Syllabus
Harvard University, Division of Continuing Education
CSCI S-K Creative New Media and the Web

(8 units: UN, GR, NC)

June 23-August 15, 2003
M-W 10 am-12:30 pm. Church Street Computer Labs, Room 203
Th 10 am-12:30 pm. Church Street Computer Labs, Room 104 [Mac Lab]

Instructors:
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Course and credit status changes: through Friday, June 27
Classes end: Friday, August 8
Examination period: Monday, August 11-Friday, August 15
Grades available online: Wednesday, August 27

Required sections to be arranged in the Mac Lab at 53 Church Street.

Please see <http://newmedia.artscience.org> for updated links to course website.

Prerequisite: Basic familiarity with Windows and/or Macintosh operating system. No programming experience required. Limited enrollment.

This introductory course is an intensive immersion into New Media production for beginning and intermediate students. The current state of "New Media" is the digital convergence of print, broadcast, audio, image, film, and the Internet. The course consists of lectures, demonstrations, visiting speakers, and computer lab experience. Particular attention is placed on balancing technical skills with individual content and experimental approaches. We will explore the evolution as well as the societal and cultural context of New Media and the Web. Along with weekly assignments, students will propose, design, and produce a web-based, multimedia final project using the tools of the industry. Core software includes Adobe PhotoShop, Macromedia Dreamweaver, and Flash. The course will also introduce digital video applications, Apple iMovie, digital sound editing, and frontline developments in web applications.

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Computer Lab Sections and Time Requirements

In addition to the Lectures and Demos by the instructors, CSCISK Teaching Fellows will schedule blocks of time to be in the computer labs, making themselves available to you as you work on your assignments as well as presenting software tutorials. They will also allow a certain amount of time to monitor the course's online discussion board and reply to direct email from you. These times will be announced on the web site and during the first two weeks in class.

Computer lab sections will be in Room 104, aka 'The Mac Lab' at 53 Church Street, Harvard Square.

During most open lab times, there are UAs (User Assistants) that monitor and troubleshoot the computers in the labs. These UAs are renaissance individuals who know a lot about computing in general. It's impossible for any one person to know all the answers to all the possible questions that you will have. These UAs are hired to support the computers and equipment in the lab - they are not tutors. They are also not necessarily specialists in New Media software. Please be respectful of their positions and their responsibilities within the lab.

You will need all the extra time your schedule will allow to work and explore the software presented in class either at home or in the computer lab. This is a double-credit, overview course and we cover a lot of ground. Attendance to all Lectures and Demos and at least one Computer Lab Section with the Teaching Assistant per week is required. You are encouraged to attend more than one Computer Lab Section if possible. Please communicate expected absences ahead of time.

Even if you are working at home, you are expected to allow a chunk of time weekly to come into the labs and talk to a TF and other students. TFs will take attendance and this record will be included in your final grade.

Students should expect at least 10-12 hours of development time outside of Lectures. Your proficiency with the software presented in class is directly proportional to the amount of time you spend exploring the software and methods for expressing your ideas with it.

Supplies
We've put together a course packet, a selection of journal and book excerpts related to the concepts we will be covering, that will be available for purchase. These readings add conceptual depth to the technical work you will be doing and we will discuss them throughout the semester.

Technical guides related to the software we will cover are highly recommended. You will need something in those moments you are alone and stuck with the software and a deadline. To get started, we suggest the Visual Quickstart Guides by PeachPit Press that give graphical, easy to understand instructions for specific software packages (e.g., Visual Quickstart Guide for Adobe PhotoShop). These can be purchased at the Harvard Coop. Books can also be purchases online <amazon.com, half.com, peachpitpress.com> or at Wordsworth, Microcenter or several other local bookstores. Our suggestion is to take a few minutes and leaf through several software instruction books and choose the one that best fits your reading style.

You will also need some kind of external storage medium. We will discuss this more in class but count on investing in at least 2 100 MB zip discs, or CD-R discs for burning CD backups of your work.

Assignments

Weekly Assigned Projects These will be assigned weekly with due dates to be announced. These assignments are due in the digital drop box, in the proper file organization and file format, by 10 am on Mondays. Complete descriptions of these projects and how to hand in files will be made available on the web site throughout the course. See current course web site for complete project instructions.

#0. Apply for a Harvard FAS account (email and server space) and introduce yourself on class Discussion Board.
#1. Digital Image Series
#2. Image Compression Comparison
#3. Beginning, Middle and End Web Site
#4. Simple User Experience with sound
#5. Edit Short Digital Video
#6a. Final Project Proposal
#6b. Meeting with Teaching Staff
#6c. Revised Final Project Proposal

Each project is to be accompanied by a WRITE-UP that describes your process - the idea, both the conceptual and technical challenge you were dealing with, your approach, your frustrations and what you learned and references the readings. These write-ups need not be more than 400 words (900 for grad students) but no less please. HTML or MSWord files please. The write-ups should be included with your weekly project in the
In addition to the weekly projects and write-ups, a Final Web Site exploring content of your choice using New Media tools is required that should represent what you've learned over the semester.

In order to receive credit for the Final Project, it should include:

**Web Site exploring content of your choice using New Media tools** - may be produced by an organized group of up to three people. Group projects are a more realistic reflection of the field and are encouraged.

**Live Presentation** - Developing successful new media projects depends on an extensive amount of showing your work to others and getting feedback. You will have about 10 minutes to present your work and 5 minutes to answer questions. This live presentation is an important part of the learning process. The final presentations are for credit students only. All students are encouraged to attend all the presentations - sharing your opinions, observations and ideas will help the presenter as well as yourselves.

**Digital Files of Project** - copied to the drop box.

**Write-up** - as with other projects. Reference reading material. For groups, each student should include an individual critique of your group's production process and a description of your role in relation to your teammates. Both groups and individuals, describe what you enjoyed about the process, perhaps what didn't go very well, what you would do next if you had more time, would you do it again, etc.

All files must be copied to the drop box - we cannot except discs during lecture periods. Exceptions are analog sketches made with pen, pencils, crayons, paintbrush, fingerpaint, etc.

**Proper file organization** - All relevant files are placed within a folder with your last name_first initial_project_version number (if applicable). For example, Flinstone_F_P1_V1. File format requirements will be specified according to each project details.

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**Grading Policy**

The process of grading creative works is full of contradiction and difficulty. Each of you will be learning at different rates and levels of frustration. You each come with a different set of skills and potentials. Some students will work many hours and produce work that may not represent those hours. Others will
spend very little time and get lucky on some projects. Effectively communicating with digital media is a complicated mix of new ideas, visual language, technical talent, endless amounts of patience and fearlessness. Learning is a risky business. We want you to dive in, experiment and learn. We also want you to have something to look at and experience after the course is over. Therefore, we will be carefully balancing your learning experience with the demands of production.

Non-credit students who feel they may want to receive credit for the course need to change status with the registrar's office no later than the late registration date. This change of status cannot be done later in the semester. Please read the student handbook on this issue.

There are no quizzes or exams for this class. There are several hands-on weekly projects, a final web-based new media project and a live presentation of your final project. Missing a project deadline will reduce your grade by incremental grade points. Please hand in your work by the deadline even if you feel it isn't finished. The reason for this policy is that it is important that we see evidence of your progress. An assignment will not be accepted for grading after one full week of lateness and a failing grade will be recorded for that project. You are permitted to resubmit one of your weekly assignments for a higher grade on that assignment. This excludes projects that were not handed in by the deadline and have not already received an original grade. This resubmission must be handed in two weeks before the final presentations.

Each assignment will be graded by a matrix of 5 criteria, each worth 5 points, with a possible total of 25.

Example:
* Project Meets Required Specifications 0- 5
* Outcome Matches Student's Intentions 0 - 5
* Technical Difficulty 0- 5
* Originality/Creativity/Conceptual Complexity 0 - 5
* Written Description 0 - 5

The Final Grade for the course will be determined by calculating the points of weekly Short Projects (35%), class participation (15%), use of the online discussion board (10%), lecture and lab attendance records (15%), and the final project (25%).

Students who miss a significant number of lectures and labs may be asked to withdraw from the course.

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**Lectures**

Each week, there will be lectures by the instructors, teaching assistants, and/or
invited guests, covering both conceptual and technical topics. They will be organized according to a topical outline with appropriate changes and substitutions that will be announced with as much notice as possible.

Lecture Topics:

Lecture #1 Course Introduction
Lecture #2 Media Fusion
Lecture #3 Clients, Servers, Protocols and The Web
Lecture #4 Online Communication, Collaboration, Communities
Lecture #5 Multimedia and the Web
Lecture #6 Motion, Time, and Meaning
Lecture #7 Digital Video - Compressed
Lecture #8 Streaming Media
Lecture #9 Interactivity, Interface Design and Usability
Lecture #10 Information Architecture
Lecture #11 Balancing Functionality and Creativity
Lecture #12 Software Family Tree
Lecture #13 Testing, Troubleshooting and Going Live
Lecture #14 The Future of New Media

In general, the following schedule is followed:

**Mondays:** Weekly overview, Lecture, discuss readings, homework due.
**Tuesdays:** Lecture, show student work
**Wednesdays:** Weekly project assigned, software demo, guest speakers
**Thursdays:** Software tutorial

This structure may change depending on guest speakers' availability or other appropriate reasons TBA.

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Topical Outline

**#1 Course Introduction**
Concepts:
* Course overview and logistics
* Introductions (Instructors, Teaching Assistants, Students, Facilities)
* Expectations
* Expressing your ideas with New Media

**#2 Media Fusion**
Concepts:
* An historical overview of Media Fusion and New Media
* Basic Digital Imaging - Introduction to Adobe PhotoShop
* Scanning
* Resolution, file size, compression, file formats (.jpg, .gif, .png)
* Image Modes (RGB, indexed color, gray scale)
#3 Clients, Servers, Protocols and The Web
Concepts:
* Basic web architecture
* What is HTML?
* The many uses of the Internet - browsing, searching, communicating, advertising, collaborative work
* Deconstructing online content (viewing source code)
* Introduction to Macromedia Dreamweaver

#4 Online Communication, Collaboration, Communities
Concepts:
* ePublishing
* Emergent Behaviors
* One to One - Email
* One to many - Discussion Lists
* Many to many - Discussion Boards
* CGI scripts (guestbooks) * Dynamic database-backed sites

#5 Multimedia and the Web
Concepts:
* How to bring together images, interactivity, sounds, text in a compressed multi-platform format optimized for the web
* Introduction to Macromedia Flash * Digital Sound

#6 Motion, Time, and Meaning
Concepts:
* Project Management
* Production Roles
* Effective Storyboarding
* Elements of animation
* Character and script development

#7 Digital Video - Compressed
Concepts:
* Current state of online broadcast media
* Bandwidth issues
* Compression
* Digital Video Capturing, Editing
* QuickTime, WindowsMedia and RealVideo
* Introduction to Apple iMovie

#8 Streaming Media
Concepts:
* Bandwidth dependent content delivery
* Digital Video Compression/CODECS
* Media player overview
#9 Interactivity, Interface Design, and Usability
Concepts: * Levels of Interactivity * Elements of Interface Design * Methods for measuring usability success * Intro to Macromedia Flash

#10 Information Architecture
Concepts:
* Information Architecture
* Defining a Site
* CSS
* More Dreamweaver

#11 Balancing Functionality with Creativity
Concepts:
* Review of class projects to date
* How are YOU doing with this balance?
* Innovative site survey

#12 Software Family Tree
Concepts:
* Family Tree of New Media software
* Fluidity and compatibility between different software packages
* For which software would you like more instruction?

#13 Testing, Troubleshooting and Going Live
Concepts:
* Quality Control
* Testing Final Project
* Tips on how to get your site online

#14 The Future of New Media and the Web
Concepts:
* Personal publishing sites and self-organization of the web
* The potentials of "Ubiquitous Computing"
* Social change
* Semantic Web
* Other Current Topics

Expectations

Students often ask, "What do I need to do to get an A in this class?"

In their book, The Art of Possibility by Benjamin Zander and Rosamund Stone Zander, the authors describe a leadership course at a college in California "taught each year to fifty of the most outstanding students out of the twenty-seven thousand in the school, hand-picked by each department." The course grader is instructed to give 1/3 of the students A's, 1/3 B's, and 1/3 C's. The
Zanders write, "Imagine the blow to the morale of the eager and hard-working student who received the requisite C." And, imagine the quality of that student's work. Will he/she improve because of this grade?

The chapter goes on to describe Benjamin's frustration with grading his own students in his teaching at the New England Conservatory in Boston. After 25 years of teaching and watching his students grade anxiety interfere with their learning, he now states on the first class that everyone will get an A. However, there is one requirement - "you must write me a letter dated next May (end of semester), which begins with the words, Dear Mr. Zander, I got my A because....," and in this letter you are to tell, in as much detail as you can, the story of what will have happened to you by next May that is in line with this extraordinary grade."

What do you think deserves an **extraordinary** grade? Perhaps more than you can give at this time, perhaps something that you will strive for and achieve. Either way, you are expected to reflect on how you approach learning in this course by handing in write-ups that accompany your weekly assignments describing your process - the idea, both the conceptual and technical challenge you were dealing with, your approach, your frustrations and what you learned. This is extremely important to the course and you will lose points for not handing it in.

We are not in a position to 'give an A' to everyone. What we CAN say is that you will do well if you - 1. Attend class, 2. Hand in work in response to the assignments, 3. Hand in the write-ups described above, 4. Participate in class discussion online and offline, 5. Present your final project, 6. And reference the readings in your assignments, discussions, and projects.

Most of this class is about learning to balance the very steep learning curve of technology, the number of hours it takes to produce results, and conceptual output and communication. It's also a DOUBLE CREDIT course. For some, this may mean sacrificing a grade point here and there in order to maintain your physical and mental health.

Finally, don't forget to put your computer aside at times and think about something totally unrelated. This will push you forward in your learning and creativity.

End.

N. Sturiale, May 2003