

Nova Southeastern University
Graduate School of Computer and Information Sciences

Course Syllabus

DCTE 720/820 Human-Computer Interaction (Core and project) 3 and 4 credits

2007 Spring Term, March 2, 2007 – August 1, 2007, Cluster Format

Professor: Laurie P. Dringus, Ph.D., Professor
Graduate School of Computer and Information Sciences
Nova Southeastern University
Carl DeSantis Building, 4th floor (Office 4073)
3301 College Avenue
Ft. Lauderdale, FL 33314-7796
E-mail: laurie@nsu.nova.edu
Office: (954) 262-2073, Fax (954) 262-3915

Class Location and Format: Cluster (March 2-4, 2007; June 1-3, 2007) and online

Course Web Site: Most course activity is managed through WebCT, except for email exchange. Additional resources are available from the professor's HCI website at: <http://scis.nova.edu/nova/hci/top.html>.

Course Descriptions:

DCTE 720 Human-Computer Interaction (3 credits)

Techniques facilitating effective human-computer interaction are presented. Basic elements, procedures, tools, and environments contributing to the development of a successful user interface are explored. Design principles, guidelines, and methodologies for building, installing, managing, interactive systems that optimize user productivity are reviewed. Topics include the multidisciplinary dynamics of human-computer interaction, current and projected developments in HCI research, usability engineering, computer-supported cooperative work, and strategies for implementing and evaluating human-computer dialogues.

DCTE 820 Project in Human-Computer Interaction (4 credits)

Students produce a research paper or project on a current topic in HCI. Some topics of current interest include interface quality and evaluation, computer system and computer interface architecture, user and task analysis, advancements in usability engineering, Internet-based user interface design issues, legal and ethical aspects of computing, speech interfaces, agent technology, handheld and wearable technology, and computer-supported cooperative work.

Required Textbooks:

Book information:

A general text and access to the CHI conference proceedings are both required.

General HCI text

Choose **one** of the following:

Preece, J., Rogers, Y., & Sharp, H. (2002). Interaction design: Beyond human-computer interaction. John Wiley and Sons, ISBN: 0-471-49278-1.

OR

Shneiderman, B. & Plaisant, C. (2004). Designing the User Interface. Strategies for Effective Human-Computer Interaction. Addison-Wesley, 4th Edition. ISBN 0-321-19786-0.

AND

Conference Proceedings

Access to one of the latest ACM SIGCHI conference proceedings, 2006 or 2005. The most recent proceedings should be available through the ACM store (<http://www.acm.org>). (Most likely ACM is the only source to purchase the proceedings as the NSU book store will not supply this. However, earlier proceedings may be available through the normal book supplier channels.) (Students should not order the extended abstracts.)

The conference proceedings are also available electronically through the ACM Digital Library.

CHI 2006 Conference Proceedings
ACM Press, 2006
ISBN: 1-59593-178-3

CHI 2005 Conference Proceedings
ACM Press, 2005
ISBN: 1-58113-998-5

CHI 2004 Conference Proceedings
ACM Press, 2004
ISBN: 1-58113-702-8, Order Number: 608043

AND

Human-Computer Interaction Selected Articles from ACM – list of various recommended articles is contained the Course Guide.

Objectives/Exit Competencies:

Upon completion of the 720 course, the student will:

1. Gain insight into the field of human-computer interaction.
2. Understand how interface design practices and methods can be integrated with user-centered principles and methods now being employed.
3. Consider the human-computer interaction requirements of educational technology.
4. Identify current trends in HCI research.
5. Understand the difficulties and pitfalls of translating theory and principles derived from research findings, into practical advice on user-centered design.
6. Apply metaphorical reasoning and conceptual models to user interface design.
7. Explore strategies for improving web site usability.
8. Describe the major aspects of usability engineering.
9. Apply usability and design principles to the evaluation of current interfaces.
10. Apply suitable methods for collecting users' requirements and analyzing users' tasks.
11. Perform usability analyses and evaluate product design.
12. Synthesize the HCI research literature effectively.
13. Write scholarly article reviews and quality papers related to HCI.
14. In online discussions, highlight progressively higher level ideas.

Upon completion of the 820 course, the student will:

1. Delve deeply into a specific area of HCI research and design and either develop a prototype HCI system or write a research paper on an HCI area of current research.

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
HCI and the World Wide Web
Accessibility of User Interfaces
Usability engineering and evaluation
Collaborative systems, groupware & coordination technology
Research in HCI

Instruction Methods and Tools:

Students will use WebCT to submit DCTE 720 and DCTE 820 coursework. WebCT will be used for our online asynchronous discussions, course announcements, and for assignment submissions. Please note: WebCT email WILL NOT be used for course correspondence. Students are required to use their SCIS email accounts to communicate with the professor. Also, email attachments of assignments or faxed assignments will not be accepted, unless pre-approved by the professor.

DCTE 720 Cluster Format CORE Course Requirements:

Cluster Activities: Selected topics listed above will be introduced through lecture and discussions during cluster meetings. The concepts and applications presented in lecture are major issues covered in the required texts and other HCI resources. In addition, students will have the opportunity to further investigate areas of their own interests. Sources will be discussed that provide advanced approaches to human-computer interaction and user interface design. Cluster activities may include, but will not necessarily be limited to, professor presentations, class/group discussions, student volunteer informal presentations of journal observation entries (arranged prior to the second cluster meeting), all depending on time and resources available. Students are required to attend all cluster meetings.

Online Course Activities: Students will contribute to Student Forums, an asynchronous discussion forum in WebCT, throughout the term. Steady contributions throughout the term 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 Forums.

In addition to required participation in the Student Forums and full attendance at cluster, the major 720 course requirements will consist of three assignments.

Assignment #1: Review five (5) journal articles related to the theory and practice of usability or usability evaluation as a process. Only specific HCI journals and conference proceedings may be used to select appropriate articles. One file containing all five reviews is the deliverable. **Due date is: Sunday, April 15, 2007.**

Assignment #2: Keep and present your own HCI journal -- containing weekly observations of the HCI issues that pertain to your work and the work of others you are in contact with. A written report presenting the journal entries and a summary with literature integration is the deliverable. Due date is: **Monday, June 4, 2007, after the second cluster meeting.** Students should be prepared to discuss selected journal entries in class.

Assignment #3: Conduct and report a usability evaluation. Due date is: **Sunday, July 15, 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, if approved, will likely result in point reduction. **All assignments require outside literature research and activity.**

DCTE 820 Project Requirements:

There are three deliverables, the idea paper, proposal and final report. **The project idea paper is due on: Sunday, April 1, 2007. The project proposal is due on: Sunday, May 6, 2007. The project final report is due on: Sunday, July 22, 2007.** As with the core course

requirements, specific instructions for completing the project are contained in the addendum course guide. (Note: Submit DCTE 820 project submissions through WebCT.)

Grading Scale and Criteria:

A	.....	195-200 points
A-	.....	189-194 points
B+	.....	183-188 points
B	.....	177-182 points
B-	.....	171-176 points
C+	.....	165-170 points
C	.....	159-164 points
F	.....	0-158 points

Grading Criteria For the 720 Core Course:

Assignment #1	30 points
Assignment #2	65 points
Assignment #3	75 points
Class Participation (online)	30 points

	200 points total

Grading Criteria For the 820 (Project Course)

For idea paper:	25 points (usually indicated as a “Pass”, “No Pass,” or “Rewrite”)
For proposal:	50 points (usually indicated as a “Pass,” “No Pass,” or “Rewrite”)
For final report:	125 points

	200 points total

Class/Course Rules:

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 DCTE 720 or DCTE 820.*

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) Attendance at cluster meetings is mandatory. (3) Follow the NSU IRB policy on Student Research. (4) Extensive literature research outside provided sources given in class is required for all work in this course. (5) Follow carefully the course guide and tips for providing quality submissions in this course. (6) Adhere to all deadlines – late arrival will likely result in point reduction. (7) To receive full class participation points for DCTE 720, every student must make steady contributions to the Forums in order to keep a healthy communication going throughout the term. (8) There will be no incompletes given for DCTE 720 or DCTE 820. (9) No work from another course may be used in DCTE 720 or DCTE 820. (10) Work from DCTE 720 cannot be duplicated or expanded on in DCTE 820.

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/

Baecker, R.M., Grudin, J., Buxton, W., & Greenberg, S. (Eds.)(1995). *Readings in human-computer interaction: toward the year 2000*. San Francisco, CA: Morgan Kaufmann Publishers. ISBN: 1-55860-246-1.

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