

Multimedia Systems
CIS 658
Spring 2003
Syllabus

Lectures: Tuesdays, 18:00h–21:05. GITC 1202
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Catalog Description

Multimedia software systems incorporate various media, such as text, images, video and audio, to provide rich experiences for users. This is a course in the design, implementation and evaluation of multimedia systems. The course has three major content areas and goals: (1) multimedia data types—the goal being to understand the development and use of various multimedia data types; (2) usability and user modeling—the goal being to incorporate theories of human perception and cognition into the design and evaluation of multimedia systems; and (3) multimedia design and software tools—the goals being to plan, develop and implement multimedia projects and to be aware of ways in which multimedia is being used in the public and private sectors. Students will also develop familiarity with one multimedia authoring package.

Prerequisite

CIS 601 (Object-Oriented Programming) or equivalent.

Softwares and Required Texts

- Macromedia Flash MX. Downloadable version available for \$56 from govconnection.com.
- Norman, D.A. (1988). *The Psychology of Everyday Things*, Basic Books, New York, NY.
- Laurel, B. (Ed.) (1990). *The Art of Human-Computer Interface Design*. Addison-Wesley, Menlo Park, CA.
- Additional readings (see below) available on-line or through the NJIT library.

Course Outline

Readings are due on the date indicated.

Week	Lecture Topic	Reading Assignment	Notes
Week 1 21 January	Course Overview Introduction to Multimedia Design	No readings	Hand out Assignment 1 Team Formation Exercise
Week 2 28 January	How to Foster Creativity Team Management	Papers 2.1, 2.2	Brainstorming of Design Problem
Week 3 4 February	Introduction to Human-Computer Interaction	Papers 3.1, 3.2, 3.3	Assignment 1 due Hand out Assignments 2–4 Macromedia Flash Tutorial
Week 4 11 February	Perception Text	Papers 4.1, 4.2	Team formation
Week 5 18 February	Color	Papers 5.1	Assignment 2 due Return and discuss Assignment 1 Exam Review
Week 6 25 February	Information Design	Papers 6.1	Macromedia Flash Tutorial Midterm Exam
Week 7 4 March	Interaction Design: metaphor	Paper 7.1, 7.2	Assignment 3 due Return and discuss Assignment 2 Macromedia Flash Tutorial
Week 8 11 March	Interaction Design: interface styles, navigation	Papers 8.1, 8.2	Return and discuss Assignment 3 Advanced Macromedia Flash Tutorial
18 March	Spring Break		
Week 9 25 March	Sound	Papers 9.1, 9.2	Assignment 4 due Audio manipulation in Macromedia Flash

Course Outline (continued)

Week	Lecture Topic	Reading Assignment	Notes
Week 10 1 April	Motion	Paper 10.1	Return and discuss Assignment 4 Audio animation in Macromedia Flash
Week 11 8 April	Usability Inspection	Papers 11.1, 11.2	Assignment 5 due Video manipulation in Macromedia Flash
Week 12 15 April	Software Tools	Paper 12.1	Return and discuss Assignment 5
Week 13 22 April	Software Documentation	Paper 13.1	Assignment 6 due Review for Final Exam
Week 14 29 April	Project Presentations	No readings	

Requirements

Requirements for the course are six assignments, a midterm and a final. This section details how and when these requirements are to be met and how they contribute to your grade for the course.

Method of Evaluation	Percentage of Grade	Due Date
Assignment 1: Iterative development of an idea	10	28 January 2003
Assignment 2: Multi-disciplinary team management	10	18 February 2003
Midterm Exam	15	25 February 2003
Assignment 3: Development of graphic interface	10	4 March 2003
Assignment 4: Obtaining feedback on design solutions from users	10	25 March 2003
Assignment 5: Attachment of sound to animation	10	8 April 2003
Assignment 6: Development of interface	10	22 April 2003
Final Exam	25	To be announced

Late Assignments

Assignments must be turned in at the beginning of class. If turned in later, they will be considered one day late. LATE ASSIGNMENTS WILL BE ACCEPTED USING THE FOLLOWING SLIDING SCALE. Late assignments must be turned in on or before 17:00 in GITC 4106 to be counted for that day. Weekends and holidays count!

2 hours late: 90% of grade	(i.e., turned in by 20:00 Tuesday)
1-2 days late: 75% of grade	(i.e., turned in by 17:00 Thursday)
3-5 days late: 50% of grade	(i.e., turned in by 17:00 Sunday)
6-7 days late: 25% of grade	(i.e., turned in by 17:00 Tuesday)
>7 days or more: no points	

Teams

Students will team up in groups of **four** for the assignments. The assignments are a considerable amount of work and require a team to help gather data or perform a portion of the programming. The assignments are not tied together and there is no need to retain the same team members for the entire course. A few rules about teams.

1. Students will need to find their own team members. A portion of the time in class can be used to talk with other students and build a team.
2. Students can maintain their team for the entire course or join a different team for each assignment.
3. Teams can consist of no more than four students. A team can choose to continue with only three members if a member drops the course or leaves the team but no one and two person teams will be permitted. The assignments are simply too much work.
4. You will help in the assessment of all members of your team. Contributions to the work of the team will be assessed anonymously with each assignment and the assignments graded accordingly. If there is a dispute about the allocation of work, it will be resolved in a meeting between all team members and the course instructor.

Note: You will often have to work with other people throughout your life who you feel are not carrying their share of the load or doing the work at the level you desire. Now is a good time to get practice in dealing with these people, negotiating compromises and making the best of the situation.

Grade Redress Policy

It is understood that mistakes occasionally occur either in the interpretation of the work or in the calculation of the point score. In order to manage requests for regrades, a grade grievance policy has been set up. **Read the grievance policy carefully.** It is attached to this syllabus. The policy works as follows.

If you have a mark that you feel needs reconsideration, you will need to submit (**in writing and on paper**) the following documents.

1. The assignment or test on which you are requesting a changed score.
2. A written statement of why you believe the score should be changed and what you believe the score should be changed to. Make sure you indicate the page numbers and clearly point out what you believe the misunderstanding to be.

3. The statement should be typed or neatly written and contain clear arguments. If it is as unclear as the original document, you are not likely to win your case. Arguments such as, "I meant a lot more than what I said in the paper." or "you didn't give me enough time." are clearly inappropriate. This is not just another chance to improve your grade. If the argument is so fallacious that it has no basis for being made at all, we are not going to feel kindly about the additional time we need to spend on your work. You must have good reason for making the request!
4. Arguments that have been used in the past that do not receive grading changes included the following.
 - *We believe we deserve more points.*
 - *We had many other things that were due at the same time and so did not have as much time to work on this assignment.*
 - *Our teaching assistant doesn't like us.*
 - *We didn't read the directions carefully enough.*
5. As with the assignments, the first page of your redress request should have your name, student number and name of document you are requesting a redress for on the front page. You should also title the page, "Grade Redress Request." Since grade redresses are usually small in size, it is likely that the title page and the redress request will be on a single sheet of paper.
6. If you have turned in a grade redress to your teaching assistant and are not satisfied with the response to the request, you can then turn the redress in to your course instructor for consideration. The same rules apply except that you will be turning the redress in a week after you receive it back from your first redress.

Grade redress requests are to be turned in **within one week** after the assignment or test in question has been returned to you. If the grade is from an assignment, it should be turned in at the **beginning** of class. If the grade is from an exam, it should be turned in at the **beginning** of class. Expect to receive a response on them one week later.

Note

Duplicate copies of most assignments and all tests are made. If a grade redress request is turned in on which the original work was changed after the document was returned, the piece of work will be given a zero (i.e., no credit whatsoever).

Cautionary Note

This will not be an easy course. Be prepared to work! In particular, much of the material will be relatively new to you and much of it will demand skills you do not normally use in your computer science or information systems courses. For example, you will be expected to read more than average and you will also be expected to generate creative design ideas and draw.

Academic Honesty

You can and should discuss course content with others in the class. You may not copy or exchange code, procedures or other work, including the contents of your critiques. Various legal aspects of article authorship and multimedia design will be discussed in class; however, a general rule is that you may not claim others' work as your own. If you have a question about whether it is permissible to use something, ask me.

NJIT's policies with respect to academic honesty and integrity apply to this course. Any student who violates these policies will receive a failing grade for the course.

Additional References

Print sources that may be of use in completing the requirements are listed here.

Usability&User Modeling

- Nielsen, J. *Designing Web Usability*, New Riders, Indianapolis 2000.
- Raskin, J. *The Humane Interface*, Addison-Wesley, Boston, 2000.
- Schneiderman, B. *Designing the user interface*, Addison-Wesley Publishing Co., New York, 1992.

Graphics

- Weinman, L. *Designing Web Graphics: 2*, New Riders, Indianapolis, 1996.

Writing

There are numerous guides to writing. The following texts point out some of the more common pitfalls and corresponding remedies:

- Strunk, Jr., W. and White, E.B. *The Elements of Style*. Macmillan, New York, 1979.
- Watkins, F., Dillingham, W. and Hiers, J.H. *Practical English Handbook*. Houghton Mifflin, Boston, 2000 (11th Edition).