Course Syllabus
MMIS 680 Human-Computer Interaction (3 credits)


Professor: Laurie P. Dringus, Ph.D., Professor
Graduate School of Computer and Information Sciences
Nova Southeastern University
Carl DeSantis Building, 4th floor
3301 College Avenue, Ft. Lauderdale, FL 33314
Email: laurie@nsu.nova.edu
Office location, Davie campus, room 4073
Office: (954) 262-2073, Fax (954) 262-3915

Class Location and Format: Online using WebCT tools. Please note that some files and information resources are posted on my HCI website. Course Internet address: http://scis.nova.edu/nova/hci/top.html

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:
   Note to the student: A general HCI text is required. Please choose EITHER the text by Preece, et al, or B. Shneiderman and C. Plaissant’s classic text (Designing the User Interface, 4th edition).
2. Barnum, C.M. (2002). *Usability testing and research*. New York: Longman. ISBN: 0205315194. Note to the student: If you have difficulty getting the Barnum text, you may select any general text on usability, especially any of those indicated with a * in the bibliography section of this syllabus. (Jordan or Nielsen or Rubin, for example). There are several usability texts that will suffice for this course.
3. Selected ACM articles. See Reading Schedule in the Course Guide. ACM articles can be accessed online through the NSU Electronic Library, the ACM Digital Library Database. 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 design practices and methods can be integrated with human factors principles and methods now being employed.
3. Identify interfaces, boundaries and components of systems.
4. Gain a conceptual foundation for the HCI design process, including design principles and goals, models of user knowledge, interaction styles, design guidelines, and assessment of user interface design.
5. Understand the difficulties and pitfalls of translating theory and principles derived from research findings, into practical advice on user interface design.
6. Apply metaphorical reasoning and conceptual models to user interface design.
7. Describe the major aspects of usability engineering.
8. Apply usability and design principles to the evaluation of current interfaces.
9. Apply suitable methods for collecting users’ requirements and analyzing users’ tasks.
10. Perform usability analyses and evaluate product design.
11. Synthesize the research literature effectively.
12. Understand how computer systems can enhance collaboration in the context of work organization.

Possible 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
Web design
Online documentation and help systems
HCI and the World Wide Web
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 the asynchronous discussion forums in WebCT, 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/expectations on contributing to the online conference discussions.
In addition to the required asynchronous discussions in WebCT, 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 or interface evaluation paper. Due date is: Sunday, February 11, 2007.

Assignment #2: Conduct and report a usability evaluation. Due date is: Sunday, March 25, 2007.

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 LITERATURE RESEARCH AND ACTIVITY. Assignments must be submitted online through the assignment submission link in WebCT. Do not email or fax assignments.

Grading Scale and Criteria:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<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>
</tr>
</tbody>
</table>

Grading Criteria For the 680 course:
Assignment #1 75 points
Assignment #2 100 points
Class Participation (Forums) 25 points

200 points total

School and University Policies and Procedures:
Students must comply with the policies published in the school’s Graduate Catalog and the NSU Student Handbook, some of which are included or referenced below. The catalog is at http://www.scis.nova.edu/NSS/pdf_documents/Catalog.pdf. The handbook is at http://www.nova.edu/cwis/studentaffairs/forms/ustudenthandbook.pdf.
1. Standards of Academic Integrity For the university-wide policy on academic standards, see the section Code of Student Conduct and Academic Responsibility in the NSU Student Handbook. Also see the section Student Misconduct in the GSCIS catalog. 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 must:

- Submit his or her own work, not that of another person
- Not falsify data or records (including admission materials)
- Not engage in cheating (e.g., giving or receiving help during examinations; acquiring and/or transmitting test questions prior to an examination; and using unauthorized materials, such as notes, during an examination)
- Not receive or give aid on assigned work that requires independent effort
- Properly credit the words or ideas of others according to accepted standards for professional publications (see Crediting the Words or Ideas of Others)
- 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 or for theses or dissertations
- Not commit plagiarism (Merriam-Webster’s Collegiate Dictionary (1996) 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.”) (see Crediting the Words or Ideas of Others below)

Crediting the Words or Ideas of Others

When using the exact words of another, quotation marks must be used for short quotations (fewer than 40 words), and block quotation style must be used for longer quotations. In either case, a proper citation must also be provided. The Publication Manual of the American Psychological Association, Fifth Edition, (2001, pp. 117 and 292) contains standards and examples on quotation methods.

When paraphrasing (summarizing, or rewriting) the words or ideas of another, a proper citation must be provided. (Publication Manual of the American Psychological Association, Fifth Edition) (2001) contains standards and examples on citation methods (pp. 207–214) and reference lists (pp. 215–281)). The New Shorter Oxford English Dictionary (1993) defines paraphrase as “An expression in other words, usually fuller and clearer, of the sense of a written or spoken passage or text…Express the meaning (of a word, phrase, passage, or work) in other words, usually with the object of clarification…” Changing word order, deleting words, or substituting synonyms is
not acceptable paraphrasing—it is plagiarism, even when properly cited. Rather than make changes of this nature, the source should be quoted as written.

Addendum by this professor: Additional requirement for this course -- overuse of direct quotes will not be acceptable in papers for this course. Direct quotes should be used sparingly, if only necessary. Points will be reduced in papers where excessive direct quoting is used. It is better instead to paraphrase and properly cite the work.

Original Work

Assignments, exams, projects, papers, theses, dissertations, etc., must be the original work of the student. Original work may include the thoughts and words of another author but such thoughts or words must be identified utilizing quotation marks or indentation and must properly identify the source (see the previous section Crediting the Words or Ideas of Others). At all times, students are expected to comply with the school’s accepted citation practice and policy.

Work is not original when it has been submitted previously by the author or by anyone else for academic credit. Work is not original when it has been copied or partially copied from any other source, including another student, unless such copying is acknowledged by the person submitting the work for the credit at the time the work is being submitted, or unless copying, sharing, or joint authorship is an express part of the assignment. Exams and tests are original work when no unauthorized aid is given, received, or used before or during the course of the examination, reexamination, and/or remediation.

2. Writing Skills

Students must demonstrate proficiency in the use of the English language. Grammatical errors, spelling errors, and writing that fails to express ideas clearly will affect their grades and the completion of their academic programs. The faculty will not provide remedial help concerning grammatical errors or other writing difficulties. It is the student’s responsibility to proofread and edit his or her work which, in both form and content, should be letter-perfect. Work that is not properly edited will be rejected.

3. Disabilities and ADA

NSU complies with the American with Disabilities Act (ADA). The university’s detailed policy on disabilities is contained in the NSU Student Handbook. Student requests for accommodation based on ADA will be considered on an individual basis. Each student with a disability should discuss his or her needs with the GSCIS disability service representative, Candy Fish (call 954-262-2034, or email fishc@nova.edu) before the commencement of classes if possible.
4. Communication by Email

Students must use their NSU email accounts when sending email to faculty and staff and must clearly identify their names and other appropriate information, e.g., course or program. When communicating with students via email, faculty and staff members will send mail only to NSU email accounts using NSU-recognized usernames. Students who forward their NSU-generated email to other email accounts do so at their own risk. GSCIS uses various course management tools that use private internal email systems. Students enrolled in courses using these tools should check both the private internal email system and NSU’s regular email system. NSU offers students web-based email access. Students are encouraged to check their NSU email account daily.

5. The Temporary Grade of Incomplete (I)

The temporary grade of Incomplete (I) will be granted only in cases of extreme hardship. Students do not have a right to an incomplete, which may be granted only when there is evidence of just cause. A student desiring an incomplete must submit a written appeal to the course professor at least two weeks prior to the end of the term. In the appeal, the student must: (1) provide a rationale; (2) demonstrate that he/she has been making a sincere effort to complete the assignments during the term; and (3) explain how all the possibilities to complete the assignments on time have been exhausted. Should the course professor agree, an incomplete contract will be prepared by the student and signed by both student and professor. The incomplete contract must contain a description of the work to be completed and a timetable. The completion period should be the shortest possible. In no case may the completion date extend beyond 30 days from the last day of the term for master’s courses or beyond 60 days from the last day of the term for doctoral courses. The incomplete contract will accompany the submission of the professor’s final grade roster to the program office. The program office will monitor each incomplete contract. If a change-of-grade form is not submitted by the scheduled completion date, the grade will be changed automatically from I to F. No student may graduate with an I on his or her record.

Addendum by the professor: Incompletes will NOT be granted for MMIS 680.

6. Grade Policy Regarding Withdrawals

Course withdrawal requests must be submitted to the program office in writing by the student. Requests for withdrawal must be received by the program office by the calendar midpoint of the course (see dates in the academic calendar in the catalog and program brochures or at: http://www.scis.nova.edu/NSS/pdf_documents/AcadCal.pdf). Withdrawals sent by email must be sent from the student’s assigned NSU email account. Requests for withdrawal received after 11:59 p.m. EST on the withdrawal deadline date will not be accepted. Failure to attend class 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 withdrawal deadline 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 (Withdrawn) for the course. Students with four withdrawals will be dismissed from the program. Depending on the date of withdrawal, the student may be eligible for a partial refund (see the appropriate catalog section Refund Policy Regarding Withdrawals).

7. Acceptable Use of Computing Resources

Students must comply with the university’s Policy on Acceptable Use of Computing Resources (see NSU Student Handbook).

8. Academic Progress, Grade Requirements, and Academic Standing

Students must be familiar with the school’s policies which are contained in its catalog.

9. Student Research Involving Human Subjects

Students must be familiar with the university’s policy (see paragraph in catalog).

10. 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) Follow NSU IRB policy on Student Research (see Instructions for Completing Assignment #2). (4) Adhere to all deadlines – late arrivals will likely result in point reduction. (5) To receive full class participation points, every student must make steady contributions to the online Student Forums in order to keep a healthy communication going throughout the term. (6) No work from another course may be used in MMIS 680. (7) There will be no incompletes given for MMIS 680.

Prepared by Laurie P. Dringus, Ph.D. and Maxine Cohen, Ph.D.

Bibliography and Suggested Texts:

* Recommended texts on usability evaluation and testing

Note to the student: It is highly suggested that you investigate these sources as reference materials for your assignment/project work. Also, master’s students may refer to the Reading Assignments Addendum list for articles to be used as reference materials.

In addition, it is highly suggested that you visit the ACM SIGCHI Web site, publications page, for other available journals and conference proceedings. Some journals and proceedings are available full-text online. Check it out: www.acm.org/sigchi/publications/


## 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 and Interaction Design; Usability Concepts</td>
<td>Preece: Ch. 1, 6&lt;br&gt;Barnum: Preface and Ch. 1&lt;br&gt;Read articles</td>
</tr>
<tr>
<td>2</td>
<td>SIGCHI resources; Understanding interaction; Usability concepts &amp; principles</td>
<td>Visit HCI Exploration Links (available online on the HCI Online Web Site&lt;br&gt;Preece: Ch. 2&lt;br&gt;Barnum: Ch. 2&lt;br&gt;Read article</td>
</tr>
<tr>
<td>3</td>
<td>Understanding Users; Human Aspects of HCI &lt;br&gt;<strong>Student Forums start online and continue throughout the term</strong></td>
<td>Preece: Ch. 3, 5&lt;br&gt;Read articles</td>
</tr>
<tr>
<td>4</td>
<td>Intro to Usability Eval &amp; Testing</td>
<td>Preece: Ch. 10, 11&lt;br&gt;Barnum: Ch. 4&lt;br&gt;Read articles</td>
</tr>
<tr>
<td>5</td>
<td>HCI and the Web; User-Centered Approaches to Design&lt;br&gt;<strong>Assignment #1 Due on or before Feb 11, 2007</strong></td>
<td>Preece: Ch. 9&lt;br&gt;Barnum: Ch. 9&lt;br&gt;Read articles</td>
</tr>
<tr>
<td>6</td>
<td>User Requirements; Conceptual Design</td>
<td>Preece: Ch. 7, 8&lt;br&gt;Barnum: Ch. 5&lt;br&gt;Read articles</td>
</tr>
<tr>
<td>7</td>
<td>Observing Users; Usability Methods</td>
<td>Preece: Ch. 12, 13&lt;br&gt;Barnum: Ch. 3</td>
</tr>
<tr>
<td>8</td>
<td>Usability Test Planning</td>
<td>Barnum: Ch. 6, 7</td>
</tr>
<tr>
<td>9</td>
<td>Testing and Modeling Users</td>
<td>Preece: Ch. 14&lt;br&gt;Barnum: Ch. 8&lt;br&gt;Read article</td>
</tr>
<tr>
<td>10</td>
<td>Making A Difference: Recommending Changes</td>
<td>Read articles</td>
</tr>
<tr>
<td>11</td>
<td>Computer Supported Cooperative Work&lt;br&gt;<strong>Assignment #2 Due on or before March 25, 2007</strong></td>
<td>Preece: Ch. 4&lt;br&gt;Barnum: Appendix&lt;br&gt;Read article</td>
</tr>
<tr>
<td>12</td>
<td>The Future of HCI (wrap up)</td>
<td>no specific readings</td>
</tr>
</tbody>
</table>

Note: This reading schedule is only a guide to help you read the texts in an organized way. You may read ahead or read several chapters concurrently. Our online discussions will include many themes, but may not necessarily follow the order of the reading schedule. Also, note there are lecture notes online pertaining to any of these topics. The lecture notes are available in text format from the HCI Web Site, under the “Learning Connections” link.