Design 320 Electronic Media for the Designer

4 Credit Hours
Department of Industrial, Interior and Visual Communication Design

Course Details Instructor:
Quarter:
Time:

Instructor Contact Office: Hopkins
Office Hours:
Email: Phone:

Objective Electronic media has become an integral part of design production and authoring. This course is structured to teach production fundamentals of electronic media for print, web and presentation applications using electronic media tools most demanded by professional design practice. Students will develop a base-level functional competence using these industry relevant programs to prepare graphics and other media for a range of design and communication applications. Students will learn print and web service processes and guidelines, including technologies, color management, and other requirements.

Context This course is structured to provide experience in the creation of content for print
media and electronic media. Students will learn the fundamentals of Adobe PhotoShop, InDesign and Illustrator, Acrobat, and Quicktime Pro. Engaging assignments will facilitate the student's understanding by exploring the functionality of these programs and their applications to real-world design problems. Students will learn properties and characteristics of graphics, image compression and representation and how to properly obtain and manipulate images and prepare images, type and other electronic media for use in design applications, such as electronic documents, printed brochures, web materials, annual reports, signage and wayfinding, product packaging, interior specification documents, project reports, portfolios, etc.. Through exposure, students will learn which programs are most appropriate for which type of design application. Students will develop an in-depth understanding of the physical printing processes and requirements and current printing technologies, and an understanding of web server requirements and processes related to image and temporal media storage and dissemination.

Format This is a progress-oriented course that requires active student participation. The class will meet 2 days per week for approximately 2 hours each day. Class sessions will be comprised of lectures, demonstrations, tutorials, and assignments. An equal balance between theory and application is expected. Students will be expected to utilize the lab facilities to conduct their project exercises. Participation in a field trip to a local printing firm is required.

Learning Outcomes Students will learn basic technological components of electronic media, including file, image and other media formats, vector versus bitmap images, image correction and enhancement, integration of media, and design production preparation. Students will discover techniques for creating paths, layers, and masks and working with various color palettes. They will gain experience with tools related to the creation and communication for print and web environments. Students will also learn how these tools integrate with each other. Students will be required to prepare a final project for submission to a print service, according to their specifications and requirements.

Course Content Overview of design media requirements and strategies for web and print environments Basic media software interface and interactivity concepts The role of imagery, typography, sound and other media in design applications Introduction to screen and page layout, design, and organization Print and web terminology and technology Preparing and sending files to print and web services Issues of color and style and manipulation techniques Issues of type and style and manipulation techniques Image scanning, importing, storage, manipulation and exporting Basic sound and video issues and management approaches Computer typography and screen legibility Design production guidelines and methodologies Print and web service processes, guidelines and requirements Use of software tools and techniques Media output and dissemination approaches

Texts No textbook is required for this course, since there is no single book that covers all of these topics. I can recommend a couple of books that cover some of the Material and concepts. Links to online versions of the appropriate books will be provided, as will links to web or PDF documents for miscellaneous reading exercises. Recommended: Botello, Chris and Elizabeth Reding, *Adobe InDesign CS2, Photoshop CS2, and Illustrator CS2 Revealed,* Thomson Publishing, (ISBN 1-4188-3970-1) Recommended: Mitchell, William J. and Malcolm McCullough, Digital Design Media, Van Nostrand Reinhold, , (ISBN 0-442-01934-3)

Requirements The following are expected of all students in the course:

- Attendance is mandatory. Any unexcused absences may result in a lowering of your grade. Contact the instructor if you will be late or absent (contact information is found above).
- Students will be expected to come to class prepared, work diligently, and do their absolute best in all projects and presentations.
- Class participation in any critiques and discussions is essential.
- All work must be completed by the scheduled due date

Students should have a working knowledge of the computer. The course will be taught using the Macintosh, but all software has similar interfaces on a Windows computer. All homework will be graded using the Mac, so testing on this platform is essential. The course will be managed with Carmen and all homework will be submitted using the Carmen dropbox unless otherwise instructed. Students must access Carmen on a regular basis since all course news and assignments will be communicated in this way.

Teaching Methods Lectures/Demonstrations: Important material from recommended texts and outside sources will be covered in class. You should plan to take careful notes as not all material can be found in the texts or readings. Discussion is encouraged as is sharing of student-procured, outside material relevant to

topics being covered. Assignments: Concepts Reviews, Skills Reviews, Independent Challenges and other projects and readings may be periodically assigned to help support and supplement material found in the lessons. These assignments may require the application of various software techniques and tools. Exams: A midterm exam and a final project will be given. The exam will be open book/note and will test assigned readings and material discussed in class. Review material will be provided before the exam day. The final project will be comprehensive in nature. It must conform to actual print and/or web service requirements and processes, as discussed in class and demonstrated during required field trip.

Grading The course will be graded as follows. The standard University schedule will be applied when assigning letter grades for the course.

Participation	10%
Exercises	30%
Midterm exam	25%
Final Project	35%

Late assignments will receive a failing or lowered grade, with 10% of each point allocation taken off for each day that it is late. Extra credit or make-up exams will not be available. Grading will be based on the following scale (minimum required points for each grade):

A	92 points
A-	90 points
B+	87 points
B	82 points
B-	80 points
C+	77 points
C	72 points
C-	70 points
D+	67 points
D	60 points

Special needs Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and students should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; http://www.ods.ohio-state.edu/

Academic Misconduct It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct (http://studentaffairs.osu.edu/resource_csc.asp)

Escorts Escort services for evening use of the labs are available by calling 292-3322

Course Overview and Schedule

L – Lecture | E – In class demonstration | A – Assignment | P – Project | V - Video

Week 1.1

L: Lecture 1- Overview of Course; Intro to design digital media; digital media assets; design media tools; media workflow; integrated software; Intro to Bridge; Images: type, mode, resolution, storage formats

E: Overview of integrated software workspaces

Week 1.2

L: Lecture 2 - Intro to Photoshop CS3 – Workspace, navigation, toolbox and panels, selection tools

E: Approaches to navigation: hand tool, navigation panel, other techniques; Approaches to magnification: zoom tool, navigation panel, keyboard shortcuts; Selections: selection tools, quick mask, tool option bar, feathering, channels

A: Assignment 1 - Using the image JapaneseProducts.jpg, select the collection of products, including the containers that they are in, and excluding the mats on which they are presented; note that some of the products are in semi-clear plastic, which should also be in the selection. Save your selection in a channel, save the image with the selection as a TIFF.

Week 2.1

L: Lecture 3 – History panel, snapshots; Copy and paste; Layers and Masks: layer panel, layer designations, layer actions, layer comps, use of channels for masks, image compositing

E: Take snapshots; copy & paste, Move tool; layer examples; layer comp technique; use layer mask to create duotone part of image; create vignette using feathering and masks; replace background image; compose image from parts of others

A: Assignment 2 - Using the image jail-view.jpg, replace the view from the window of the old castle with the backgrounds 1, 2 and 3, using a layer mask and separate layers. The first two composited images should be in full RGB, but you need to make the 3rd image Duotone with black and the color of your choice for both the foreground and background. Make a layer comp for each composite image. Save the image as only one TIFF with all changes, including all layers, masks and channels, each background as a layer comp.

Week 2.2

L: Lecture 4 – Image manipulations: sizing & resampling, basic image transformations (edit menu), straightening & cropping, guides and grids;. Printing images: print dialogue box; Optimizing for web: web constraints, web-safe colors, dithering; Filters: filter gallery

E: image manipulation tools and techniques; web optimization; filter gallery

A: Assignment 3 - Using the image farmers.jpg, modify it in the following way:

* extract the image of the two field workers with the baskets on their heads from the frame.
* Orient the resulting picture correctly.
* TAKE A SNAPSHOT at this point.
* Change the resolution to 144 dpi.
* Change the size so that it prints at 4 inches wide.

Save the image as a JPG.

Restore it to the state it was after orienting it using Snapshot. Now save it for the Web, with

* 72 dpi
* 32 colors
* selective color reduction
* diffusion dithering
* and interlaced mode. Save it as a GIF.

Week 3.1

L: Lecture 5 – Tonal Corrections: terminology, histograms, adjustment layers, basic adjustments, Levels & Curves, global vs. local tonal correction

E: histogram examples for different images; contrast; adjustments and adjustment layers; levels panel and usage; curves panel and usage

A: Assignment 4 – Part 1: Using rooms1.jpg, adjust the tonal properties of the two regions using adjustment layers for curves so that the tonal values match those in rooms2.jpg. Save as a TIFF.

Part 2: Using mountain.jpg, adjust the tonal properties of the image using adjustment layers for curves to your own personal satisfaction. Save as a TIFF with all layers, and write a short summary that describes the choices that you make.

Week 3.2

L: Lecture 6 – Photo corrections: Color selections and panels; shadow/highlight; gamuts; color workflow; white balance; color correction tools and panels; levels and curves and color balance; dynamic range and HDR; color correction workflow; pixel replacement and correction tools (clone stamp, healing, noise correction, …) sharpening

E: shadow/highlight examples; HDR automated process; gamut warnings; data loss from mode changes; adjusting white balance; using levels and curves for color balance; pixel replacement and image corrections

A: Assignment 5 - Part 1 - Do a color correction using a curves adjustment layer on the image of the orange tomato, tomato.jpg, to make it a bright red tomato. As you do this correction, you want to consider the color of the stem and the shadow on the background so that they don't get color-shifted incorrectly. Save the resulting image as a TIFF (you might choose LZW compression to make it smaller) with all layers.

Part 2 - Repair the image of the World War II airman (airman.jpg). It should be patched together and all evidence of the "rips" and scratches and missing corners and damaged edges should be cleaned up, using the CS3 pixel replacement tools. Save as a TIFF file with all layers used (you should select LZW compression to make it smaller).

Week 4.1

L: Lecture 7: Sharpening and scanning – Unsharp mask; sharpening workflow; History brush; scanning basics and technology; moiré and descreening; scanning workflow; calibration of scanner; Preparing images for printing; limitations and requirements of printing technologies

E: Sharpening examples and problems, sample sharpening values; manual descreening process; scanning and calibration

A: Assignment 6 - Scan a popular magazine (not a fine art magazine) at 150 dpi with all scanner processing turned off. Save the file as a TIFF with all layers and annotate it with the scan parameters (resolution, size, bit depth). Scan it again at 150 dpi with descreening turned on.

Sharpen it using Unsharp Mask and a sharpening layer with a layer mask (save it as a TIFF with sharpening parameters annotated). Now scan it at 300 dpi with descreen turned off and perform manual screening as was demonstrated in class (save it as a TIFF). Turn in all 3 files and the original. Note: When saving as a TIFF, select LZW compression to reduce the size of the files.

Week 4.2

L: Lecture 8 - Intro to Illustrator CS3 - Workspace, tools, panels, navigation; overview of vectors and paths; pen tool; path manipulation
E: Drawing with the pen tool
A: Open the files practice1.ai, practice2.ai and practice3.ai - for each file, make a new layer and use the pen tool to draw each path, drawing as close as you can to the shape that is there. Minimize the number of anchor points used for each curve. Save each file as an .ai file.
V: Use of the pen tool in illustration (Quicktime movie)

Week 5.1

L: Lecture 9 – Strokes and fills; Appearance panel; stroke attributes; shapes; vectors in photoshop; path panel; fill attributes; spot vs process colors; gradients
E: stroke and fill process; vectors in photoshop; gradient creation and modification

Week 5.2

L: Lecture 10 – Layers and organizing objects in Illustrator; template layer; placing images; embedding vs linking; link panel; clipping masksadvanced paths (offset, compound, pseudo strokes, …); Pathfinder panelbasic and complex appearances
E: Scanner Darkly process; use of different panels; placing images; Midterm review session
A: Assignment 8 - Using the banana and orange still life, create an Illustrator document in a similar fashion to the "A Scanner Darkly thresholding technique" discussed in class. Each of the fruits should have 4 colors, in addition to the shadow, the background, and the bruises on the banana. Save the document WITH ALL LAYERS as an .ai file
V: A Scanner Darkly movie trailer

Week 6.1

Midterm Exam

Week 6.2

L: Lecture 11: Live Effects, Groups, expanding and enhancing appearances, effects vs filters, graphic styles, symbols, live trace
E: Chain drawing example, Live effects examples, live trace parameters, Midterm exam discussion
A: Final project assignment and overview

Week 7.1

L: Lecture 12: Illustrator 3D Effects, mapping art, Adobe text engine and Type in Illustrator, type panels and tools, threading, wrapping text, conversion to outline; illustrator objects in web and print environments
E: 3D Effects and art mapping, text examples
A: Assignment 9 - Draw your own path in Illustrator that can be used to generate an interesting 3D shape. Create the 3D shape, and apply artwork of your own (example, apply an image of a wine label to a 3D wine bottle, or "etch" a shape into a vase). Next, create a ribbon using the 3D capability of Illustrator, and place it behind your 3D object. Label your resulting image with Illustrator design text. Save the resulting Illustrator file in .ai format.

Week 7.2

L: Lecture 13 – Intro to Indesign – Workspaces, Layout workflow, navigation, tools and panels, spreads, master spreads, frams, threading, placing text and images, text flow, special characters and glyphs, story editor, typographic issues and elements, styles
E: InDesign elements

Week 8.1

L: Lecture 14 – illustration tools in InDesign, placing graphics (images and drawings), tinting paragraphs and fills, duplicate and distribute objects, anchored objects, tables in InDesign, Printing from InDesign – preflight and package; Color management systems and print services; preparation of files for submission to print services
E: Examples of above
A: Assignment 10 - Thanks to our friends at Adobe for this assignment... Using the file bike.indd in the assignments folder, make appropriate layout and typography adjustments so that the document approximates the PDF file bike-final.pdf in the same folder.
You'll have to make certain that you pay attention to
* vertical spacing,
* text,
* graphic and paragraph alignment
  o (watch out for an expanded last line in a paragraph when you justify the paragraph),
* fonts and glyphs with styles,
* kerning and tracking,
* text gradients,
* filled text,
* a horizontal rule, and
* tabs in the sales chart.

Stuff that I used:
* Font - Adobe Caslon Pro,
  o 11 pt
  o 15 for pull quotes
* Leading
  o 14 pt
  o 18 for pull quote

Save the file in the dropbox as an InDesign file

Week 8.2

L: Lecture 15 – Digital prepress, printing workflow, output technologies and issues, halftoning, RIP, Color managementICC profiles, CMYK vs RGB spaces, rendering intent, color management workflow, calibration, proofingcolor systems (Pantone, …), prepress descriptions
E: Examples of above, demo photospectrometer

Week 9.1

L: Lecture 16 – Adobe Acrobat – PostScript, PDF, Distiller, Acrobat family, navigation, embedding fonts, editing PDFs, Bookmarks, optimizing
E: Examples of above

Week 9.2

L: Lecture 17 – PDF forms, Acrobat forms tools, Markup in acrobat, watermarks, security, digital signature services and technology; use of markups to convey instructions to print and web services

E: Examples of above

A: Assignment 11 - Access the attached file Syllabus.doc (Word document). Convert it to a PDF document, called Syllabus.pdf using whatever PDF creation tool you want. Perform the following on the PDF file:

1. Using Text touchup tools, change the name of the class to the correct name.
2. Find the phrase "Students will learn the fundamentals of Adobe PhotoShop, InDesign and Illustrator, Acrobat, Quicktime, and Dreamweaver. " and change it to "Students will learn the fundamentals of Adobe PhotoShop, InDesign and Illustrator, Acrobat, and Quicktime."
3. Using the Notes tool, put a note in the upper right of the first page telling me what you used to do it.
4. Using the Comments tools, Highlight the Course name change, and underline the phrase change.
5. Find the Grading criteria section and using the Markup tool, use the Callout tool and tell me that it needs to be changed.
6. Add Form Field text boxes for each of the 7 blank entries on the first page.
7. Sign the document with a visible digital signature and place the completed file in the Dropbox.

Week 10.1

L: Lecture 18 – QuickTime – QuickTime technology and standards, QuickTime Pro, movie properties, editing QT video, tracks, inserting and extracting sequences, images and tracks, adding text, chapters and skins, streaming preparation; preparing temporal media for web storage and dissemination

E: Examples of above

V: Show different videos in Quicktime (Macintosh 1984 with iPod added, computer animation, …)

Week 10.2

L: Site visit to printing service firm

E: Final project discussions - individual

Week 11 – Final Project