Course Syllabus

MCTE 680 Human-Computer Interaction (3 credits)

2001 Summer Term, June 25, 2001 – September 14, 2001, Online Format

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Class Location and Format: Online
Course Internet address: http://scis.nova.edu/nova/hci/top.html
In text form from the scis system: type hci at your system prompt

Course Description:
Explores the emerging field of human-computer interaction. Emphasis is placed on how software design practices are integrated with human factors, principles, and methods. Other issues covered include user experience levels, interaction styles, usability engineering, interaction devices and strategies, user-centered design, human information processing, social aspects of computing, and computer-supported cooperative work.

Required Textbooks:
   Paperback ISBN: 0-74840-762-6. Note to the student: If you have severe difficulty getting this text, you may select any general text on usability, especially any of those indicated with a * in the bibliography section of this syllabus. (Nielsen or Rubin, for example).
3. Selected ACM articles. Contact the Program Office if you did not receive the articles with this syllabus package.

See the Course Schedule for specific reading assignments throughout the term.
Course Objectives:
Upon completion of this course and project, the student will:
1. Gain insight into the field of human-computer interaction.
2. Understand how software design practices and methods can be integrated with human factors principles and methods now being employed.
3. Gain a conceptual foundation for user interface design, including design goals, models of user knowledge, interaction styles, design guidelines, and assessment of user interface design.
4. Understand the nature of the HCI design process. Apply an integrated perspective to the design process.
5. Understand the difficulties and pitfalls of translating theory and principles derived from research findings, into practical advice on system design.
6. Apply metaphorical reasoning and conceptual models to user interface design.
7. Make decisions about which interaction styles to use in different applications.
8. Be able to select and apply suitable techniques for collecting users’ requirements and analyzing tasks.
9. Become familiar with the major aspects of usability evaluation.
10. Be able to conduct usability analyses and evaluate software.
11. Understand how computer systems can enhance collaboration in the context of work organization.

Course Topics (summary):
Human-Computer Interaction as an emerging field
Human Information Processing
User experience levels
Interaction styles and general design
Interaction strategies
Interface metaphors and conceptual models
Screen design
Online documentation and help systems
HCI and the World Wide Web
Task analysis
Usability evaluation
Collaborative systems, groupware & coordination technology
Research in HCI

MCTE 680 HCI Course Requirements:
Course Activities: Students will conduct independent research and produce scholarly projects. In addition, students will contribute to “Student Forums,” a Web-based conferencing forum, at designated times throughout the term. Contributions will count as points toward the class participation grade. See the section on Student Forums in the addendum course guide for instructions on accessing and contributing to the online conference discussions. Our Teaching Assistant, Ms. Ellen Scalese, will be assisting me in moderating the Forums and answering questions about HCI and assignments.
In addition to the required asynchronous contributions in Forums, the major course requirements will consist of two assignments.
Instead of the typical midterm and final examinations, two assignments or projects are required that will enable the student to synthesize the major issues and relevant research currently being examined in the field of human-computer interaction.

**Assignment #1:** An objective and scholarly software evaluation paper. Due date is: **Sunday, July 29, 2001.**

**Assignment #2:** Conduct and report a usability test. Due date is: **Sunday, September 9, 2001.**

**IMPORTANT:** Specific instructions for completing these assignments are contained in the addendum course guide. Assignments must be submitted according to the due dates specified in this syllabus. Late assignments must be pre-approved by the professor and will likely result in point reduction. **ALL ASSIGNMENTS REQUIRE OUTSIDE RESEARCH AND ACTIVITY.** Assignments may be submitted online through the electronic student system (ESET -- Web-based system). Do not email or fax assignments.

**Grading Scale and Criteria:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
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<tbody>
<tr>
<td>A</td>
<td>192-200</td>
</tr>
<tr>
<td>A-</td>
<td>186-191</td>
</tr>
<tr>
<td>B+</td>
<td>180-185</td>
</tr>
<tr>
<td>B</td>
<td>174-179</td>
</tr>
<tr>
<td>B-</td>
<td>168-173</td>
</tr>
<tr>
<td>C+</td>
<td>162-167</td>
</tr>
<tr>
<td>C</td>
<td>156-161</td>
</tr>
<tr>
<td>F</td>
<td>0-155</td>
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Grading Criteria For the 680 course:
- Assignment #1: 75 points
- Assignment #2: 100 points
- Class Participation: 25 points

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200 points total

**Class/Course Rules and SCIS Stated Policies:**

1. **Academic Integrity and Student Original Work** (See Catalog for additional policies, especially Policy on Acceptable Use of Computing Resources, and Policy on the Use of Material in Web Pages.)
Each student is responsible for maintaining academic integrity and intellectual honesty in his or her academic work. It is the policy of the school that each student be academically honest, which means that each student must:

a) Submit his or her own work, not that of another person
b) Not falsify data
c) Not engage in cheating (giving or receiving help during examinations, acquiring and/or transmitting test questions prior to an in-class examination, or falsifying any records, including admissions material)
d) Not receive nor give aid on assigned work that requires independent effort
e) Properly credit the words or ideas of others according to accepted standards for professional publications (See, for example, The Publication Manual of the American Psychological Association.)
f) Not use term paper writing services or consult such services for the purpose of obtaining assistance in the preparation of materials to be submitted in courses
g) Not engage in plagiarism. Webster’s defines plagiarism as “stealing or passing off ideas or words of another as one’s own” and “the use of a created production without crediting the source.” Extreme caution must be exercised by students involved in collaborative work to avoid questions of plagiarism.

2. Writing Skills: Each student must demonstrate proficiency in the use of the English language in all work submitted for this course. Grammatical errors, spelling errors, and writing that does not express ideas clearly will affect your grade. The professor will not provide remedial help concerning writing problems that you might have. Students who are unable to write correctly and clearly are urged to contact their program office for sources of remedial help.

3. The Grade of Incomplete (I): Incompletes will not be granted for MCTE 680.

4. Withdrawal: Withdrawal requests must be submitted to the student’s program office and must be made in writing by the student. Requests for withdrawal received after the last day of the term will not be accepted. Failure to attend classes or participate in course activities will not automatically drop or withdraw a student from the class or the university. Students who have not withdrawn by the last day of the term will receive letter grades that reflect their performance in the course. When a withdrawal request is approved, the transcript will show a grade of W for the course. Depending on the date of withdrawal, the student may be eligible for a partial refund.

5. Miscellaneous rules: (1) A student may neither do additional work nor repeat work to raise their grade. (2) Literature research is required for all work in this course. (3) Adhere to all deadlines – late arrivals will likely result in point reduction. (4) To receive full class participation points, every student must make steady contributions to the Forums in order to keep a healthy communication going throughout the term.
Bibliography and Suggested Texts:

* Recommended texts on usability evaluation and testing


Course Schedule (See also the Reading Assignments--Selected ACM Articles Addendum in the Course Guide):

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic/Activity</th>
<th>Tasks/Reading</th>
</tr>
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</table>
| 1    | Introduction to Human-Computer Interaction | Jordan: Ch. 1  
Shneiderman: Ch. 1, 2  
Review lecture notes online  
Read articles |
| 2    | Usability Overview: Concepts | Jordan: Ch. 2  
Review lecture notes online |
| 3    | HCI Web Sites  
Student Forums/HCI Discussion Groups start online and continue throughout the term | Visit HCI Exploration links available on the HCI Online Web site  
Read article  
Shneiderman: Ch. 16 |
| 4    | Evolution of User Interfaces & Human Aspects of HCI | Jordan: Ch. 3  
Review lecture notes online  
Read article |
| 5    | Usability Evaluation Methods and Procedures  
**Assignment #1 Due on or before July 29, 2001** | Shneiderman: Ch. 4  
Jordan: Ch. 5, 6  
Read articles  
Review lecture notes online |
| 6    | Designing the User Interface | Shneiderman: Ch. 3, 6, 7  
Read articles |
| 7    | Methods and Standards for User-Centered Design | Shneiderman: Ch. 5, 11  
Jordan: Ch. 4  
Read articles  
Review lecture notes online |
| 8    | User Support & Online Information/Documentation | Shneiderman: Ch. 12  
Review lecture notes online |
| 9    | Interaction Devices and Response Time and Display Rate Strategies | Shneiderman: Ch. 9, 10, 13 |
| 10   | Computer-Supported Cooperative Work | Shneiderman: Ch. 14  
Review lecture notes online |
| 11   | Interface Agents  
**Assignment #2 Due on or before September 9, 2001** | Shneiderman: Ch. 15 |
| 12   | Social Issues of Computing | Shneiderman: afterword |