DIGITAL DESIGN: FOUNDATIONS OF WEB DESIGN

Adobe

NOTICE OF RIGHTS

TRADEMARKS

ACKNOWLEDGEMENTS

Table of Contents

Unit 1: Graphic design using Adobe Fireworks CS3

    Unit 1 overview and teaching activities

    Unit 1 presentations

    Unit 1 student guides

Unit 2: Electronic portfolios using Adobe Dreamweaver CS3

    Unit 2 overview and teaching activities

    Unit 2 student guides

Unit 3: Building a basic client website

    Unit 3 overview and teaching activities

    Unit 3 presentations

    Unit 3 student guides

Unit 4: Review workshop

    Unit 4 overview and teaching activities

    Unit 4 student guide

Unit 5: Enhancing user experience with Adobe Flash CS3

    Unit 5 overview and teaching activities

    Unit 5 presentation

    Unit 5 student guides

Unit 6: Digital narratives using Adobe Flash CS3

    Unit 6 overview and teaching activities

    Unit 6 student guides

Unit 7: Designing a client website

    Unit 7 overview and teaching activities

    Unit 7 student guides

Unit 8: Electronic portfolio workshop

    Unit 8 overview and teaching activities

Course overview and setup

Digital Design: Foundations of Web Design is a two-semester, project-based curriculum that teaches digital communication skills in the context of the professional web design and development process, using Adobe web tools. *Digital Design* develops four key skill areas:

- Project management and collaboration

- Design

- Research and communication

- Professional web-authoring tools

Students develop these key skills in a spiral—each project adds more challenging skills onto the foundation proficiencies.

Adobe collaborated with the Washington State Office of the Superintendent of Public Instruction and the Wilderness Technology Alliance to create career-track course materials that focus on digital media and web development.

Digital Design addresses each of these areas, using a project-based approach. Each project has phases that follow a design and development process, from project planning to evaluation and launch. To simulate a professional work environment, students gradually migrate their design work from an individual process to a group process. Design and technical work by its very nature is iterative, so the projects contain activities that require students to evaluate and then redesign and rework their communications. Specific attention has been paid to developing concepts and principles for thorough, effective design. The following concept map is one way to represent the design process.
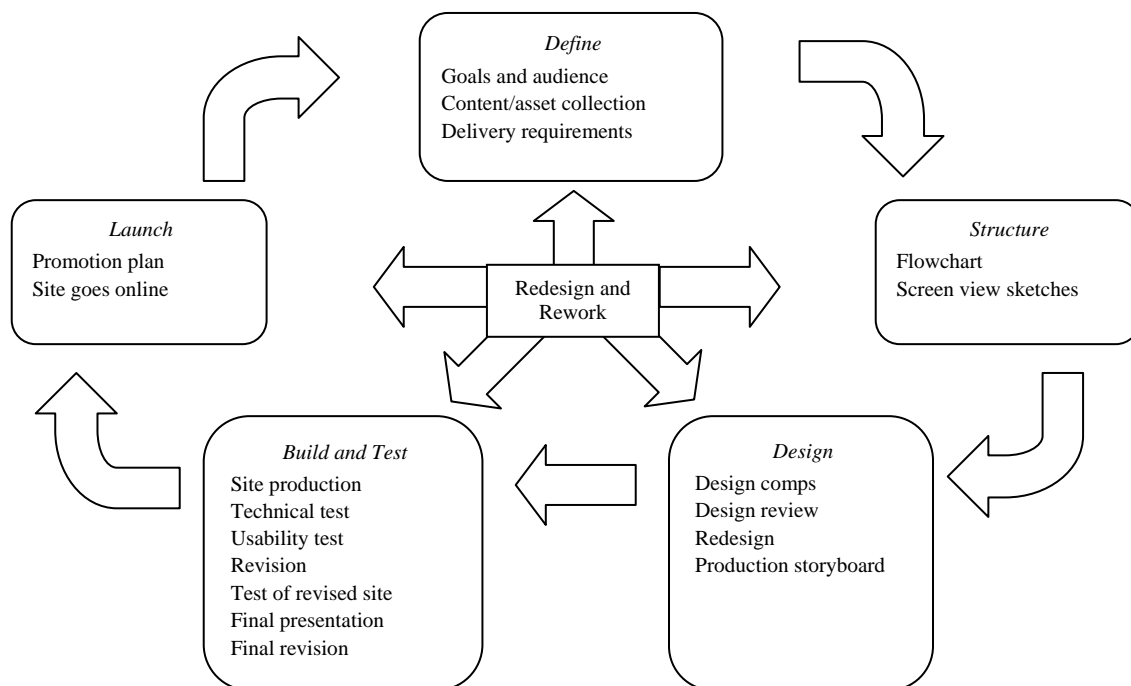
First semester projects

The first semester of *Digital Design* (Units 1–4) develops skills that lay the foundation for producing web-ready communications: graphic design principles, storyboards, web development, shared project management skills such as interviewing and project scheduling, peer review, and redesign. Project activities focus on developing effective communications that can be deployed on the web. Students develop a variety of graphical images, an electronic portfolio, and a client website. A great deal of flexibility is implied in the curriculum.

The key skills emphasized in this semester are:

- "Soft" skills such as interviewing and responding to feedback
- Designing a website for clients
- Problem solving that helps support multiple perspectives
- Reflection about the design process and effective communication
- Peer teaching and evaluation in a collaborative environment
- Technical web publishing

In the first semester, students use Adobe Fireworks CS3 to develop static and interactive graphics. They use Adobe Dreamweaver CS3 to design and build websites. This content prepares students for the Adobe Certified Associate, Web Communication using Adobe Dreamweaver CS3 examination.

Second semester projects

The second semester of *Digital Design* (Units 5–8) builds on student design and development skills by focusing on rich media development as well as website design and development. Students continue to work individually or on teams and produce rich media communications such as digital narratives and rich media elements of client websites. They focus on effective rich media design, multimedia storyboarding, design specifications, and iterative development with clients. They produce design documents and visual comps that clients review. They develop rich media designs that solve specific communication challenges. They build technical skills to address client needs.

The key skills emphasized in this semester are:

- "Soft" skills such as interviewing and responding to feedback
- Communication with clients, using design documents or specifications
- Design and redesign according to client specifications
- Technical multimedia skills such as film effects and transitions
- Design solutions, including effective navigation systems and digital narratives

In the second semester, students learn Adobe Flash CS3 to apply design solutions requiring rich media and interactivity. This content prepares students for the Adobe Certified Associate, Rich Media Communication using Adobe Flash CS3 examination.

Digital Design skills matrix

	Project management	Design	Research and communication	Technical
Unit 1: Graphic design using Adobe Fireworks CS3 *Focus:* • Principles of good design • Individual and peer review process • Optimization and graphic manipulation in Fireworks *Time:* 12–18 hours (3–4 weeks)	• Planning a scan • Creating a storyboard • Following standard copyright practices for text • Reviewing and redesigning images • Planning graphics based on needs and audience	• Optimizing JPEGs and GIFs • Editing images • Using composition, contrast, and balance • Applying the rule of thirds • Creating emphasis • Applying proximity and patterns • Using line • Using shape • Using unity and color • Using typography • Design and create original page banner	• Understanding graphics types • Understanding copyright issues • Collecting and analyzing audience needs and purpose to inform design • Communicating with peers to review and redesign images • Present and communicate design principles to peers	*General* • Scanning photographs, objects, and drawings • Using a digital camera *Fireworks* • Understanding panel elements and structure • Creating text • Setting export window options • Creating effects • Using drawing tools
Unit 2: Electronic portfolios using Adobe Dreamweaver CS3 *Focus:* • Electronic portfolio design • Website storyboards • Quality assurance and redesign techniques • Usability and accessibility *Time:* 12–18 hours (3–4 weeks)	• Managing files and using file-naming conventions • Designing for usability and accessibility • Managing a quality assurance test • Factoring visitor response into redesign • Synthesizing content based on reflection	• Investigating and incorporating color and layout consistently • Applying principles of user interface design • Considering screen size • Designing consistent website pages • Rebuilding web pages based on visitor feedback	• Evaluating and analyzing content validity • Evaluating and analyzing website navigation • Designing a quality assurance test • Advocating and practicing legal use of images Technical skills	*Dreamweaver* • Using options on panels • Creating a root folder and site • Creating pages • Using tables to lay out content • Using Design view • Inserting images and text • Using relative and absolute links • Using alternative text (Alt text) • Importing interactive images from Fireworks • Publishing a website *Fireworks* • Building buttons • Exporting buttons as HTML

	Project management	Design	Research and communication	Technical
Unit 3: Building a basic client website *Focus:* • Effective team collaboration • Designing for a client • Professional web design process *Time:* 15–23 hours (4–6 weeks)	• Designing for a client • Developing a project plan • Developing a marketing plan • Analyzing and evaluating to select best examples	• Creating designs that meet client requirements • Communicating ideas and information through simple screen views • Providing multiple design ideas • Designing to others' requirements • Synthesizing information from design review meetings • Creating design comps	• Asking questions to focus and clarify • Communicating ideas clearly • Listening and interpreting information and feedback • Finalizing design with a client	*Dreamweaver* • Creating Cascading Style Sheets (CSS) • Creating external style sheets • Using templates • Using libraries • Creating forms • Creating a calendar • Creating rollover images • Creating image maps • Checking files in and out *Fireworks* • Creating pop-up menus
Unit 4: Review workshop *Focus:* • Usable, effective websites • Consistency in website design • Peer critique and presentation *Time:* 2–3 hours (2 days)	• Conducting a review workshop • Providing constructive criticism	• Designing for usability • Providing consistency and accessibility • Providing universal navigation • Adapting content for readability and emphasis	• Presenting a website to a group • Providing meaningful but not overly critical feedback • Taking notes on critique • Demonstrating the realization of redesign goals	

	Project management	Design	Research and communication	Technical
Unit 5: Enhancing user experience with Adobe Flash CS3 *Focus:* • Animation and rich media for communication • Building Flash skills • Enhancing user experience *Time:* 10–12 hours (2–3 weeks)	• Evaluating user experience on the web for different techniques used in rich media		• Researching audience and appropriate sites • Using Flash effectively • Connecting goals with user interaction • Researching appropriate uses of multimedia • Researching and categorizing uses of Flash	*Flash* • Identifying parts of the user interface • Using drawing tools • Working with layers • Organizing layers and libraries • Using animation methods • Creating interactive buttons • Working with bitmaps • Using basic ActionScript • Importing and compressing audio • Optimizing file size • Producing video • Publishing Flash documents
Unit 6: Digital narratives using Adobe Flash CS3 *Focus:* • Animation and rich media for communication • Deeper look at audience and audience needs • Product or program promotion *Time:* 13–16 hours (3–4 weeks)	• Writing a proposal with attention to scenarios and audience characterization • Managing and organizing different tasks involved in design vs. production	• Designing a custom experience • Writing scripts for a digital narrative • Synthesizing and displaying complex information • Developing thorough and accurate storyboards • Making screen sketches for interactive experiences	• Researching audience and appropriate sites • Using Flash effectively • Connecting goals with user interaction	*Flash* • Using animation methods • Using basic ActionScript • Importing and compressing audio • Creating interactive buttons • Using drawing tools • Organizing layers and libraries • Working with layers • Optimizing file size • Working with bitmaps • Publishing movies

	Project management	Design	Research and communication	Technical
Unit 7: **Designing a** **client website** *Focus:* • Usability and consistency • Look and feel • Content • Evaluating and comparing websites *Time:* 12–16 hours (3–4 weeks)	• Analyzing related sites to assess needs • Defining and prioritizing tasks • Synthesizing and recommending changes to current sites • Defining and clarifying client design requirements • Writing a proposal	• Applying design aspects such as color, design, layout, contrast, and composition • Connecting content and style to user needs • Integrating images and text	• Conducting usability analysis • Selecting what information is important • Understanding and addressing client design issues	*Dreamweaver* • Providing accessibility • Creating forms • Creating Cascading Style Sheets (CSS) • Creating calendars • Creating external style sheets • Importing spreadsheet tables *Flash* • Using basic ActionScript • Creating and modifying text • Creating Timeline effects • Creating transparent buttons *Fireworks* • Using masks • Using color tones
Unit 8: **Electronic** **portfolio** **workshop** *Focus:* • Usable, effective websites • Consistency in website design • Peer critique and presentation *Time:* 2–3 hours (3–4 days)	• Conducting a review workshop • Providing constructive criticism	• Investigating and incorporating color and layout consistently • Applying principles of user interface design • Considering screen size • Designing consistent website pages	• Evaluating and assessing skills • Planning for future careers • Presenting a website to a group • Taking notes on critique • Providing meaningful but not overly critical feedback • Demonstrating the realization of redesign goals	

Classroom computer setup

We've included the technical information you will need to get your computer lab or classroom ready to implement the Digital Design curriculum.

Adobe Fireworks CS3

Install Fireworks on all workstations. System requirements are noted below and installation procedure are included with the software. To view video tutorials, visit the Adobe Creative Suite 3 Video Workshop *www.adobe.com/go/videoworkshop*.

Windows

- Intel® Pentium® 4, Intel Centrino®, Intel Xeon®, or Intel Core™ Duo (or compatible) processor
- Microsoft® Windows® XP with Service Pack 2 or Windows Vista™ Home Premium, Business, Ultimate, or Enterprise (certified for 32-bit editions)
- 512MB of RAM (1GB recommended)
- 1GB of available hard-disk space (additional free space required during installation)
- 1,024x768 monitor resolution with 16-bit video card
- DVD-ROM drive
- QuickTime 7 software required for multimedia features
- Internet or phone connection required for product activation
- Broadband Internet connection required for Adobe Stock Photos and other services

Macintosh

- PowerPC® G4 or G5 or multicore Intel® processor
- Mac OS X v.10.4.8
- 512MB of RAM (1GB recommended)
- 1GB of available hard-disk space (additional free space required during installation)
- 1,024x768 monitor resolution with 16-bit video card
- DVD-ROM drive
- QuickTime 7 software required for multimedia features
- Internet or phone connection required for product activation
- Broadband Internet connection required for Adobe Stock Photos and other services

Adobe Dreamweaver CS3

Install Dreamweaver on all workstations. System requirements are noted below and installation procedure are included with the software. To view video tutorials, visit the Adobe Creative Suite 3 Video Workshop *www.adobe.com/go/videoworkshop*.

Windows

- Intel® Pentium® 4, Intel Centrino®, Intel Xeon®, or Intel Core™ Duo (or compatible) processor
- Microsoft® Windows® XP with Service Pack 2 or Windows Vista™ Home Premium, Business, Ultimate, or Enterprise (certified for 32-bit editions)

- 512MB of RAM
- 1GB of available hard-disk space (additional free space required during installation)
- 1,024x768 monitor resolution with 16-bit video card
- DVD-ROM drive
- Internet or phone connection required for product activation
- Broadband Internet connection required for Adobe Stock Photos and other services

Macintosh

- PowerPC® G4 or G5 or multicore Intel® processor
- Mac OS X v.10.4.8
- 512MB of RAM
- 1.4GB of available hard-disk space (additional free space required during installation)
- 1,024x768 monitor resolution with 16-bit video card
- DVD-ROM drive
- Internet or phone connection required for product activation
- Broadband Internet connection required for Adobe Stock Photos and other services

Adobe Flash CS3 (Authoring)

Install Flash on all workstations. System requirements are noted below and installation procedures are included with the software. To view video tutorials, visit the Adobe Creative Suite 3 Video Workshop *www.adobe.com/go/videoworkshop*.

Windows

- Intel® Pentium® 4, Intel Centrino®, Intel Xeon®, or Intel Core™ Duo (or compatible) processor
- Microsoft® Windows® XP with Service Pack 2 or Windows Vista™ Home Premium, Business, Ultimate, or Enterprise (certified for 32-bit editions)
- 512MB of RAM (1GB recommended)
- 2.5GB of available hard-disk space (additional free space required during installation)
- 1,024x768 monitor resolution with 16-bit video card
- DVD-ROM drive
- QuickTime 7.1.2 software required for multimedia features
- Internet or phone connection required for product activation
- Broadband Internet connection required for Adobe Stock Photos and other services

Macintosh

- 1GHz PowerPC® G4 or G5 or multicore Intel® processor
- Mac OS X v.10.4.8
- 512MB of RAM (1GB recommended)
- 2.5GB of available hard-disk space (additional free space required during installation)
- 1,024x768 monitor resolution with 16-bit video card
- DVD-ROM drive

- QuickTime 7.1.2 software required for multimedia features
- Internet or phone connection required for product activation
- Broadband Internet connection required for Adobe Stock Photos and other services

Adobe Flash Player 9 (Playback)

Windows

- 450 MHz Intel Pentium® II processor or equivalent
- 128 MB available RAM

PLATFORM	BROWSER
Microsoft® Windows® Vista	Microsoft Internet Explorer 7, Firefox 2.0, AOL 9
Microsoft Windows XP	Microsoft Internet Explorer 6.0 or later, Firefox 1.x, Firefox 2.x, Mozilla 1.x or later, Netscape 7.x or later, AOL 9, Opera 7.11 or later
Windows Server™ 2003	Microsoft Internet Explorer 6.0 or later, Firefox 1.x, Firefox 2.x
Windows 2000	Microsoft Internet Explorer 5.x, Firefox 1.x, Firefox 2.x, Mozilla 1.x, Netscape 7.x or later, AOL 9, Opera 7.11 or later
Windows Me	Microsoft Internet Explorer 5.5, Firefox 1.x, Mozilla 1.x, Netscape 7.x or later, AOL 9, Opera 7.11 or later
Windows 98	Microsoft Internet Explorer 6.0 or later, Firefox 1.x, Mozilla 1.x, Netscape 7.x or later, CompuServe 7, AOL 9, Opera 7.11 or later

Macintosh

- 500 MHz PowerPC G3 processor
- Intel Core™ Duo 1.83GHz or faster processor
- 128 MB RAM

PLATFORM	BROWSER
Mac OS X v.10.1.x, 10.2.x, 10.3.x, or 10.4.x (PowerPC)	Firefox 1.x, Mozilla 1.x, Netscape 7.x or later, AOL for Mac OS X, Opera 6, Safari 1.x or later
Mac OS X v.10.4.x (Intel)	Firefox 1.5.0.3 or later, Opera 6, Safari 2.x or later

Linux

- Modern processor (800MHz or faster)
- 512MB of RAM, 128MB of Graphics Memory

PLATFORM	BROWSER
Red Hat Enterprise Linux (RHEL) 3 update 8, RHEL 4 update 4 (AS/ES/WS)	Firefox 1.5.0.7 and higher; Mozilla 1.7.x and higher; SeaMonkey 1.0.5 and higher
Novell SUSE 9.x or 10.1	Firefox 1.5.0.7 and higher; Mozilla 1.7.x and higher; SeaMonkey 1.0.5 and higher

Classroom enrichment

Many techniques can help enhance students' experience as they engage in these projects and also help you manage the content and technology. When you set up your computer lab or classroom for working on technology-based projects, the suggestions below can help create a successful learning experience for your Digital Design students.

Acceptable use policies

To promote good digital citizenship and to help students feel ownership of the technology and tools they use, discuss acceptable use policies with students. Your institution might already have a policy, but discuss with students appropriate use of the Internet and technology tools and have them apply their understanding to various misuse scenarios to determine consequences. Work with students to create a class policy to protect the rights and privileges of fellow students and class hardware/software. Propose rules for good team dynamics and peer critiques.

File Management

To save time in assessing student work, make sure all classroom materials and student work are properly saved and posted (preferably on a school server). The following guidelines will help:

- *Student folders:* All students should have a folder for all of their work. Folder names might include student's last name, first initial, and class period (such as "per7_m_smith").

- *Backups:* Students might want to keep Zip disks or local copies of their folders.

- *Working from home:* Students can work from home, but make sure they find a way to transfer their work to the school computers (such as FTP, e-mail, Zip disk, or floppy).

- *Turning in work:* If students work from home by e-mail, make sure you have effective file virus protection and that all work is clearly labeled for ease of identification and organization (for example, per7_logo_m_smith).

- *Legal issues:* If you plan to publish student work on the web, check into your school's rules about putting pictures or names of students on the web. It might be appropriate for students not to include their full names or e-mail addresses.

Classroom environment

Using technology as part of any lesson in the classroom can lead to management issues unrelated to the content being covered. Here are some tips and techniques that can help you manage the technology while reinforcing key concepts:

- *Good design posters:* Because the course focuses on good design techniques, you might want to print and laminate examples of well-designed websites and post them throughout the classroom. A variation might be to post examples of "good" and "bad" site designs on opposite sides of the classroom. The good and bad design examples should include both HTML sites and Adobe Flash sites. You might also have students compile a list of good design criteria throughout the course and post it in the classroom.

- *Help center:* Create a library of print materials for software and design techniques in a corner of the classroom where students can browse for answers to challenging questions.

- *Running questions list:* List technical questions for student research on a large piece of paper or chalkboard in the classroom. As the questions are answered, write the answers below them.

- *Student leaders:* Designate lead students with strong technical skills to be the first person contacted for software or hardware questions and issues so students do not break up the lesson time with technology questions. You might rotate this role among different sets of students, empowering them to take more initiative with their learning.

- *Questioning process:* You might face some running around when students have open time to work on projects. To alleviate this, urge students to try to find the answer themselves first and rely on the teacher second and to continue working without waiting for an answer. For example, you might request students to look in the help system first and ask their neighboring peers before they ask the teacher. You might also provide students with props to place on their monitors as a silent signal that they want help.

- *Technology extension:* As students work on their projects, some will come across techniques that have not been demonstrated to the class. When student groups learn a new technique on their own, ask them to present it to the class. The group should show the resulting product, share step-by-step how they completed it, and have the class complete the same steps while group members walk around to help others learn the technique.

- *Using constructive comments:* Working in teams requires students to become better communicators. During the web design process, students will sometimes need to critique each others' work. Giving feedback requires students to be sensitive to the feelings of others. To help students become better communicators, you might spend some time brainstorming with the class to identify constructive comments and words. This class-generated list can be posted as a reminder for everyone when giving a critique of a fellow student's work.

Ethical content use and production

In many projects students will gather, manipulate, and create images and websites. Emphasize the social responsibility students have to each other and their audience to help them build good practices as they take these skills to future programs and jobs. Some areas to focus on include:

- *Content validity:* As students research content online, have them continually consider and evaluate content bias, currency, and source corroborating. You might cover some search techniques such as those provided by November Learning www.novemberlearning.com/Default.aspx?tabid=160.

- *Copyright:* Emphasize the need to gain permission to use graphics, images, video, and audio produced by others and to copyright their own original work.

Limited resources (digital cameras, video cameras, scanners, etc):

- Consider having students work in groups instead of individually.

- Consider connecting all computers into a local network to encourage collaborative learning.

- You might divide computers into learning stations, perhaps grouped by subject areas or activities (digital media center, web research center, etc.).

- You might consider splitting up the activities associated with the project. Have some students use the equipment to gather their data while others spend time researching the topic at hand, planning their time with the equipment for what they might capture, or building an aspect of the project. Rotate groups to ensure all students are occupied at all times.

Professional skills

This course is designed to introduce students to professional experiences. You can reinforce the ideas around professional behavior and work in a few ways.

- *Soft skills:* When communicating with clients, students need soft skills to help them interview and review their work with clients. You might have students practice interviewing each other or conduct practice interviews with you as they develop skills for speaking with clients.

- *Project tracking:* Reinforce the need to plan appropriate schedules and manage time. You might consider having students give brief daily status reports of how they are doing on time per task. Guide students in reprioritizing when needed.

- *Team work:* Helping students develop individually and as productive team members is a challenging task. You might reinforce the importance of both types of development by evaluating their individual performance as well as the ways they contribute to team goals, work to solve any team conflicts, and collaborate with other teams to adopt successful practices.

- *Professional environment:* To prepare students to work with clients and help them develop professional attitudes, you might want to give them weekly points for displaying professional attitudes and skills, such as the following:

  - Punctuality

  - Dressing well when interviewing peers and clients

  - Promptly replying to peers and clients

  - Listening to suggestions and working well in groups

- *Professional designers:* Students can benefit greatly from speaking with a professional web designer or developer. You could arrange a field trip to a design studio or ask a designer to visit your classroom. Key topics to address with the designer

  - Teamwork and collaboration

  - Effective design

  - Samples of the designer's work and the challenges they presented

  - Use of professional software, such as Adobe products, in the web and rich media fields

  - Critique of student work

Teaching across disciplines

You could team-teach some units with teachers from other departments to help traditional content area teachers integrate technology into their courses while helping students develop skills in academic areas such as writing, reading, math, and science. You can have students go into the other teacher's classroom for a change of atmosphere, or bring the other teacher into your classroom. This is especially helpful with the following topics:

- *Graphic design:* An art teacher can address topics such as line, rule of thirds, and typography.

- *Web page design:* An art teacher can address topics such as composition, color, and shape.

- *Web page design and production:* A business or career exploration teacher can discuss the qualifications, salary, and skills required for working in the web design field. A marketing teacher can enhance the discussion around audience and purpose.

- *Web page content:* A literature teacher could emphasize writing for different audiences as students engage in web projects that include different clients.

Skills overview rubric

This general skills rubric is a tool for assessing various aspects of major web and rich-media projects. Although each activity has its own rubric, you might use the following to help you assess particular aspects of projects further. Select the items that apply to a particular project.

Design skills

Category	0 - Does not meet expectations	3 - Meets expectations	5 - Exceeds expectations
Composition	There is no use of white space, symmetry, and focal point. Site pages (and elements within pages) are cut off inappropriately at their borders or are surrounded by excessive white space.	There is some use of white space, symmetry, and focal point. Site pages (and elements within pages) usually fit appropriately within their borders.	White space, symmetry, and focal point are used effectively. Site pages (and elements within pages) fit within their borders in a pleasing manner.
Color	Colors clash and do little for the theme of the design. Background color interferes with text and images. Colors make text less readable.	Colors are somewhat complementary. Background color coordinates with images and text design. Colors do not interfere with readability.	Colors work together, reinforcing the theme of the design. Background color enhances images and text design. Colors strongly support readability.
Typography	Text is not easily readable. White space is not used effectively. Fonts and text effects interfere with the design and readability.	Text is readable. Type sizes communicate information and are compatible with overall site design. White space around text supports readability and design. Fonts and text effects are compatible with the design and readability.	Text is readable, and selected fonts support design goals. Type sizes reflect desired emphasis. White space around text strongly supports readability and design. Fonts and text effects add to mood and tone. Fonts enhance readability through color, size, and contrast.
Usability	Site navigation appears on some pages, and not all links function properly. Navigation does not allow users access to all main pages in the site and is not intuitive to use. Some site pages take a noticeable time to load, and the delays are caused by irrelevant elements.	Site navigation appears on all pages, and all links function properly. Navigation gives users access to most main pages in the site and is intuitive to use. Some site pages take a noticeable time to load, but most delays are worth the wait.	Consistent site navigation appears on all pages, and all links function properly. Navigation gives users access to all main pages in the site and is intuitive to use. Site pages load in a reasonable time, and any noticeable delays are worth the wait.
Use of technical elements (Dreamweaver, Fireworks, or Flash)	Use of technical elements and effects does not enhance the user's experience or consistently support the overall goals and message of the site.	Use of technical elements and effects consistently supports the overall goals and message of the site but does not enhance the user's experience. Use of such elements or effects is not excessive or distracting.	Use of technical elements and effects adds to the overall design of the site by enhancing the user's experience and supporting the goals and message of the site. Use of such elements or effects is not excessive or distracting.

Category	0 - Does not meet expectations	3 - Meets expectations	5 - Exceeds expectations
Storyboard	Storyboard provides incomplete or contradictory production information.	Storyboard is complete but somewhat difficult to interpret.	Storyboard is thorough, complete, and very clear.

Technical skills

Category	0 - Does not meet expectations	3 - Meets expectations	5 - Exceeds expectations
Accessibility	Very few graphical site elements, such as images and buttons, have alternative text tags.	Some graphical site elements, such as images and buttons, have alternative text tags.	All graphical site elements, such as images and buttons, have alternative text tags.
Drawing	Illustrations and buttons are poorly drawn, not always using appropriate drawing and effects tools.	Illustrations and buttons are drawn in a sufficient manner, using a range of drawing and effects tools.	Illustrations and buttons are cleanly and clearly drawn, effectively using the full range of drawing and effects tools.
Color panels	Color is not consistently applied and panels are usually not configured for the web.	Color is consistently applied most of the time, and panels are usually configured for the web.	Color is consistently applied, and panels are configured for the web.
Optimization	The quality of images is not sufficient, or the file size is too large.	Images have a satisfactory balance of quality and file size.	Images have an excellent balance of quality and file size.
Tool use	Student frequently has to ask what tool to use to create desired elements and effects. Does not independently use available information about the tools. Does not use tools efficiently.	Student usually knows what tool to use to create desired elements and effects but sometimes needs to be reminded to use available information about the tools. Uses most tools efficiently.	Student knows what tool to use to create desired elements and effects or uses resources effectively and independently to find out. Uses tools efficiently.

Research and communication skills

Category	0 - Does not meet expectations	3 - Meets expectations	5 - Exceeds expectations
Design process	The design process does not include all appropriate elements, such as sketches, site map, storyboard, and review comments. The final product does not completely reflect the storyboard and feedback.	The design process includes elements such as sketches, site map, storyboard, and review comments. The final product reflects the storyboard, with some revisions based on feedback.	The design process includes all appropriate elements, such as sketches, site map, storyboard, and review comments. The final product accurately reflects the storyboard, including storyboard revisions based on feedback and thoughtful design decisions made during production.

Feedback	Reviews of other students' designs do not adequately address content and design. Feedback does not use informative vocabulary and is often not constructive.	Reviews of other students' designs provide some analysis of content and design. Feedback uses some informative vocabulary and connects comments to design and content. Feedback is not always constructive.	Reviews of other students' designs provide thorough and insightful analysis of content and design. Feedback uses clear and informative vocabulary and connects comments to design and content. Feedback is always constructive.
Presentation	Design presentations provide little information on the goals, design concepts, and requirements of a project.	Design presentations cover the goals, design concepts, and requirements of a project.	Design presentations clearly and completely state the goals, design concepts, and requirements of a project.
Team collaboration	Student does not collaborate with other students to provide feedback or assistance. Fulfills assigned team roles but does not contribute equally to project work. Does not consult with other team members before making major project decisions. Does not help others build skills.	Student collaborates with other students as required to provide feedback or assistance. Fulfills assigned team roles and contributes equally to project work. Sometimes consults with other team members on major project decisions but makes minimal effort to help others build skills.	Student collaborates freely with other students to provide feedback or assistance. Fulfills assigned team roles and contributes equally to project work. Consults with other team members on major project decisions and voluntarily helps others build skills to complete the project.

Project management skills

Category	0 - Does not meet expectations	3 - Meets expectations	5 - Exceeds expectations
Progressive design	Student does not use a storyboard or peer feedback.	Student uses a storyboard to guide the design process. Inconsistently uses peer feedback to guide the redesign process.	Student consistently uses a storyboard to guide the design and development process. Thoughtfully uses peer feedback to guide the redesign process.
File management	Student files and folders are inconsistently named and not logically organized. File organization is not seen as an important task.	Most student files and folders are named and organized logically on both local and remote drives. File organization evolves as project work progresses.	Student files and folders are consistently named and logically organized on both local and remote drives. File organization is created at the start of a project.
Task review	Student does not respond to feedback, or student redesigns without deciding whether the feedback improves the content and design of the project.	Student responds to feedback, deciding which feedback improves the content and design of the project. Incorporates some of this feedback into redesign.	Student responds thoughtfully and completely to feedback, deciding which feedback most effectively improves the content and design of the project. Incorporates this feedback into redesign of a project.

Time management	Student does not effectively allot time for the phases of the design and development process. Completes few phases on schedule.	Student allots time for each phase of the design and development process. Completes most phases on schedule.	Student thoughtfully and effectively allots time for each phase of the design and development process. Completes all phases on schedule.

ISTE NETS*S Standards for Students

The International Society for Technology in Education (ISTE) is the trusted source for professional development, knowledge generation, advocacy, and leadership for innovation. These standards, identified throughout the Digital Design curriculum, are integrated into the various activities students engage in during each project.

1. Creativity and Innovation *(new)*
    Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

    a. apply existing knowledge to generate new ideas, products, or processes.

    b. create original works as a means of personal or group expression

    c. use models and simulations to explore complex systems and issues.

    d. identify trends and forecast possibilities.

2. Communication and Collaboration *(IV)*
    Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

    a. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.

    b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.

    c. develop cultural understanding and global awareness by engaging with learners of other cultures.

    d. contribute to project teams to produce original works or solve problems.

3. Research and Information Fluency *(V)*
    Students apply digital tools to gather, evaluate, and use information. Students:

    a. plan strategies to guide inquiry.

    b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.

    c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.

    d. process data and report results.

4. Critical Thinking, Problem-Solving & Decision-Making *(VI, III)*
    Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

    a. identify and define authentic problems and significant questions for investigation.

    b. plan and manage activities to develop a solution or complete a project.

    c.   collect and analyze data to identify solutions and/or make informed decisions.

    d.   use multiple processes and diverse perspectives to explore alternative solutions.

5. Digital Citizenship *(II)*
Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

    a.   advocate and practice safe, legal, and responsible use of information and technology.

    b.   exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.

    c.   demonstrate personal responsibility for lifelong learning.

    d.   exhibit leadership for digital citizenship.

6. Technology Operations and Concepts *(I, III)*
Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

    a.   understand and use technology systems.

    b.   select and use applications effectively and productively.

    c.   troubleshoot systems and applications.

    d.   transfer current knowledge to learning of new technologies.

Adobe Certified Associate objectives

Over the last few years, Adobe conducted research to identify the foundation skills students need to create effective communication using different digital media tools. Adobe met with educators and design professionals and surveyed businesses and educational institutions around the world. The research resulted in objectives that cover design, project planning, communication, and technology. The following set of essential learning objectives are a part of the Adobe Certified Associate exams in Web Communication and Rich Media Communication and are integrated throughout Digital Design.

Web Communication objectives

Setting project requirements

1.1 Identify the purpose, audience, and audience needs for a website.

1.2 Identify web page content that is relevant to the website purpose and appropriate for the target audience.

1.3 Demonstrate knowledge of standard copyright rules (related terms, obtaining permission, and citing copyrighted material).

1.4 Demonstrate knowledge of website accessibility standards that address the needs of people with visual and motor impairments.

1.5 Follow design specifications.

1.6 Understand project management tasks and responsibilities.

Planning site design and page layout

2.1 Demonstrate knowledge of best practices for designing a website, such as maintaining consistency, separating content from design, using standard fonts and web-safe colors.

2.2 Produce website designs that work equally well on various operating systems and browser versions/configurations.

2.3 Demonstrate knowledge of page layout design concepts and principles.

2.4 Identify basic principles of website usability, readability, and accessibility.

2.5 Demonstrate knowledge of flowcharts and storyboards to create web pages and a site map (site index) that maintain the planned website hierarchy.

2.6 Communicate with others (such as peers and clients) about design and content plans.

Understanding the Adobe Dreamweaver CS3 interface

3.1 Identify elements of the Dreamweaver interface.

3.2 Use the Insert bar.

3.3 Use the Property inspector.

3.4   Use the Assets panel.

3.5   Use the Files panel.

Adding content

4.1   Define a Dreamweaver site.

4.2   Create, title, name, and save a web page.

4.3   Follow a flowchart and storyboards to create web pages and a site map (site index) that maintain the planned website hierarchy

4.4   Add text to a web page.

4.5   Insert images and apply alternative text on a web page.

4.6   Link web content, using hyperlinks, e-mail links, and named anchors.

4.7   Insert rich media, such as video, sound, and animation in Flash format.

4.8   Insert navigation bars, rollover images, and buttons created in Adobe Fireworks on a web page.

4.9   Build image maps.

4.10   Import tabular data to a web page.

4.11   Import a Microsoft Word or Microsoft Excel document to a web page.

4.12   Create forms.

Organizing and modifying content

5.1   Set and modify document properties.

5.2   Organize content by using tables.

5.3   Organize web page layout with absolutely-positioned div tags and CSS styles.

5.4   Modify text and text properties.

5.5   Modify images and image properties.

5.6   Modify Flash movies on a web page.

5.7   Create web page templates.

5.8   Use basic HTML tags to set up an HTML document, format text, add links, create tables, and build ordered and unordered lists.

5.9   Add head content to make a web page visible to search engines.

5.10   Use CSS to implement a reusable design.

Evaluating and maintaining a site

6.1   Conduct basic technical tests.

6.2   Identify techniques for basic usability tests.

6.3   Present web pages to others (such as team members and clients) for feedback and evaluation.

6.4   Identify methods for collecting site feedback.

6.5   Manage assets, links, and files for a site.

6.6   Publish and update site files to a remote server.

Rich Media Communication objectives

Setting project requirements

1.1   Identify the purpose, audience, and audience needs for rich media content.

1.2   Identify rich media content that is relevant to the website purpose and appropriate for the target audience.

1.3   Understand options for producing accessible rich media content.

1.4   Demonstrate knowledge of standard copyright rules (related terms, obtaining permission, and citing copyrighted material).

1.5   Understand project management tasks and responsibilities.

1.6   Communicate with others (such as peers and clients) about design and content plans.

Identifying rich media design elements

2.1   Identify best practices for designing rich media content for a website.

2.2   Demonstrate knowledge of design elements and principles.

2.3   Identify techniques to create rich media elements that are accessible and readable.

2.4   Use a storyboard to produce rich media elements.

Understanding Adobe Flash CS3

3.1   Identify elements of the Flash interface.

3.2   Use the Property inspector.

3.3   Use the Timeline.

3.4   Understand Flash file types.

3.5   Identify best practices for managing the file size of a published Flash document.

Building rich media elements

4.1   Follow design specifications.

4.2   Adjust document properties.

4.3   Use Flash guides and rulers.

4.4   Use tools on the Tools panel to select, create, and manipulate graphics and text.

4.5   Import and modify graphics.

4.6   Create text.

4.7   Adjust text properties.

4.8   Create objects and convert them to symbols, including graphics, movie clips, and buttons.

4.9   Understand symbols and the library.

4.10 Edit symbols and instances.

4.11 Create masks.

4.12 Create animations (changes in shape, position, size, color, and transparency).

4.13 Add simple controls through ActionScript 3.0.

4.14 Import and use sound.

4.15 Add and export video.

4.16 Publish Flash documents.

Evaluating rich media elements

5.1 Conduct basic technical tests.

5.2 Identify techniques for basic usability tests.

Adobe Digital Careers Teaching Resources DVD

The *Adobe Digital Careers Teaching Resources DVD* contains electronic files and assets for curriculum on graphic and print production, web design, and video production. In addition to this curriculum, the DVD includes teaching and learning materials from partners such as the International Society of Technology Education (ISTE), Adobe Press, and Atomic Learning. The DVD contains the following information:

Digital Design curriculum guide

- Electronic version of instructor and student materials for each activity
- Data and sample files you can share with students to help them complete certain activities
- PowerPoint presentations that illustrate concepts presented in various units

Visual Design curriculum guide

- Electronic version of instructor and student materials for each activity
- PowerPoint presentations that illustrate concepts presented in various units

Digital Video curriculum guide

- Electronic version of instructor and student materials for each activity
- PowerPoint presentations that illustrate concepts presented in various units

International Society of Technology Education (ISTE) resources

- Professional Development Institutes
- Seal of Alignment overview
- ISTE Books
- ISTE Periodicals
- ISTE Conferences
- Join ISTE

Atomic Learning video tutorials

- Adobe Photoshop CS3
- Adobe Dreamweaver CS3
- Adobe Flash CS3
- Adobe Acrobat 8 Professional

Adobe Press book excerpts

- Adobe Photoshop CS3 Classroom in a Book
- Adobe Dreamweaver CS3 How- To's 100 Essential Techniques
- Adobe Dreamweaver CS3 Classroom in a Book

- Adobe Flash CS3 Classroom in a Book
- Adobe Illustrator CS3 Classroom in a Book
- Adobe InDesign CS3 How- To's 100 Essential Techniques
- Adobe InDesign CS3 Classroom in a Book
- Adobe Photoshop CS3 Visual Quickstart Guide