses are expected to regularly check their email so they do not miss important announcements.
- You can avail of the Student Resource Center in Avery 13A: [http://cse.unl.edu/src](http://cse.unl.edu/src)
- All homework assignments, quizzes, exams, etc. must be your own work. No direct collaboration with fellow students, past or current, is allowed unless otherwise stated. The Computer Science & Engineering department has an **Academic Integrity Policy**. All students enrolled in any computer science course are bound by this policy. You are expected to read, understand, and follow this policy. Violations will be dealt with on a case-by-case basis and may result in a failing assignment or a failing grade for the course itself. [http://cse.unl.edu/undergrads/academic_integrity.php](http://cse.unl.edu/undergrads/academic_integrity.php)
- Any student in this course who has a disability that necessitates accommodation should contact the instructor as soon as possible to discuss the appropriate accommodations necessary to complete the course requirements.