52.1206 Web Page Development and Design

This cluster offers a sequence of planned educational classroom and laboratory experiences designed to prepare individuals to design, create, and maintain various web pages and sites. Instruction will include learning to create web pages and sites using scripting languages such as HTML and JavaScript. Students will learn to use HTML, HTML editors and graphic editors, as well as other applications. Students will also learn how to capture and edit images, sound, and video and combine them with text and animation to create dynamic interactive web pages.

This cluster includes a sequence of planned educational classroom laboratory experiences which will develop competencies in the following duty areas:

- *Designing, creating, and maintaining web pages and sites*
- *Using HTML, HTML editors and graphic editors*
- *Using audio, image, animation, graphic, and video capturing and editing hardware and software*
- *Updating, modifying, and expanding existing web pages and sites*
- *Performing general web based programming functions*
- *Adding interactive and dynamic elements to web pages and sites*
- *Understanding and implementing usability and accessibility*
- *Connecting to and manipulating databases*

Employment opportunities which are available to workers with competencies in the Web Page Development and Design Cluster include banking institutions, manufacturing companies, educational institutions, government offices, insurance companies, retail and wholesale companies, accounting firms, hotel-motel firms, real estate firms, savings and loan institutions, medical offices, legal offices, transportation firms, advertising companies, and computer firms. Through entrepreneurship, other employment opportunities are also available.

The following are examples of occupations for which instruction may be provided at the secondary level.

Web Design Specialist/Web Developer
Webmaster

The following occupational listing shows examples of occupations that may require additional training in a specialized program at the postsecondary level.

JavaScript Programmer
Web Content Developer
HTML Coder
Web Designer
Multimedia Producer

In addition to those occupations already noted, there are other occupations of a professional nature requiring extensive education beyond that received at secondary and postsecondary levels.

A regional delivery system should offer training for occupations in this field as determined by employment opportunities and the needs of the students.

Training received in this program is used as a basis for entry level into the labor market and for further training at the postsecondary level. Worksite learning experiences are encouraged to provide experiences that cannot be duplicated in the classroom. Articulation between the secondary and postsecondary programs will be a part of the regional delivery system.

Workplace skills, as well as 1) skills used in work performance that are transferable across jobs and occupations and that are instrumental to job and classroom success, 2) skills used to manage life's transitions, and 3) skills employed in the resolution of interpersonal, information or task-related problems or problems related to behavior in cooperative group settings, should be included in this curriculum. Leadership skill development is an integral part of this program and is delivered through career and technical student organization activities (e.g. Future Business Leaders of America (FBLA) and Business Professionals of America (BPA). Individualized instruction and learning reinforcement are provided through cooperative career and technical education programs, as well as classroom instruction. Communication skills (thinking, listening, composing, revising, editing, and speaking) will be integrated throughout the course.

Industry Certifications - Regional systems are encouraged to provide opportunities for students to acquire the skills and knowledge needed to meet the industry certifications associated with this program. It is recommended that the related industry certification content be integrated within the core content at the preparation level.

COURSE SEQUENCE

Course Title	Credits per Semester	Length in Semesters	Grade Level
Orientation			
Business and Technology Concepts	.5	2	9, 10
Keyboarding and Formatting I	.5	1	9, 10
Computer Concepts and Software Applications	.5	1	9, 10
Preparation			
Web Page and Interactive Media Development I	.5	2	11

Web Page and Interactive Media Development II	.5	2	12
Cooperative Office Education	*variable	2	12

*As determined at the regional system level.

WEBPAGE AND INTERACTIVE MEDIA DEVELOPMENT I
SUGGESTED COURSE DESCRIPTIONS

BUSINESS AND TECHNOLOGY CONCEPTS

Length of course: 2 Semesters
Credits per semester: .5
Grade level: 9, 10

This orientation-level course will provide an overview of all aspects of business marketing and management, including the concepts, functions, and skills required for meeting the challenges of operating a business in a global economy. Topics covered will include the various forms of business ownership, including entrepreneurship, as well as the basic functional areas of business (finance, management, marketing, administration and production).

Students will be introduced to a wide range of careers in fields such as accounting, financial services, information technology, marketing, and management. Emphasis will be placed on using the computer while studying applications in these careers along with communication skills (thinking, listening, composing, revising, editing, and speaking), math and problem solving. Business ethics as well as other workplace skills will be taught and integrated within this course.

This course is not intended to meet the consumer education requirement, but rather to provide preparation for the skill level courses that make up the Business, Marketing and Management occupations programs.

KEYBOARDING AND FORMATTING I

Length of course: 1 Semester
Credits per semester .5
Grade level: 9, 10

Keyboarding and Formatting I is a course designed to develop basic skills in touch keyboarding techniques for entering alphabetic, numeric, and symbol information found on computers and terminals. Students will learn to edit and format text and paragraphs, change fonts, work with headers and footers, cut and paste text, create and use tab keys, create labels, and work with multiple windows. Students will format documents such as letters, envelopes, memorandums,

reports, and tables for personal, educational, and business uses. During the second half of the course, major emphasis is placed on formatting documents, improving proofreading skills, and increasing speed and accuracy.

COMPUTER CONCEPTS AND SOFTWARE APPLICATIONS

Length of course: 1 Semester
Credits per semester: .5
Grade level: 9, 10

Computer Concepts and Software Applications is an orientation-level course designed to develop awareness and understanding of application software and equipment used by employees to perform tasks in business, marketing and management. Students will apply problem-solving skills to hands-on, real-life situations using a variety of software applications, such as word processing, spreadsheets, database management, presentation software, and desktop publishing. Students will explore topics related to computer concepts, operating systems, telecommunications and emerging technologies. The development of employability skills, as well as transition skills, will be included in the course as well as an understanding of the ethical considerations that arise in using information processing equipment and gaining access to available databases.

WEB PAGE AND INTERACTIVE MEDIA DEVELOPMENT I

Length of course: 2 Semesters
Credits per semester .5
Grade level: 11

Web Page and Interactive Media Development I is a skill-level course designed to prepare students to plan, design, create and maintain web pages and sites. Students will learn the fundamentals of web page design using HTML, HTML editors, and graphic editors as well as programming tools such as JavaScript. Students will work in a project-based environment to create a working website. Students will learn to create pages, add hyperlinks, make tables and frames, create forms, integrate images, and set styles. Students will use image-editing programs to manipulate scanned images, computer graphics, and original artwork. Instruction will include creating graphical headers, interactive menus and buttons, and visually appealing backgrounds. Students will use hardware and software to capture, edit, create, and compress audio and video clips.

WEB PAGE AND INTERACTIVE MEDIA DEVELOPMENT II

Length of course: 2 Semesters

Credits per semester .5
Grade level: 12

Web Page and Interactive Media Development II is a skill-level course for students who have completed Web Page and Interactive Media Development I. Instruction will include using multimedia authoring applications and programming tools such as JavaScript to create a web site that combines text, hyperlinks, images, video, and sound. Instruction will include using hardware and software to capture, edit, create, and compress audio and video clips as well as create animated text, graphics, and images. Other topics will include using tables to align images with text, creating newspaper-style columns, and inserting side menus and call-outs. Students will learn how to use templates, cascading style sheets and interactive elements to enhance web pages. Students will learn to create dynamic forms that include multiple-choice questions, comment boxes, and buttons. Students will learn how to connect to a database and retrieve and write data.

Students are encouraged to develop a portfolio project that demonstrates their expertise in areas such as multimedia authoring, web development, audio and video editing, and advanced JavaScript applications to create interactive web pages.

COOPERATIVE OFFICE EDUCATION

Length of course: 2 Semester
Credits per semester variable
Grade level: 12

Cooperative Office Education is a capstone course designed to assist students in the development of effective business skills and attitudes through practical, advanced instruction in school and on the job through cooperative education. Approximately half the school day is spent taking classes at school and the other half in on-the-job training supervised by the designated training sponsor and coordinated by the teacher-coordinator. The related class at school is planned to develop skills and attitudes that are applied on the job. A training plan is developed jointly by the teacher-coordinator, training sponsor and student that identifies training to be provided. Training in the related class at school focuses upon the student's career and technical education, with additional assignments based upon areas where on-the-job performance indicates a need. Related instruction also includes workplace skills such as seeking and applying for employment, communicating on the job, maintaining professionalism, workplace ethics, etc.

Current generation equipment is utilized in this course to develop information management competencies required for employment in this cluster of careers. Instruction involves the use of simulations and computer-assisted instruction, as well as specific application software for data-base management, accounting, word processing, financial modeling, business graphics and communications between information processing systems.