Course Syllabus

MMIS 680 Human-Computer Interaction (3 credits)


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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:
The dynamics of human-computer interaction (HCI). Provides a broad overview and offers specific background relating to user-centered design approaches in information systems applications. Areas to be addressed include the user interface and software design strategies, user experience levels, interaction styles, usability engineering, and collaborative systems technology. Students will perform formal software evaluations and usability tests.

Required Textbooks:
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

**MMIS 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.
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, February 4, 2001.**

**Assignment #2:** Conduct and report a usability test. Due date is: **Sunday, March 18, 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:**

- **A** ........................................ 192-200 points
- **A-** ........................................ 186-191 points
- **B+** ........................................ 180-185 points
- **B** ........................................ 174-179 points
- **B-** ........................................ 168-173 points
- **C+** ........................................ 162-167 points
- **C** ........................................ 156-161 points
- **F** ........................................ 0-155 points

Grading Criteria For the 680 course:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment #1</td>
<td>75</td>
</tr>
<tr>
<td>Assignment #2</td>
<td>100</td>
</tr>
<tr>
<td>Class Participation</td>
<td>25</td>
</tr>
</tbody>
</table>

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200 points total

**Class/Course Rules:**

1. **Academic Integrity and Student Original Work** (See SCIS Graduate Catalog for stated policies).
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. All assignment and project work must conform to the form and style requirements contained in the SCIS Dissertation Guide, unless otherwise instructed by the professor. Master’s students may also follow the Publication Manual the American Psychological Association (APA), Fourth Edition, as the basis for form, style, and general writing principles in the preparations of papers and reports.

3. **Incomplete Policy:** Incompletes will not be given for MMIS 680.

4. **Withdrawal:** (See SCIS Catalog for stated policies).

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:**


Human-computer interaction. Reading, MA: Addison-Wesley.
television, and new media like real people and places. New York: Cambridge University
59403-2.
usability: a designer’s guide. San Francisco, CA: Morgan Kaufmann
Weinschenk, S., Jamar, P., & Yeo, S. (1997). GUI design essentials for Windows 95,
Boston, MA. ISBN: 0-12-751250-0.
0-201-85491-0.
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>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Human-Computer Interaction</td>
<td>Jordan: Ch. 1, 2, Shneiderman: Ch. 1, 2, Review lecture notes online, Read articles</td>
</tr>
<tr>
<td>2</td>
<td>Usability Overview: Concepts</td>
<td>Jordan: Ch. 2, Review lecture notes online</td>
</tr>
<tr>
<td>3</td>
<td>HCI Web Sites</td>
<td>Visit HCI Exploration links available on the HCI Online Web site, Read article, Shneiderman: Ch. 16</td>
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<td></td>
<td>Student Forums/HCI Discussion Groups start online and continue throughout the term</td>
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<tr>
<td>4</td>
<td>Evolution of User Interfaces &amp; Human Aspects of HCI</td>
<td>Jordan: Ch. 3, Review lecture notes online, Read article</td>
</tr>
<tr>
<td>5</td>
<td>Usability Evaluation Methods and Procedures</td>
<td>Shneiderman: Ch. 4, Jordan: Ch. 5, 6, Read articles, Review lecture notes online</td>
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<tr>
<td></td>
<td>Assignment #1 Due on or before February 4, 2001</td>
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<tr>
<td>6</td>
<td>Designing the User Interface</td>
<td>Shneiderman: Ch. 3, 6, 7, Read articles</td>
</tr>
<tr>
<td>7</td>
<td>Methods and Standards for User-Centered Design</td>
<td>Shneiderman: Ch. 5, 11, Jordan: Ch. 4, Read articles, Review lecture notes online</td>
</tr>
<tr>
<td>8</td>
<td>User Support &amp; Online Information/Documentation</td>
<td>Shneiderman: Ch. 12, Review lecture notes online</td>
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<tr>
<td>9</td>
<td>Interaction Devices and Response Time and Display Rate Strategies</td>
<td>Shneiderman: Ch. 9, 10, 13</td>
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<td>10</td>
<td>Computer-Supported Cooperative Work</td>
<td>Shneiderman: Ch. 14, Review lecture notes online</td>
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<tr>
<td>11</td>
<td>Interface Agents</td>
<td>Shneiderman: Ch. 15</td>
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<tr>
<td></td>
<td>Assignment #2 Due on or before March 18, 2001</td>
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Social Issues of Computing

Shneiderman: afterword