EME6936: Instructional Graphics

COURSE GENERAL INFORMATION
Fall Semester 2009

Instructor: Steve Downey
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Phone: (813) 974-7952
Text: Required readings available online
Materials: 4GB+ USB storage device (iPod, thumb drive, etc)

Course Description
More than 80% of the information processed by the human brain is visual in nature. As a result, we rely upon text, graphics, object arrangement, and other visual cues more than any other input to our system in order to inform and educate us about our world.

The purpose of this course is to advance your knowledge and application of the principles underlying the design and use of graphics in instructional settings.

While the creation of visuals and graphics seems straightforward, there are a variety of pedagogical, psychological, cultural, and communicative factors that influence the design, use, and effectiveness of instructional graphics from one setting to another. For example, graphics that initially appear busy and chaotic convey a sense that extreme mental effort is required to dissect, interpret, and assimilate the information by the viewers. As a result, viewers may become intimidated, frustrated, or simply ignore the visual altogether thereby resulting in its failed purpose.

In this course, you will learn to take photos, edit images, produce instructional booklets, and create educational animations. In doing so, you will draw upon multiple disciplines:

(1) human cognition,
(2) instructional design, and
(3) graphic design.

Human cognition reveals to us how our basic cognitive mindset perceives and processes visual information and how new visuals can affect what we already know. Building on this knowledge, we blend insights from instructional design practices to create an understanding of how people learn. In particular, the principles of instructional design will guide us in identifying and dissecting learning problems and knowing how visuals might be used to mitigate and overcome them. Finally, from the graphic design field we learn how to encode and present desired knowledge, concepts, and feelings into our visuals so as to maximize the information extraction and knowledge assimilation conducted by learners as they perceive, decode, assimilate, and learn from instructional graphics in formal and informal instructional settings.
Course Objectives

- Describe cognitive principles underlying image interpretation and understanding
- Describe the design elements of instructional graphics
- Analyze human performance problems
- Design instructional graphics solutions to address the human performance problems
- Create and edit digital images/photos
- Create and edit job aids comprised of images/photos and text
- Create and edit instructional booklets
- Create and edit graphical web interfaces
- Create and edit instructional animations

Performance Assessment

Your course grade is determined by summing the points accumulated for the various completed assignments and course requirements. Because assignments may not be resubmitted for a revised grade, you're encouraged to communicate your ideas and work progress with the instructor to receive the feedback needed and produce a high quality of work. Assignment specifications and performance criteria will be provided on the course website throughout the semester.

Performance Activities

There are seven assignment and participation requirements for the course. They are:

IGA1 Photo Capture & Editing (10%): take a series of color photographs with varying backgrounds and edit them using Photoshop.

IGA2 Job Performance Aid (10%): design a color display, (using Photoshop) illustrating how to use a particular device (e.g., digital camera or other multi-variable device). The completed work will print onto an 8.5x11 paper.

IGA3 Instructional Booklet (20%): produce an 8.5x11 booklet, 8-pages in length, to be used in the classroom or on the job (e.g., orientation manuals, instructional guides, etc). The booklet will be designed using Adobe's InDesign software.

IGA4 Web Interface Design (10%): Use Adobe Dreamweaver and Photoshop to design and produce attractive and highly usable graphical Web interfaces.

IGA5 Animation (25%): Using Adobe Flash, you will create an animated sequence illustrating complex logistical and/or scientific process or workflow. Your animation will last 1-2 minutes and will contain interactive elements to engage learners.

IGA6 Course Exam (15%): traditional multiple-choice and short answer exam worth a total of 30 points. The content will cover all of the topics addressed in class throughout the semester.

IGA7 Quizzes & Participation (10%): as with any other job, you are expected to come to class prepared (e.g., have your readings completed). These short quizzes and your overall participation in the course are measures of your overall preparedness.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Points</th>
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<tbody>
<tr>
<td>IGA1</td>
<td>10%</td>
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<tr>
<td>IGA2</td>
<td>10%</td>
</tr>
<tr>
<td>IGA3</td>
<td>20%</td>
</tr>
<tr>
<td>IGA4</td>
<td>10%</td>
</tr>
<tr>
<td>IGA5</td>
<td>25%</td>
</tr>
<tr>
<td>IGA6</td>
<td>15%</td>
</tr>
<tr>
<td>IGA7</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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Late Assignments

Except for the most extreme of circumstances (e.g., hospitalization), assignments completed late will be reduced one letter grade for each week they are late. Assignments not completed at the end of the semester (December 11) will be given a zero.
Notation about submission of digital assignments
With roughly 20 students in a course, the possibility exists for electronic files getting over-written or mislabeled. Therefore, for those assignments submitted electronically, you are required to label submitted files in the following manner:

IGA(assignment #)-(last name).(file extension)

For example, if I was turning in the second assignment (the job aid image), the submitted file would be titled: **IGA2-downey.psd**

Course Inclusion
Students with disabilities are responsible for registering with the Office of Student Disabilities Services in order to receive special accommodations and services. Please notify me during the first week of classes if a reasonable accommodation for a disability is needed for this course. For more information on this, contact USF Student Disability Services. Telephone: 974-4309 (SVC 1133).

Academic Dishonesty
The USF Student Handbook defines plagiarism as "literary theft" consisting of the unattributed quotation of the exact words of a published text, or the unattributed borrowing of original ideas by paraphrase from a published text. Plagiarism, however, may also involve non-text sources as well as the "theft" of one’s own work. As example of this is submission of work completed for another course or task and presented as an original product created solely for a course assignment.

The University of South Florida has an account with an automated plagiarism detection service (SafeAssignment) which allows instructors to submit student assignments to be checked for plagiarism. I reserve the right to 1) request that assignments be submitted to me as electronic files and 2) electronically submit assignments to SafeAssignment. Assignments are compared automatically with a huge database of journal articles, web articles, and previously submitted papers. The instructor receives a report showing exactly how a student’s paper was plagiarized. For more information, go to:

http://www.safeassignment.com/ and:
http://www.ugs.usf.edu/catalogs/0304/adadap.htm#plagiaris

Academic Continuity
In the event of a campus emergency, it may be necessary for USF to suspend normal operations. During this time, USF may opt to continue delivery of instruction through methods that include but are not limited to: Blackboard, Elluminate, Skype, and email messaging and/or an alternate schedule. It's the responsibility of the student to monitor Blackboard site for each class for course specific communication, and the main USF, College, and department websites, emails, and MoBull messages for important general information.
### Course Scope and Sequence (tentative – subject to change)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
<th>Tools</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/26</td>
<td>Course Intro ● Cognition &amp; Image Interpretation</td>
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</tr>
<tr>
<td>9</td>
<td>10/21</td>
<td>Designing Web Interfaces &amp; Embedding Visuals <em>(Begin IGA4)</em></td>
<td>Photoshop &amp; HTML</td>
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<tr>
<td>10</td>
<td>10/28</td>
<td>Designing Web Interfaces, continued</td>
<td>Photoshop &amp; HTML</td>
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<tr>
<td>12</td>
<td>11/11</td>
<td>No Class – Veterans Day</td>
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<tr>
<td>14</td>
<td>11/25</td>
<td>Creating &amp; Scripting Buttons</td>
<td>Flash</td>
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<tr>
<td>15</td>
<td>12/2</td>
<td>Project Work</td>
<td>Flash</td>
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<tr>
<td>16</td>
<td>12/9</td>
<td>Course Exam</td>
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Assigned Readings

The assigned readings are available online via the USF e-Journal collection or in the form of PDFs posted to the course Discussion Board in Blackboard.

Week 1:
None

Week 2:

Week 3:

Week 4:

Week 5:

Week 6:

Week 7:
To Be Determined
Week 8:


Week 9:


Week 10:


Week 11:


Week 12: No Class – Veterans Day

Week 13:

Read the Executive Summary, Part 2 (Using Games in Practice), and Part 4 (Future Trends).

Week 14: