DSGD 132
User Interface & Interaction Design
Professor Chang Kim
Graphic Design

BFA Studio
Spring 2014
MON & WED 8:30AM-11:20AM
IS 226
DSGD 132 User Interface & Interaction Design

Prerequisites: Acceptance to the BFA Graphic Design Program

This course is 3 semester units and graded

Faculty Web Page and Messaging System
Copies of the course materials such as the syllabus, major assignment handouts, etc. may be found on my faculty web page or designated Facebook class group page which will be notified later. You are responsible for regularly checking with my email notification and other messaging system that are given.

Course Description
This course focuses on the fundamental principles and practices of digital typographic presentation, computer user interface, data visualization, and service information design. Our emphasis will focus on the design of typeface system design, 2D graphical user interfaces, and visual simulation for an effective concept presentation, which are based on the current information visualization technology, process and methods. Coursework will include discussions regarding the importance of Information System Design’s role in the advancement of technology usage, entertainment, public needs, and ultimately its impact on culture and society.

Students will be asked to conduct a survey on the basic information applications available and the techniques that have been developed for (or have given rise to) them, and will study several important paradigms on how these techniques can be woven into a coherent dialogue. This course will provide a framework for analyzing existing user interfaces and designing new ones. Although this course is not primarily a "programming class," some programming will be required for design and analysis. A number of topics this course will cover include: typeface design, new design paradigms, projects workflow, information design, production methodologies.

Projects are defined in phases:
Phase 1: Discovery and Analysis Research
  Content gathering, project definition, strategy and recommendations.
Phase 2: Concept Development and Design
  Sketching, content integration, exploration, refinement and system development.
Phase 3: Implementation and Documentation
  Production, consensus building, and education
Phase 4: Production and review
  Work in class & application design (Individual conference)
Phase 5 Finalization
  Execution and presentation (Individual conference)
Course Goals and Student Learning Objectives
This course will address how advanced and diverse series of topics on typeface system design, scientific data visualization, user interface design, and their applications confronting a wide variety of situations and needs emphasizing conceptual innovation, organization, and analysis. This course will include lectures, discussions, critiques, presentations, and creative work. Participation in discussion and critique is vital to the success of the class. Assignments will include researching designed artifacts, reading from textbooks, developing/creating excellent work, and giving presentations.

On successful completion of this course students shall be able to:
• Investigate the design components of several typographic designs;
• Articulate the major theories underlying typeface system design and experimental applications design;
• Conceptualize and design an experimental data visualization and explain the underlying rationale for each design element;
• Discuss contemporary issues of interactive design;
• Design and produce interactive objects & spaces at an intermediate level;
• Create new and experimental modes of service information design;
• Organize information to make compelling and experimental visual expressions for presentation.

This course presents the following significant issues:
• Understanding Type anatomy, structure and typeface design principles
• Exploring principles of the grid system and developing a new approach of designing a information system design
• Deviating from form and norm (functional and emotional expression)
• Experimenting with information system architecture and data visualization
• Understanding the concept and process of service design

Recommended Reference Books/Readings
• The Elements of Typographic Style (Paperback) by Robert Bringhurst, Hartley and Marks, Port Roberts
• Thinking with Type by Ellen Lupton, Princeton: Princeton Architectural Press, 2004
• Geometry of design/ kimberly Elam / Princeton Architectural press
• Graphic Design Manual / Principles and Practice / Armin Hofmann / Van Nostrand Reinhold
• Typography / Emil Ruder / Hastings House
• Typographic communication today / Edward M. Gotshall /1989 / ITC The MIT press
• The New Grid to graphic design / Bob Cotton / Quarto Publishing Inc. / 1990

Book Binding:
• Book binding at Home / K. Riberholt / 1987 / Thorsons publishers limited
• Book binding as a handcraft / Manly banister / 1975 sterling Publishing CO., Inc.
• How books are made / David C. Cooke / 1963 / Dodo, Mead and company
Graphic Design:
• Design Careers / Steven Heller
• The graphic design portfolio / Paula Scher
• Graphic design presentation / Margrand / Van Npstrand Reinhold / 1986

User Interface and information design:
• Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Rules, Jeff Johnson PhD, Morgan Kaufmann Publishers, USA.
  ISBN: 978-0-12-375030-3

• Global Usability (Human-Computer Interaction Series), Ian Douglas and Zhengjie Liu, Springer-Verlag London, England

Reference Web Sites:
Glossary of Typography:
• http://www.redsun.com/type/glossary/a.shtml

Early Masters of type design:
• http://webcom.net/~nfhome/early.htm
• The history of Canadian type design
  • http://webcom.net/~nfhome/history.htm

Font software:
• http://www.32bit.com/software/listings/Multimedia/Fonts/8444/

University of Reading, England
• http://www.rdg.ac.uk/AcaDepts/Lt/home.html

Typography dictionary

Useful typo list
• http://au.yahoo.com/Arts/Design_Arts/Graphic_Design/Typography/
  • http://www.e-typography.co.uk/Download.htm

Typesetting and Publishing Glossary

Interactive typography reference site
• http://www.rsub.com/typographic/

Data Visualization, Information, and Interaction Design
• http://www.kickstarter.com
• http://www.visual.ly
• http://www.sciencedaily.com/articles/s/scientific_visualization.htm
• http://www.interaction-design.org/encyclopedia/data_visualization_for_human_perception.html
• http://www.infovis.net
• http://www.infovisawards.com
• http://www.cs.uregina.ca/~rbm/cs100/notes/spreadsheets/tufte_paper.html
• http://www.visualcomplexity.com/vc/
• http://reas.com
• http://infosthetics.com
• http://flowingdata.com
• http://dataviz.ch/showcases/
• http://feltron.com
• http://www.quadrigram.com/become-an-expert/tutorials/principles-of-visualization-design

Recommended bookstore:
William Stout, Architectural Books
804 Montgomery Street, San Francisco (415) 391 6757

Library Resources (liaison):
The San Jose State University Library supports student access to information with in-person reference at the King Library Reference Desk and specialized support for Design online at http://libguides.sjsu.edu/design or by appointment with Librarian Rebecca Feind. She may be contacted at rebecca.feind@sjsu.edu or 808-2007.

Material Requirements:
Laptop computer with software (Adobe Creative Suite 5 or higher version) and type fonts. Other materials include sketch book, metal ruler, tracing pads, cutting-mat, X-Acto knife, brush, ink, pencil, graphic arts adhesive, flash drive, CD/DVD, small ink-jet printer, etc.

Tool Requirements
A mandatory design tool called “TypeTool 3” is required to purchase and use throughout semester for the project 1. The special price is available directly from the company, Fontlab (http://www.fontlab.com/font-editor/typetool/) for the full version at $47.99 or you may qualify to purchase a special version (http://www.fontlab.com/academic-purchases/) for 1 year limited academic version at $23.00.

Expenses:
The cost for semester supplies/materials will vary according to the individual. However, typical estimated cost would be around $300. There is a $45 printing fee for this course to cover software licensing, printing consumable, and related infrastructure. Includes 50 Black and White and 30 color prints.
Administrative Policies:
This course is an essential component of your curriculum at SJSU. We have a good amount of work to complete this term, so in order professionally and effectively deliver the curriculum it is necessary to establish some ground rules. Students are expected to read this syllabus thoroughly and to observe all of the regulations laid out below.

Classroom Protocol
We are involved in a mutually beneficial communal learning experience, one that requires full attention and respectful behavior toward all members of the class. In order to maximize the learning experience, students are requested to observe the following etiquette guidelines:

• Students must take every step necessary to minimize distractions during class.
• Students are expected to arrive on time and to remain in class until the class is over, or excused. If you have a prior engagement that requires you leave before the end of class, please inform the instructor before class and take pains not to disturb other students when you leave.
• Announcements, handouts, and assignments are issued at the beginning of class. All critiques begin 15 minutes after official class start time; no work is to be added to the wall after a critique begins. It is your responsibility to inform yourself of any announcements or requirements that you miss due to late arrivals. Please do not interrupt class to ask about these. Remain after class if you have questions.
• Electronic devices not directly pertaining to your participation in this class must be turned off and put away before class starts. This means you may not place or receive calls, messages, play games, check e-mails, surf the web, pop into Facebook, Twitter, etc.
• Laptops are to be used for course related purposes only.
• Please do not eat during class.
• Socializing during lectures or when other students are presenting material for the benefit of the class is counterproductive and inconsiderate.
• No spray-mount adhesives spraying in the class.
• Do not use tabletops as a cutting surface.

It is expected that there will be 1.5 to 2 hours of homework for each hour of class.

Dropping and Adding:
Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's Catalog Policies section at http://info.sjsu.edu/static/catalog/policies.html. Add/drop deadlines can be found on the current academic calendar web page located at http://www.sjsu.edu/academic_programs/calendars/academic_calendar/. The Late Drop Policy is available at http://www.sjsu.edu/aars/policies/latedrops/policy/. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.
Syllabus

Grading Policy:
The project and course performance will be evaluated according to the following components:

Each project (2 or more) will be graded upon completion and assigned a letter grade according to the University policy—A through F. An incomplete will be granted to students with documented extenuating circumstances e.g. debilitating illness, family emergency etc. Bases for the grading are:

- **Problem solving skills**
  - Planning, organizing, research and content gathering (message development), analysis, sketching and content integration.

- **Formgiving skills**
  - Design exploration, development, and refinement. The synthesis of the elements, principles, and attributes of form into an effective, evocative product. The verbal/visual investigation of form and function.

- **Presentation skills**
  - The skill, dexterity, and attention to detail exhibited in presentation. The quality of line and form necessary for effective visual communication.

- **Participation and Preparation**
  - Producing appropriate solutions to all required phases of development on projects both in quality and quantity. Engaged in class critiques and activities.

Grading Scale:

- **A+** 95% and above
- **A** 94% - 92%
- **A-** 91% - 90%
- **B+** 89% - 85%
- **B** 84% - 82%
- **B-** 81% - 80%
- **C+** 79% - 75%
- **C** 74% - 72%
- **C-** 71% - 70%
- **D+** 69% - 65%
- **D** 64% - 62%
- **D-** 61% - 60%
- **F** below 60%

Semester grade will be weighted according to the following percentages:

<table>
<thead>
<tr>
<th>Proportion of each grading segment</th>
<th>Project 1</th>
<th>Project 2</th>
<th>Project 3</th>
<th>Tutorials</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>30%</td>
<td>30%</td>
<td>30%</td>
<td>10%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Semester grade will be weighted according to the following percentages:

Grading Scale:

- **A+** Excellence (3.7–4.0)
  - Student consistently delivers creative and high quality work and demonstrates the ability to explore a wide range of alternative options as well as the ability to make intelligent and informed decisions on the final solution. Student is able to refine final solutions to instructor feedback. Student shows the ability to communicate ideas clearly and completely, both visually and verbally. Well-crafted and informed arguments support any and all design decisions. All projects are complete and on time. Student demonstrates a strong, engaged effort in work and in class. Student maintains at all times a positive attitude and commitment towards the profession, classmates, the instructor and their own development. Student participates in all regularly scheduled classes. Overall, student meets and exceeds the requirements of the course.

- **B+, B, B-** Very good work (2.7–3.6)
  - Student demonstrates an above average effort in all areas. Work is complete and demonstrates no craft or technical problem areas. Student shows the ability to communicate decent rationale for design decisions and demonstrates improvement in all areas of professional development as a designer. Student maintains a positive attitude and involvement in all coursework and class activities.

- **C+, C, C-** Adequate, average work (1.7–2.6)
Student produces the minimum work required at an average quality level and provides basic explanations for design decisions. Student demonstrates a basic understanding of the principles presented in class and may have some craft and technical problem areas. Student demonstrates average participation in all regularly scheduled classes.

D-, D, D+ = Poor work and lack of effort (0.7–1.6)
Student produces the minimum work required at below average quality and demonstrates little understanding of the principles

F = Failure to meet the course requirements (0.0–0.6)
Student demonstrates a lack of understanding of the basic principles discussed in class and is unable to convey creative and craft and technical ability as required. Student has little or no involvement in class discussions, repeatedly misses deadlines or critiques, and demonstrates little commitment to learning and their own development. Student shows little participation and/or is consistently late for class.

Important Notes about Grading
All assignment are graded, therefore you should do your best on them or your course grade will be adversely affected.
It is very important to complete all of them because:
• each develops a skill necessary for successful completion of assignments
• missing a portion of these assignments can lower your course grade substantially

Deadlines
On the regularly scheduled Final Exam day and time is when you will submit the last project. No extensions will be given except in cases of documented emergencies, serious illness. If such a circumstance should arise, please contact the instructor as early as possible and be ready to provide documentation.

Late Assignments
It is essential that you keep up with the course work and submit all assignments in a timely manner. Assignments will lose a full letter grade for each day late. Graded assignments more than 3 days late will not be accepted. In such cases, a grade of zero credit will be entered.

Extra Credit
Out of general fairness to all students, there will be no opportunities for extra credit assignments given in this class.

University Policies
Academic Integrity
Your commitment as a student to learning is evidenced by your enrollment at San Jose State University. The University's Academic Integrity policy, located at http://www.sjsu.edu/senate/S07-2.htm, requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office.
of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at http://www.sa.sjsu.edu/judicial_affairs/index.html.

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person’s ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include your assignment or any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Policy S07-2 requires approval of instructors.

Campus Policy in Compliance with the American Disabilities Act
If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the Disability Resource Center (DRC) at http://www.drc.sjsu.edu/ to establish a record of their disability.

Student Technology Resources
Computer labs for student use are available in the Academic Success Center located on the 1st floor of Clark Hall and on the 2nd floor of the Student Union. Additional computers are also available in the Martin Luther King Library. A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include digital and VHS camcorders, VHS and Beta video players, 16 mm, slide, overhead, DVD, CD, and audiotape players, sound systems, wireless microphones, projection screens and monitors.

Student affairs
The Division of Student Affairs provides a wide variety of services – career development, health and wellness, campus life, leadership development, cross cultural experiences, disability resources, psychological counseling, student housing, recreation, and co-curricular events. If you are interested in learning more about the departments and opportunities and services, please visit http://www.sjsu.edu/studentaffairs/

Campus Emergency and Other Aid
Emergency call: Call to the police office at 911 or pick up a Blue light phones. Escort Service: 4-2222. “Individuals with disabilities may contact the Disability Resource center on campus, 924-6000, Administration building 110, for a variety of formats such as Braille, large print, sign interpreters, assistive listening devices, audio tape, and accommodations for physical.

Learning Assistance Resource Center
The Learning Assistance Resource Center (LARC) is located in Room 600 in the
Student Services Center. It is designed to assist students in the development of their full academic potential and to inspire them to become independent learners. The Center’s tutors are trained and nationally certified by the College Reading and Learning Association (CRLA). They provide content-based tutoring in many lower division courses (some upper division) as well as writing and study skills assistance. Small group, individual, and drop-in tutoring are available. Please visit the LARC website for more information at http://www.sjsu.edu/larc/.

**SJSU Writing Center**
The SJSU Writing Center is located in Room 126 in Clark Hall. It is staffed by professional instructors and upper-division or graduate-level writing specialists from each of the seven SJSU colleges. Our writing specialists have met a rigorous GPA requirement, and they are well trained to assist all students at all levels within all disciplines to become better writers. The Writing Center website is located at http://www.sjsu.edu/writingcenter/about/staff/.

**Peer Mentor Center**
The Peer Mentor Center is located on the 1st floor of Clark Hall in the Academic Success Center. The Peer Mentor Center is staffed with Peer Mentors who excel in helping students manage university life, tackling problems that range from academic challenges to interpersonal struggles. On the road to graduation, Peer Mentors are navigators, offering “roadside assistance” to peers who feel a bit lost or simply need help mapping out the locations of campus resources. Peer Mentor services are free and available on a drop-in basis, no reservation required. The Peer Mentor Center website is located at http://www.sjsu.edu/muse/peermentor/

**Campus Emergency Numbers**
Police 911
Escort Service 4-2222

**Course Projects & tutorials:**
Fontlab: Type Tool 3 tutorial

Project 1
New typeface system design and promotion design
Individual project

Project 2
Data visualization graphics (Information & user interface design): Competition based project
This is still in discussion with the client (UCLA hospital) and will be determined soon.
If this project is not available, the project 3 will be extended with interactive simulation programming and deeper components.
Group or Individual project

Project 3
Service design: Creating user centered (interaction design) design for public needs
The topics and research area will be based on the city of San Jose.
Group or Individual project
Course Schedule & Timeline
This schedule is used as a guideline and subject to change with fair notice.

**Project 1: New typeface design**

Course and project overview

**Week 1**
- 01/27 MON
- 01/29 WED

Phase 1 Discovery and Analysis Research
Content gathering, project definition, strategy and recommendations.

**Week 2**
- 02/03 MON
- 02/05 WED

Lecture & demonstration: type anatomy, type analysis, and lettering
In class activity

Phase 2 Concept Development and Design
Visual exploration, refinement and system development (Group critique)

**Week 3**
- 02/10 MON
- 02/12 WED

Lecture & demonstration: conceptual visualization of type characters
In class activity

Phase 3 Implementation and experimentation
Visual experimentation and variation (Group critique)

**Week 4**
- 02/17 MON
- 02/19 WED

Work in class & application design (Individual conference)

Fontlab: Type Tool Tutorials 1

**Week 5**
- 02/24 MON
- 02/26 WED

Fontlab: Type Tool Tutorials 2
Work in class & application design (Individual conference)

Phase 4-1 Production and review
Work in class & application design (Individual conference)

**Week 6**
- 03/03 MON
- 03/05 WED

Phase 4-2 Production and review
Work in class & application design (Individual conference)

Phase 5 Production and Finalization
Review and production (Individual conference)

**Week 7**
- 03/10 MON

Project 1 due and presentation
Project 2 pre-introduction

**Project 2: Data visualization graphics (Information design):**

Project overview and research (guest speaker’s kick off presentation)

**Week 8**
- 03/17 MON

Phase 1 Discovery and Analysis Research
Content gathering, project definition, strategy and recommendations.
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>03/19 Wed</td>
<td>Research content review and In class activity: Scientific visualization system design (Group critique)</td>
</tr>
<tr>
<td></td>
<td>03/24 Mon</td>
<td>Spring Break</td>
</tr>
<tr>
<td></td>
<td>03/26 Wed</td>
<td>Spring Break</td>
</tr>
<tr>
<td>10</td>
<td>03/31 Mon</td>
<td>Phase 2 Concept Development and Design Visual exploration, refinement and system development (Group critique)</td>
</tr>
<tr>
<td></td>
<td>04/02 Wed</td>
<td>Phase 3-1 Implementation and experimentation Visual experimentation and variation (Group critique)</td>
</tr>
<tr>
<td>11</td>
<td>04/07 Mon</td>
<td>Phase 3-2 Implementation and experimentation Visual experimentation and variation (Individual critique)</td>
</tr>
<tr>
<td></td>
<td>04/09 Wed</td>
<td>Phase 4 Production and Finalization Review and production (Group critique)</td>
</tr>
<tr>
<td>12</td>
<td>04/14 Mon</td>
<td>Final group critique and project 2 due Project 2 pre-introduction</td>
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<tr>
<td></td>
<td>04/16 Wed</td>
<td>Project 3: Service Design: Creating user centered design for public needs</td>
</tr>
<tr>
<td>13</td>
<td>04/21 Mon</td>
<td>Phase 1 Discovery and Analysis Research Content gathering, project definition, strategy and recommendations.</td>
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<tr>
<td></td>
<td>04/23 Wed</td>
<td>Research content review and In class activity: User centered public service design (Group critique)</td>
</tr>
<tr>
<td>14</td>
<td>04/28 Mon</td>
<td>Phase 2 Concept Development and Design Visual exploration, refinement and system development (Group critique)</td>
</tr>
<tr>
<td></td>
<td>04/30 Wed</td>
<td>Phase 3-1 Implementation and experimentation Visual experimentation and variation (Group critique)</td>
</tr>
<tr>
<td>15</td>
<td>05/05 Mon</td>
<td>Phase 3-2 Implementation and experimentation Visual experimentation and variation (Individual conference)</td>
</tr>
<tr>
<td></td>
<td>05/07 Wed</td>
<td>Phase 4 Production and Finalization Review and production (Individual conference)</td>
</tr>
<tr>
<td>16</td>
<td>05/12 Mon</td>
<td>Final group critique and last day of instruction</td>
</tr>
<tr>
<td>17</td>
<td>05/19 Mon</td>
<td>Semester-end final presentation and Project 3 due Portfolio and DVD (digital data) submission</td>
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</tbody>
</table>