Information Design and Visualization FNAR-337-401 Spring 2009

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Meeting spaces: Advanced MacLab and Fine Arts conference room
Blog: datadesign.wordpress.com

This course is an introductory studio that explores the relationship between visual design and the field of information visualization. It presents strategies for designing effective visual communications while seeking to articulate a vocabulary of data design. Course work will provide students with an introduction to structuring and visualizing information with an emphasis on clear communication and visual aesthetics.

TEXTBOOK:

Envisioning Information, Edward Tufte, Graphics Press, 1990

Readings:

Information Graphics: Visual Tools for Analyzing, Managing, and Communicating Robert L. Harris

Fundamental Principles, Edward Tufte

Mapping Experience, Marc Treib, Design Quarterly, No. 115

Artistic Data Visualization: Beyond Visual Analytics, Martin Wattenberg, HCII, 2007

The purpose of this course is to explore how information can be structured and to develop ways in which it can be presented with visual excellence.

Students will produce a number of visual exercises and one major project using a variety of design tools from pencil and paper models to video, animation, and interactive media. The focus of the projects will be on developing an analytic and critical design process, demonstrating how design can affect and improve the understanding of information. The course is intended for both undergraduate and graduate students in a variety of programs including visual design, engineering, business, and architecture, or any student who works with data.

Students will be expected to complete basic research, data collection, analysis, and interpretation of data. They will be required to synthesize information from multiple and varied perspectives and create visual representations for each of the semester's five projects. Students will need to choose appropriate media for each project and complete work with a high level of skill, balancing function and aesthetics. Emphasis will be placed on user-testing as much as possible.

COURSE REQUIREMENTS

- attend all classes on time and prepared to work
- complete all assignments fully and on time (submit work to Course Folder on assigned days) and contribute to blog
- participate in critiques, explaining and justifying work and offering criticism of other students' work
- keep records of sketches and other work (digital and print)
- turn in copies of final projects on the last day of class

GRADUATE STUDENT REQUIREMENT

Graduate students will be required to participate in a separate mid-point review of their independent project with a panel of faculty and peers. Based on feedback they must complete the work with a documentation of their development process.

GRADING

Your grade is based on work produced and participation in class (including critiques and course blog). Projects will be evaluated based on how effectively you complete research, the design development process, and the quality of final design. A successful project is a result of synthesis and aesthetics–observation, inquiry, interpretation, and visualization–and will be evaluated by the professor based on presentations in class.

Students will be assessed based on how effectively their designs enable comparisons, demonstrate causality, include multivariate analysis, integrate evidence, and document data sources.

The projects are weighted based on the complexity of the work: projects 1-4, 15% each; the final independent project, 40%.

Mid-semester meetings will be scheduled with each student to discuss progress.

LATENESS AND ABSENCE POLICY

In addition to grading for work completed, students will be assessed on the basis of attendance, preparedness, and participation in class. **Attendance in class is a critically important element of your grade.** Three absences will result in grade drop of one letter grade.

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PROJECTS AND READINGS

Project 1 Getting Started (2 weeks) January 15–January 29

1.1   Info Landscape: Charts, Graphs, Maps, Diagrams, and Tables for January 20
Working in small groups, begin basic visual research: collect and categorize types of graphics and visualizations, merge, and build a taxonomy of information design in class and for next class. Use class blog as repository.
Readings: *The Fundamental Principles of Analytical Design,* Tufte; *Information Graphics: Visual Tools for Analyzing, Managing, and Communicating,* Harris

1.2   Hello for January 29
Design and perform a 2-minute spoken and visual presentation (Powerpoint!) about yourself built from personal data and vital statistics. Initial plans/sketches due Jan 20.
Design and print an 8.5x11" handout diagram summarizing your presentation (illustration, text, photos, charts, tables, etc.)

Project 2   My Day/Week (3 weeks) January 29–February 19

Design a multivariate (time, space, events) map documenting an experience over a short duration of time—hour, day, week—and employ as many variables as possible to enrich the map.
Reading: *Mapping Experience,* Treib, Design Quarterly, No. 115, 1980

February 3: Visiting Lecturer Matthew Ericson, New York Times Deputy Graphics Director*

Project 3   Interactive Narrative (4 weeks) February 19–March 19

Interactive timeline or other visual narrative structure that documents and juxtaposes various data sources to tell a story that can be controlled by user

Project 4   How-To (3 weeks) March 19–April 9

2-d graphic instructions demonstrating how to complete a task (tie a bow-tie, make and bake brownies, find a life partner) – revise as a video; Instructions, diagram and video

Reading: *Tiny Talents: Instruction, Especially in Trivial Skills, is one of the Web's Great Giveaways,* Heffernan

Project 5 Independent Project (5 weeks) April 9–TBD

Project proposals due March 31. Mid-project review, April 23; projects due at final critique, May 11

Discussion group leaders for each project/reading—15 min presentation/summary, 15 min discussion:

1 January 20 (Fundamental Principles, Tufte)

2 February 9 (Mapping Experience, Treib)

3 March 15 (Artistic Data Visualization: Beyond Visual Analytics, Wattenberg)

4 TBD

5 TBD

* Read: *Talk to the Newsroom: Graphics Director Steve Duenes*
Link to reading is on blog under 'Steve Duenes'