

MISSION TRAILS REGIONAL OCCUPATIONAL PROGRAM

1. **COURSE TITLE:** WEB DESIGN

2. **CBEDS TITLE:** TELECOMMUNICATIONS

3. **CBEDS NUMBER:** 4618

4. **JOB TITLES:**

Webmaster	Web Editor
Web Developer	Graphic Designer/Web Page Design

5. **COURSE DESCRIPTION**

This self-paced course is designed to provide the necessary skills and training for an entry-level position in the field of Web Design (Business & Administrative Services cluster). The class will focus on web page planning, base design, layout, and construction (effective and ineffective), setup and maintenance of a web site, HTML, DHTML, Java Script, and various web page and image creation tools. This course is taught in a PC/Macintosh environment.

6. **HOURS:**

- ❖ 360 hours Classroom/Lab
- ❖ 275 hours Community Classroom (CC)/Cooperative Vocational Education (CVE)

7. **PREREQUISITES:**

- ❖ Typing 25 wpm, Windows 95/98, knowledge of word processing (Word or Word Perfect) and the Internet.
- ❖ Must be 16 years of age or older, a junior or senior in high school; an out-of-school youth, or an adult.

8. **REVISION DATE:** May 30, 2003

9. COURSE OUTLINE

a. CONTENT AREA SKILLS

i. EXPECTED STUDENT OUTCOME

ii. HOURS OF INSTRUCTION

CONTENT AREA SKILLS	EXPECTED STUDENTS OUTCOME	HOURS		
		CL=Classroom	CC=Comm.Class	CP=Co-op Ed.
INSTRUCTIONAL UNITS:		CL	CC	CP
1. Orientation and Procedures.	<ul style="list-style-type: none"> A. Safety Unit B. Classroom policies C. Overview of equipment D. Expectations and evaluations E. Skill assessment 	5		
2. Introduction to the Internet	<ul style="list-style-type: none"> A. Internet service Providers (ISP's), connecting to the Internet B. Software tools; Browsers, Email, FTP clients, compression utilities, telnet, security, PGP, SSL. C. Internet Web Addresses; URL, domain name, e-mail address. D. Searching the Internet. <ul style="list-style-type: none"> a. Directory Search b. Boolean Search 	15	10	5
3. Principles of Web Design	<ul style="list-style-type: none"> A. Print vs. Web and How it Affects Design <ul style="list-style-type: none"> a. Color b. Updates c. Distribution d. File Size e. Multimedia f. Accessibility B. Basic Design Principles <ul style="list-style-type: none"> a. Alignment b. Updates c. Distribution d. Repetition and Consistency e. Contrast f. Spelling and Proofreading C. Navigational System and Interface Design <ul style="list-style-type: none"> a. Horizontal Format b. Navigational design c. Navigational Styles d. Frames 	20	10	5

	<ul style="list-style-type: none"> e. Repeating Themes f. Multiple Navigational Methods g. Site Maps h. Linking <ul style="list-style-type: none"> i. Cross Platform Issues ii. Cross Browser Compatibility j. Content Placement k. Depth of site l. Usability Tests <p>D. Color</p> <ul style="list-style-type: none"> a. CMYK Color b. RGB Color c. HSL Color d. Indexed Color e. Bit Depth f. Monitor Resolution g. Image Resolution h. Browser Safe Colors <p>E. Introduction to Imaging</p> <ul style="list-style-type: none"> a. File Formats <ul style="list-style-type: none"> (1) GIF File Format <ul style="list-style-type: none"> (a) Interlaced vs. Non-Interlaced (b) Transparency (c) 256 Color Limitation (2) JPEG File Format – Progressive vs. Non-progressive (3) PNG File Format (4) What format is best for different types of images (5) Anti-aliasing (6) File Size – Compression Utilities (7) Image Maps (8) Dicing Images (9) Alternate Text (10) Thumbnails (11) Pre-load Graphics (12) Acquiring Artwork for Web Sites <ul style="list-style-type: none"> (a) Image Sites on the Web (b) Scanning Images (c) Digital Cameras (d) Creating Your Own Images <p>F. Web Sites and Typograghy</p> <ul style="list-style-type: none"> a. Readability vs. legibility <ul style="list-style-type: none"> (1) Font Support System Fonts (2) Text Colors (3) Font styles and the Web (4) Style Sheets (5) Dynamic Fonts 			
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<p>4. HTML (Using Notepad or Text Pad)</p>	<ul style="list-style-type: none"> A. Creating an HTML Document <ul style="list-style-type: none"> a. Planning the Site b. Text Editor vs. HTML Editor or Word Processor c. Four Basic Tags <HTML>, <Head>, <Title>, <Body> d. Editing and Viewing HTML e. Linking HTML Documents f. Printing HTML Documents B. Formatting an HTML Document <ul style="list-style-type: none"> a. Ordered, Unordered and Definition Lists b. Formatting Text; bold, italics, and underline c. Adding Line Breaks d. Preformatted Text e. Address Tags f. Organizing your code C. Graphics and Multimedia <ul style="list-style-type: none"> a. Graphic Format b. Inline Images c. Resizing Images d. Linking Graphics e. Address Tags f. Organizing your Code D. User Interaction-Creating Forms <ul style="list-style-type: none"> a. Text Entry-Fields b. Radio Buttons c. Checkboxes d. Pull-down Menu e. Scroll Boxes f. Push Buttons g. CGI/PERL h. Submit Buttons Using Either HTML or Images E. Aligning Text and Objects with Tables <ul style="list-style-type: none"> a. Creating a Simple Table b. Spanning Columns c. Formatting a Border d. Aligning Text e. Adding Color f. Modifying a Border g. Changing Table Dimensions h. Cell spacing and Padding i. Controlling Page Layout j. Using Single Pixel Gifs for Precise Layout F. Frames <ul style="list-style-type: none"> a. Creating the Main Frame b. Formatting a Frame c. Modifying a Frame d. Controlling Frames e. Targeting Hyperlinks f. Naming Frames g. Frame Navigation h. Navigation Bars 	85	45	25
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5. Introduction to Java Script Choosing a Scripting Language	<ul style="list-style-type: none"> A. Creating a Simple Script B. Linking to External Script C. Debugging a Script D. Understanding Objects E. Event Handlers F. Functions G. Variable <ul style="list-style-type: none"> H. Conditionals I. Test browser compatibility 	25	15	10
6. Style Sheets	<ul style="list-style-type: none"> A. Cascading Style Sheets B. Embedded Style Sheets C. Creating a Class D. Browser Detection Routines E. Page Element Visibility F. Changing Font Style and Color Dynamically <ul style="list-style-type: none"> G. External Style Sheets H. Test Browser Compatibility 	20	10	5
7. Dynamic HTML	<ul style="list-style-type: none"> A. Introduction to Dynamic HTML, DHTML <ul style="list-style-type: none"> a. Cross Platform and Browser Issues b. Document Object Model c. Browser Variability d. Design Resources e. Code Architecture B. Controlling Content Dynamically <ul style="list-style-type: none"> a. Inserting Content Dynamically b. Deleting Content Dynamically c. Modifying Content Dynamically d. Replacing Graphics Dynamically e. Binding Data f. Manipulating Bound Data Dynamically C. Positioning with DHTML <ul style="list-style-type: none"> a. Positioning and Element Absolutely and Relatively b. Sizing an Element Manually c. Stacking Screen Elements d. Adding a Scroll Bar e. Creating a Sidebar f. Advanced Positioning Functions <ul style="list-style-type: none"> (1) Advanced DHTML <ul style="list-style-type: none"> (a) Filtering Content (b) Scaling Content (c) Animating Element Position 	20	15	5

	(d) Creating 3- D Animation (e) Transitioning Between Elements			
8. Structuring Data with XML (extensible Markup Language)	A. Understanding extensible Markup Language B. Defining XML Elements and Structure C. Entering XML Data D. Binding XML Data to HTML E. Displaying XML Data with HTML F. Modifying an XML Document G. Altering XML Data View with HTML	5	5	5
9. HTML Editors (Dream weaver, Go Live, Front Page)	A. Site Management Software a. Planning a New Web Site (1) Content (2) Folder Structure (3) Navigational Structure b. Site Management Interface c. Help System d. Introduction to the Role of Web Servers B. Basic HTML Editing a. Open and Create a new Web Page b. Set Page Properties c. Enter and Format Text d. Format Paragraph Styles e. Preview and Print a Web Page f. Save a Web Page C. Enhancing a Web Page a. Inserting Images b. Editing Images c. Insert a Horizontal Rule d. Insert and Test a Hyperlink (Internal, External, E-mail, and Image) D. Wizards and Templates a. Insert Components b. Edit Templates c. Export and Delete Web Pages d. Add a Search Form e. Make Global Revisions f. Publish a Web Site E. Tables and Frames a. Insert a Table b. Add and Move a Table Caption c. Modify Table Properties d. Add Rows and Columns to a Table e. Modify Cell Properties	85	50	25

	<ul style="list-style-type: none"> f. Create a Web Page with Frames g. Set Frame Target h. Modify Frame Properties <p>F. Adding Graphic Features to Web Pages</p> <ul style="list-style-type: none"> a. Setting Custom Colors b. Background Colors and Images c. Modifying Images d. Aligning Text to an Image e. Creating Hot Spots/Image Maps f. Creating Scrolling Marquees g. Add Animations and Page Transitions <p>G. Enhancing and Maintaining a Web Site</p> <ul style="list-style-type: none"> a. Applying Themes b. Adding Navigation Bars c. Using Shared Borders d. Inserting Hover Buttons and other JavaScript Components e. Add a Banner Ad Manager f. Convert RTF, ASCII, and other Documents Formats to HTML <p>H. Feature Comparison</p>			
10. Creating Web Graphics	<ul style="list-style-type: none"> A. File Formats-GIF, JPEG, PNG, PSP,SWF B. Image Dimensions C. Web Safe Color Palette D. Dithering E. Logos, Headlines, Icons, and Backgrounds F. Editing Images and Photos G. Images and Special Effects and Filters H. Using Scanners and Digital Cameras I. Creating Transparent GIFS J. Creating GIF Animation K. Creating Image Maps L. File Compression <ul style="list-style-type: none"> M. File Size Limitations N. MacroMedia FLASH 	45	15	5
11. Site Maintenance	<ul style="list-style-type: none"> a. Site Management Software b. Filenames and Folders c. Browser Checks d. Update Frequency e. Uploading Sites and FTP f. Site Maps/Flow Charts g. Information Architecture <ul style="list-style-type: none"> (1) Site Registration <ul style="list-style-type: none"> (a) Meta Tags (b) Submission Services (c) Link Exchange/Banner services (d) Advertising (e) Responsible Use of E-mail and Newsgroups 	10		

	(f) Lead Tracking (g) Site Statistics			
12. Server Issues/Client Server Concepts	A. Apache B. HS C. Configuration Files D. Restrictions E. Security F. Telnet g. Front Page Server Extensions	15	5	5

9. COURSE OUTLINE:

B. CAREER PERFORMANCE STANDARDS

i. EXPECTED STUDENT OUTCOMES

ii. HOURS OF INSTRUCTION

COURSE OUTLINE

CAREER PERFORMANCE STANDARDS	EXPECTED STUDENT OUTCOMES	HOURS		
		CL	CC	CP
Instruction will include:	Student will be able to:			
1. Understand how personal skill development; including positive attitude, honesty, self-confidence, time management, and other positive traits-affect employability.	A. Demonstrate an understanding of classroom policies and procedures. B. Discuss importance of the following personal skills in the business environment: a. Positive attitude b. Self-confidence c. Honesty d. Perseverance e. Self-management/work ethic f. Pride in product/work g. Dependability C. Identify acceptable business attire. D. Establish goals for self-improvement and further education/training. E. Prioritize tasks and meet deadlines F. Understand the importance of initiative and leadership. G. Understand the Importance of lifelong learning in a world of consistently changing technology.	10		
2. Understand principles of effective interpersonal skills, including group dynamics, conflict resolution and negotiation.	A. Identify and discuss behaviors of an effective team. B. Explain the central importance of mutual respect in workplace relations. C. Discuss and demonstrate strategies for conflict resolution and negotiation, and explain their importance within the business environment. D. Understand laws that apply to sexual harassment in the workplace, and identify tactics for handling harassment situations. E. Work cooperatively, share responsibilities, accept supervision and assume leadership roles. F. Demonstrate cooperative working relationships and proper etiquette across gender and cultural groups.			

<p>3. Understand the importance of good academic skills, critical thinking, and problem solving skills in the workplace.</p>	<p>A. Recognize the importance of good academic skills in information technology and implement a plan for self-improvement as needed.</p> <p>B. Exhibit critical and creative thinking skills and logical reasoning skills, and employ these skills for problem solving.</p> <ul style="list-style-type: none"> a. Work as a team member in solving problems. b. Diagnose the problem, its urgency, and its causes. c. Identify alternatives and their consequences. d. Explore possible solutions. e. Compare/contrast the advantages and disadvantages of alternatives. f. Determine appropriate action(s). g. Evaluate results of action(s) taken. 			
<p>4. Understand principles of effective communication.</p>	<p>A. Use communication concepts in application of skills, techniques, and operations.</p> <ul style="list-style-type: none"> a. Prepare written material. b. Analyze written material. <p>B. Understand and implement written instructions, from technical manuals, written communications, and reference books.</p> <p>C. Present a positive image through verbal and non-verbal communication, and understand the power of body language in communication.</p> <p>D. Demonstrate active listening through oral and written feedback.</p> <p>E. Give and receive feedback.</p> <p>F. Demonstrate assertive communications (both oral and written).</p> <p>G. Demonstrate proper etiquette in business communications, including an awareness of requisites for international communications (language, customs, time zones, currency and exchange rates.)</p> <p>H. Demonstrate writing/editing skills as follows:</p> <ul style="list-style-type: none"> ❖ Write, proofread, and edit business correspondence. ❖ Use correct grammar, punctuation, capitalization, vocabulary and spelling. ❖ Select and use appropriate forms of technology for communication. <p>I. Exhibit a proficiency in the use of reference books.</p> <p>J. Research, compose and orally present information for a variety of business situations utilizing appropriate technology.</p>			

5. Understand career paths and strategies for obtaining employment.	<ul style="list-style-type: none"> A. Develop a career portfolio, including the following documents. <ul style="list-style-type: none"> a. Job application b. Resume c. Appropriate cover and follow up correspondence B. Identify and demonstrate effective interviewing techniques. 			
6. Understand and adapt to changing technology.	<ul style="list-style-type: none"> A. Identify and explain how people, information, tools, machines, energy, capital, physical space, and time influence the selection and use of networking technologies. B. Demonstrate the ability to use personal computers for loading and retrieving data, information gathering, measurements, and writing about and explaining computer networking. C. Identify the characteristics and explain the importance of adapting to changes, being flexible, and evaluating goals when working in the computer networking industry. D. Understand the importance of life-long learning in adapting to changing technology. 			
7. Understand the importance of ethics in information technology fields.	<ul style="list-style-type: none"> A. Discuss social and ethical responsibilities attached to access to information. B. Discuss rights to privacy of individuals with regard to information. C. Understand that copyright violations are theft. D. Discuss copyright laws and distinguish copyright violations in a variety of situations. E. Demonstrate ethical choices in workplace situations. F. Distinguish between first amendment freedoms and access to information. 			
	TOTAL HOURS	360	180	95
GRAND TOTAL HOURS		635		

10. ADDITIONAL RECOMMENDED/OPTIONAL ITEMS

A. ARTICULATION

B. VOCATIONAL CREDIT

C. ACADEMIC CREDIT

D. INSTRUCTIONAL STRATEGIES

E. INSTRUCTIONAL MATERIAL

F. CERTIFICATES