COURSE DESCRIPTION

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Type</th>
<th>Course Title</th>
<th>Coordinator</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 540</td>
<td>Sel. Elect.</td>
<td>User Interface Development</td>
<td>Nancy Green</td>
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</tbody>
</table>

Sem. Hours: 3

Current Catalog Description:
Survey of concepts and techniques for human-computer interface development. Topics include user-centered design, user interface programming, and usability evaluation.

Textbook:

References:

Course Outcomes:
Upon completion of the course students should be able to
1. Demonstrate knowledge of foundations and terminology of the field of Human-Computer Interaction (CO1)
2. Demonstrate knowledge of methods for user-centered design of human computer interfaces (CO2)
3. Demonstrate knowledge of methods for evaluating human-computer interfaces (CO3)
4. Apply knowledge outlined above in 1-3 to the requirements analysis, design, implementation, and evaluation of a graphical user interface in a course project; and present project deliverables in written and oral form (CO4)
5. Apply knowledge outlined above in 1-3 to analyze the design and evaluate the usability of real-world human-computer interfaces; and communicate the analysis and evaluation in written and oral form (CO5)
6. (graduate students only): Summarize and evaluate evidence-based HCI literature in class presentations (CO6)
Prerequisites by Topic:

Students must have

For undergraduates: Grade of C or better in CSC340 or permission of instructor.

Major Topics Covered in the Course:

- Introduction
- Role of cognitive science and psychology
- Design Examples
- Design Process
- Data Gathering
- Requirements Analysis
- Design & Prototyping
- GUI Design Guidelines
- Evaluation
- Usability testing, Data Analysis
- Analytical evaluation
- Special topics (Information visualization, etc.)

Estimated Curriculum Category Content (Semester hours):

<table>
<thead>
<tr>
<th>Area</th>
<th>Core</th>
<th>Advanced</th>
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<tbody>
<tr>
<td>Algorithms</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Data structures</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Comp Org &amp; Arch</td>
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<td>0</td>
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<tr>
<td>Software design</td>
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<td>0</td>
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<tr>
<td>Prog. Languages</td>
<td>0</td>
<td>0</td>
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