Fall 2007 – Course Syllabus

COURSE NUMBER:     CSC540
COURSE TITLE:       USER INTERFACE DEVELOPMENT
CREDITS:            3

PREREQUISITES: Grade of C or better in CSC130, CSC230, CSC330, and CSC339. The student is expected to have basic skills using an object-oriented programming language suitable for GUI development (such as Java or C#) and to be able to learn on his own any new computer skills needed to implement the course project.

INSTRUCTOR INFORMATION: Dr. Nancy Green; office: 322 Bryan Hall; phone: (336) 256-1133; office hours: 3:30-4:30 pm Thursdays and by appointment; email: nlgreen at uncg dot edu.


COURSE OBJECTIVES: The objectives of the course are for the student to

- CJ1: Learn foundations and terminology of the field of Human-Computer Interaction
- CJ2: Learn methods for user-centered design of human-computer interfaces
- CJ3: Learn methods for evaluating human-computer interfaces
- CJ4: Practice analysis of user requirements and design, implementation, and evaluation of a graphical user interface through a course project; and present project deliverables in written and oral form
- CJ5: Practice analysis of the design of and evaluation of the usability of real-world human-computer interfaces; and communicate the analysis and evaluation in written and oral form.
- CJ6 (for graduate students only): Practice reading, summarizing and evaluating evidence-based HCI literature (e.g. ACM CHI Conference Proceedings); and communicate this information in written and oral form.

STUDENT LEARNING OUTCOMES: Upon completion of the course students should be able to

- CO1: Demonstrate knowledge of foundations and terminology of the field of Human-Computer Interaction
- CO2: Demonstrate knowledge of methods for user-centered design of human-computer interfaces
- CO3: Demonstrate knowledge of methods for evaluating human-computer interfaces
• CO4: Apply knowledge outlined above in CO1-CO3 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
• CO5: Apply knowledge outlined above in CO1-CO3 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.
• CO6 (for graduate students only): Summarize and evaluate evidence-based HCI literature in project deliverables and in class presentations.

GRADING: Students are expected to attend class, to participate in class activities, and to read assigned readings. Students will be assigned a course project involving programming, written deliverables, usability testing, and in-class presentations. The course grade will be based on

• Midterm exam (25%)
• Final exam (25%)
• Project (several parts, totaling 40% of the course grade)
• Class participation (including miscellaneous homework, in-class exercises, in-class user studies and graduate student reports, totaling 10% of the course grade).

POLICIES:

• Attendance: is expected and will be checked during the semester. If you miss more than 5 classes you may be dropped from the course without warning.
• Disruptive Behavior: If you engage in non-course-related or disruptive activities (such as excessive non-course-related conversation, reading/sending email or text messages, doing work for another class) you may be asked to leave the room and counted as absent; persistent behavior of this type may result in your being dropped from the course (see the UNCG Disruptive Behavior Policy).
• Textbook: The required textbook is indispensable to this course. Therefore, you are expected to show ownership of it by the third class meeting; otherwise you may be dropped from the course. (In case of financial hardship, see the instructor immediately to discuss getting help for purchasing a copy.)
• Late work will not normally be given credit. (Make arrangements with the instructor to turn work in early if you know you will be absent on a due date.)
• Missed exams cannot be made up without an official university excuse.
• Academic Integrity: All work (including assignments and tests) is subject to the UNCG Academic Integrity Policy. When you submit your work and exams, you are implicitly agreeing to this policy. Academic dishonesty includes submitting software that you did not write as your own work.
• Disabilities: If you have disability-related requirements, please inform us as soon as possible.
• Copies of student work (with student’s identifying information removed) may be kept and used for curriculum assessment and in accreditation studies.

SUPPLEMENTARY BOOKS (not required):


Other supplementary books to be added (TBA).

TENTATIVE SCHEDULE: This schedule is tentative; that is, it may be changed during the semester (with advance notice of changes to test dates and due dates).

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<th>Tu-Th</th>
<th>Topic (&amp; related reading) or other activity</th>
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<tr>
<td>8/21-8/23</td>
<td>Introduction (ch. 1, 2.1-2.3), assign homework (ch.1, p. 37) due 8/28</td>
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<td>8/28-8/30</td>
<td>8/28 Last day to show ownership of textbook</td>
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<td>10/16-10/18</td>
<td>Fall Break 10/16</td>
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<td>10/23-10/25</td>
<td>Project part I due 10/23 (presentations all week)</td>
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<td>11/20-11/22</td>
<td>Thanksgiving 11/22 (no class)</td>
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<td>11/27-11/29</td>
<td>Usability test design due 11/27 (run usability testing in class all week)</td>
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<td>12/4-12/6</td>
<td>Rest of project due 12/4 (presentations all week)</td>
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<td>Final Exam (day/time scheduled by university)</td>
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TOPICS & READINGS: (All readings are from the textbook except where noted.)

Introduction (ch. 1, 2.1-2.3)
Role of cognitive science (ch. 3) and psychology (ch. 5)
Design Examples (ch. 6 through p. 263)
Design Process (ch. 9), Data Gathering (ch. 7)
Requirements Analysis (ch. 10)
Design & Prototyping (ch. 11)
GUI Design Guidelines (TBA)
Evaluation (ch. 12-13)
Usability testing (ch. 14), Data Analysis (ch. 8.1-8.3)
Analytical evaluation (ch. 15)
Future advances in HCI (info viz, collaboration, etc.) (ch.4, rest of ch. 6, and/or TBA)