Web Design and Development Program (WDD)

Course Descriptions

TI-0550 Fundamentals of Information Systems Technology: This course is a survey of computer technologies. This course may include computer history, ethics of computer and network use, web design, introduction to graphics, animation, computer hardware and operating systems, elementary networking, troubleshooting and programming. (The student should have prior knowledge of an "office suite" to include but not be limited to word processing, spreadsheet, database and presentation software.)

TI-0555 WDD-I: Students enrolled in this course will learn the fundamentals of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) and their vital relationship to each other. Students will distinguish the use of HTML and CSS as to content and presentation. Students will demonstrate knowledge of W3C compliant websites. *(Outcomes: 1 - 9, 12 – 13)*

TI-0605 WDD-II: This course is designed to teach the student the process of creating, designing, and publishing a web page. Web page media will be developed for the World Wide Web using Industry Standard development tools. The course will take the student from the initial design to the launching of the accessible web site. *(Outcomes: 7, 10 – 14)*

TI-0608 (Capstone) WDD-III: This course is designed to be a capstone experience for the student where they will apply knowledge and skills learned throughout their course of study as they apply advanced web design and development topics. Students in this course will also investigate current and emerging technologies. Students will take the Technical Skills Assessment in this course. *(Outcomes: 12 – 17)*

Outcomes and Learning Objectives

Outcome 1: Students will use standards-compliant HTML to create basic Web pages.
- Describe how the Internet and the World Wide Web work
- Investigate roles and responsibilities behind the development of a Web site
- Understanding the Web design environment
- Create conventions for filenames and URLs
- Set a directory structure
- Identify and use tags on a Web page
- Document HTML code using comments
- Save a text document as an HTML file
- Specify Headings
- Format Web page text
- Insert HTML entities, superscripts, and subscripts
- Create a horizontal rule
- Create ordered and unordered lists
- Learn where to place anchors on a Web page
- Create links
- Create links to email
- Use the <img> element
- Use and image as a link
- Organize files in your web directory
- Understand paths and their application to links

Outcome 2: Students will be able to use styles to format Web pages.
- Identify the differences between HTML and CSS

- Write CSS Styles
- Create an embedded style
- Understand and use the font property
- Control line spacing and white space
- Change foreground and background colors on a Web page
- Create and apply inline styles
- Use classes to style several tags

Outcome 3: Students will demonstrate an understanding of advanced CSS selectors and properties.
- Identify the differences between dependent and independent classes
- Use external style sheets to format several Web pages
- Understand how to position text on a Web page
- Use CSS pseudo-elements
- Use the <span> tag
- Create and apply an independent class
- Use the <div> tag
- Investigate the box model
- Explore the padding, margin, and border properties
- Group links on a page
- Identify the Pseudo-class selectors
- Use CSS to style links
- Create a stylized navigation

Outcome 4: Students will demonstrate understanding of Color Theory as it applies to Web Design and Development.
- Explore Web Design Fundamentals
- Explore Design Theory
- Understand graphics file formats (vector versus raster)
- Investigate graphics editors
- Understand computer color basics
- Control color properties with CSS

Outcome 5: Students will enhance web pages with list, images and background-images.
- Control background images with CSS
- Float and image or text
- Control image properties with CSS
- Understand and use the clear property
- Change list style type and position
- Format and float headings
- Work with background properties

Outcome 6: Students will demonstrate understanding of and use the Box Model.
- Understand resolution as it applies to the Box Model
- Create boxes for layout
- Size and position boxes
- Determine how to control overflow for a box
- Understand padding, margins, and border properties

Outcome 7: Students will demonstrate the ability to effectively design and layout out Web pages using CSS.
- Designing for multiple screen resolutions
- Crafting the look and feel of a site
- Creating a unified site design
- Designing for the user
- Designing for accessibility
- Use the <div > tag to create formatting sections of a document
- Use <span> tag to format elements in a document
- Understand the positioning properties
- Create a print style sheet

- Use multiple style sheets

Outcome 8: Students will appropriately use tables to enhance their Web pages.
- Discern the difference between data tables and layout tables
- Understand the importance of using CSS for layout versus tables for layouts
- Learn how to nest a data table within a CSS layout
- Create styles to change the appearance of a table
- Understand how to position cell contents
- Understand how to position a table
- Understand how to manipulate table cells

Outcome 9: Students will demonstrate the ability to use Design and Layout Web Forms.
- Create an HTML form
- Create fields for text
- Create text boxes
- Understand how to choose appropriate form controls
- Create radio buttons, check boxes, and list boxes
- Create selection lists
- Talk about HTML Form validation (but don't use)

Outcome 10: Students will demonstrate Understanding of Website Architecture and Planning.
- The beginning stages of Web site development
- The importance of understanding a site's target audience and how that understanding can affect site development
- Methods for getting a site developed
- Baseline considerations for every site, including navigation, organization, graphic design, and content development
- Understand the Web site development process
- Create a site specification
- Identify the content goal
- Analyze their audience
- Build a Web site development team
- Create a site storyboard
- Publish their Web site
- Test their Web site

Outcome 11: Students will demonstrate Understanding of Site Organization and Navigation Principles.
- Create usable navigation
- Build text-based navigation
- Use graphics for navigation and linking
- Use lists for navigation
- Build horizontal navigation bars
- Build vertical navigation bars
- Use background color and graphics to enhance navigation
- Create hover rollovers

Outcome 12: Students will demonstrate understanding of Web site Accessibility Standards.
- Investigate Accessibility Standards
- Explore and implement Web Content Accessibility Guidelines (WCAG)
- Explore and understand Section 508 Standards

Outcome 13: Students will use Multimedia on the Web.
- Learn the basics of multimedia and executable content
- Embed Social Media Widgets on a Web page
- Explore the various formats available for Web-based video, the factors that determine which one to use
- Determine the demographics of the viewing audience, what they're watching, and why
- Investigate how and why companies are using Web-based video, and how audiences are responding to these efforts

- Explore what goes into producing professional videos

Outcome 14: Students will demonstrate Brand and Marketing and Traffic Analysis.
- Identify the different types of sites that make up the Web, how each differs from the other, and how marketers can take advantage of each type of site
- Understand the importance of keeping visitors coming back to a site
- Learn the methods that sites utilize to increase customer retention
- Explain the issues involved in copyrighting, trademarking, and licensing
- Identify the issues related to working in a global environment
- Define web-related mechanisms for audience development (attracting and retaining an audience)
- Identify how the Web is different from other marketing tools and the added value it can provide to marketers in developing brands
- Discover how to promote and market your Web site to help drive new and returning traffic
- Learn how marketers can track Web sites and what information relating to a Web site they can analyze

Outcome 15: Students will understand the relationship between the Web and Social Media.
- Define social media
- Understand how and why social media grew to play such an important role in the Web
- Explore the demographic breakdown of social media users and how their use of various applications differs
- Investigate the various types of social networks, how social networking sites function, and how marketers use these sites to build an audience
- Differentiate between Blogging and Content Management Systems
- Examine benefits and potential pitfalls of using Blogging and Social Media
- Explore Wikis and how they harness the collaborative nature of a user community
- Add Fresh Content with RSS/XML feeds
- Define "Mashups" and how they give marketers a unique opportunity to present features and information pulled together from other social media tools
- Explore the creation of Virtual worlds, how people communicate using avatars

Outcome 16: Students will demonstrate Knowledge and Understand of Ecommerce.
- Define Ecommerce, who uses it, and how
- Identify the various sources of revenue that e-commerce marketers rely on to generate profits
- Investigate the means and methods of online store development

Outcome 17: Students will use Client Side Scripting.
- Learn about the JavaScript programming language
- Add basic JavaScript code to your Web pages
- Use JavaScript to manipulate and validate form elements
- Explore the DOM and understand how you can manipulate it with JavaScript

Program Criteria

Program Cluster: Information Systems Technology

Program: Interactive Media – Web Design & Development

Program Requirements –

In order that a student might be considered a concentrator and be considered for Tech Prep articulation to a qualifying postsecondary program the student should:

Complete the secondary IST Web Design & Development program** consisting of:

100012	TI 0550	Fundamentals of Information Systems Technology
102013	TI 0555	Web Design & Development I
101101	TI 0605	Web Design & Development II
111536	**TI 0608**	Web Design & Development III **(CAPSTONE)**

**See corresponding program Outcomes and Objectives document for program outcome details.

Upon completion of the Capstone course the student would be required to take the Technical Skill Assessment, **NOCTI #2750 Web Design.** This will complete the concentrator requirements under Carl Perkins for a program of study. This 160 question assessment will test the student's competency in the following areas:

Internet Basics	13%
Programming/Markup/Scripting	14%
Editors	17%
Web Graphics	9%
Web Multimedia	10%
Web Marketing & Business Management	8%
Site Design	17%
Administration & Maintenance	12%

Should the student be interested in qualifying for postsecondary articulated credits the student that has successfully passed the Technical Skill Assessment would also be required to pass the **NOCTI #2750 Web Design Performance Evaluation** which will test their knowledge and skills in:

Creating the Cascading Style Sheet (CSS)	13%
Creating the Template	23%
Creating the Home Page	15%
Creating the Form Page	16%
Creating the Content Pages	33%

Upon completion and passing of both assessments the student would qualify for Tech Prep articulation at the below listed colleges for the courses described.

College	Course	Credits
Lewis-Clark State College	CITPT-111 HTML & CSS	3
College of Western Idaho	INTC-178 Princ of Web Scripting	4
College of Southern Idaho	CISW-111 Web Authoring	3
Eastern Idaho Technical College	CIS-236 Web Page Design	3