Web Development and Digital Media (WEB)

Courses

WEB 110   HTML and CSS (3 Hours)
This course will cover the essential skills needed to create responsive websites, using HyperText Markup Language (HTML) and Cascading Style Sheets (CSS). Students will be introduced to the concepts, foundations, syntax and structure of HTML and CSS. Additional topics include the use of File Transfer Protocol (FTP) to publish websites and validation to web standards established by the World Wide Web Consortium (W3C) and other organizations.

WEB 112   Professional Skills for the Digital Developer (3 Hours)
This course covers the development of a professional digital portfolio. Also, students will use technology to achieve effective team management, project management and problem-solving skills. Current and relevant legal, ethical and governmental issues important to a career in digital development are also covered. Professional branding through social media, resume and cover letter will be produced. Self-promotion, networking, job searches and interview skills will also be covered.

WEB 112H   HON: Professional Skills for the Digital Developer (1 Hour)
One-credit hour honors contract is available to qualified students who have an interest in a more thorough investigation of a topic related to this subject. An honors contract may incorporate research, a paper, or project and includes individual meetings with a faculty mentor. Student must be currently enrolled in the regular section of the courses or have completed it the previous semester. Contact the Honors Program Office, COM 201, for more information. Prerequsite: Honors department approval.

WEB 114   Web Scripting: JavaScript I* (2 Hours)
Prerequisites or corequisites: WEB 110.
Students will study the purpose for and principles of client-side scripting using JavaScript. Topics include JavaScript variables, operators, expressions, functions, control structures, arrays and event listeners. Students will use professional techniques to write and debug code. JavaScript security issues will be explored.

WEB 116   Digital Media Concepts (2 Hours)
This course examines the digital media creation process and the impact of emerging technology on that process. Emphasis is placed on the need to understand target audiences, as well as the impact of content on those audiences. Creative culture is examined so students may begin to understand the relationship between ideas and the structure and management of the organizations and intellectual property systems used to express those ideas.

WEB 116H   HON: Digital Media Concepts (1 Hour)
One-credit hour honors contract is available to qualified students who have an interest in a more thorough investigation of a topic related to this subject. An honors contract may incorporate research, a paper, or project and includes individual meetings with a faculty mentor. Student must be currently enrolled in the regular section of the courses or have completed it the previous semester. Contact the Honors Program Office, COM 201, for more information. Prerequsite: Honors department approval.

WEB 118   Digital Workflow (3 Hours)
The course introduces the terminology, planning, processes, and tools needed for web development and digital media projects. Students will be introduced to current and best practice strategies, including how to manage client expectations, develop requirements for designing in the browser, create style guides and documentation, develop techniques for handling responsive design requirements, and visualizing the points where responsive designs change.

WEB 120   Web Analytics* (3 Hours)
Prerequisites : WEB 110.
Upon successful completion of this course, students should be able to implement and apply Web analytics techniques. Topics to be covered include Web traffic analysis, data collection methodologies, report analysis, best-practices configuration and search engine optimization.

WEB 121   Digital Media Assets* (4 Hours)
Prerequisites or corequisites: WEB 116.
This course focuses on technologies and workflows in managing digital image, digital video and audio assets throughout an asset's life cycle. Through the study of digital and interactive media and its application in information technology, students will analyze and assess current and emerging technologies. Students will design and create multimedia projects that address customer needs and solve real world problems. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society.

WEB 122   CSS Techniques & Projects* (3 Hours)
Prerequisites : WEB 110.
Students will apply Cascading Style Sheet (CSS) techniques through the use of professional, advanced website development projects. Industry-standard Hypertext Markup Language (HTML) semantic markup practices and presentation separation through CSS is emphasized. CSS topics include professional syntax practices, formatting and layout skills. Advanced CSS skills for float, positioning, alignment and image formatting are covered.

WEB 124   Web Scripting: JavaScript II* (2 Hours)
Prerequisites : WEB 114.
Students will apply JavaScript to interact with the Document Object Model (DOM) and the Browser Object Model (BOM). Students will also use JavaScript to enhance and validate form data, to manipulate data in strings and arrays, and will build upon their object-oriented programming skills by working with built-in JavaScript objects as well as custom objects. Students will study and apply coding techniques to address JavaScript linting, debugging, and security issues.

WEB 124H   HON: Web Scripting: JavaScript II (1 Hour)
One-credit hour honors contract is available to qualified students who have an interest in a more thorough investigation of a topic related to this subject. An honors contract may incorporate research, a paper, or project and includes individual meetings with a faculty mentor. Student must be currently enrolled in the regular section of the courses or have completed it the previous semester. Contact the Honors Program Office, COM 201, for more information. Prerequsite: Honors department approval.

WEB 125   Digital Video Tools (1 Hour)
This introductory video production technology course will cover basic desktop computer operating systems and the technologies used to bring photographic (film, video, still) images and audio into the digital domain. Students will learn to prepare audio and video media from pre-production to post-production techniques for digital delivery systems and the Internet.

WEB 126   Technical Interface Skills* (3 Hours)
Prerequisites : WEB 110.
This course will cover the skills needed to successfully develop Information Architecture (IA) blueprints from concept to completion. Students will use fundamental visual principles, perception, color, composition and typography to analyze and modify existing IA plans while keeping consistent structure. They will create complementary visuals that maintain a client's brand while working through the modification process. Students will review the critical universal usability rules and basic visual design principles quintessential of a design team and to implement an aesthetic vision through every step of development.

WEB 128   Server Scripting: PHP with MySQL* (2 Hours)
Prerequisites : WEB 110.
This course covers the commands and techniques available to add functionality to Web pages using Hypertext Preprocessor (PHP). Students will build client-side PHP scripts with variables, functions, expressions, methods and events to validate forms and enhance Web page functionality. The basics of server-side scripting are introduced. Students also define and build a relational database using MySQL, then use PHP scripts as well as SQL in a Web page to connect to the database to edit, delete and enter records.

WEB 134   Web Scripting: JavaScript III* (2 Hours)
Prerequisites : WEB 124.
Students will write JavaScript to interact with touch and gesture events. They will also explore technologies that extend JavaScript's functionality, including popular Application Program Interfaces (APIs), libraries and frameworks. Ajax, JavaScript Object Notation (JSON), jQuery and other technologies will be introduced. Students will code secure web applications, often called web apps.

WEB 148   Server Scripting: PHP with MySQL II* (2 Hours)
Prerequisites : WEB 128.
Students will apply Hypertext Preprocessor (PHP), Structured Query Language (SQL), and MySQL commands and skills to extend their knowledge of adding server-side functionality to webpages. Students will use the Model View Controller (MVC) pattern to build, test, debug and deploy a PHP – MySQL application. Students will work with various object and data types including dates, strings numbers, arrays, and functions. Students will also build regular expressions to scrub and validate data stored in a MySQL relational database.

WEB 150   Essential Web Concepts and Techniques I* (1 Hour)
Prerequisites or corequisites: CPCA 105 or CPCA 106 or CPCA 128 or appropriate score on an assesment test.
This current-events course introduces students to essential Web concepts and techniques. Students will explore a range of topics, from fundamental existing technologies to new trends. Real-world applications of the Web will be the primary focus of this course. Hands-on, practical projects will be performed to reinforce the concepts.

WEB 160   Essential Web Concepts and Techniques II* (1 Hour)
Prerequisites or corequisites: WEB 150.
This course is a continuation of Essential Web Concepts and Techniques I, and will cover intermediate commands and techniques required to use various Web based tools and programs. Students will explore a wide range of topics, from existing technologies to new trends. Real-world applications of the Web will be the primary focus of this course. Hands-on, practical projects will be performed to reinforce the concepts.

WEB 172   WordPress I* (1 Hour)
Prerequisites or corequisites: CPCA 105 or CPCA 106 or CPCA 128 or an appropriate score on an assessment test.
This course will cover the commands and techniques required to create and revise blogs and websites using WordPress. Topics to be covered will include basic blogging techniques, working with digital images, hosting, spam and security issues, plugins and themes. Real-world applications of WordPress will be the primary focus of this course. Hands-on, practical projects will be performed to reinforce the concepts.

WEB 225   Advanced Digital Video Tools* (1 Hour)
Prerequisites or corequisites: WEB 125.
In this advanced video course, students will work with video capture and post-production technologies. Students will expand on prior experience with basic audio and video pre-production and post-production techniques and learn advanced skills, including: audio, keyframing, adjustment layers, masks/mattes, greenscreen and motion tracking.

WEB 230   Asynchronous JavaScript and XML* (1 Hour)
Prerequisites : WEB 114.
This course will introduce and explain the use of AJAX (Asynchronous JavaScript and eXtensible Markup Language). AJAX is not a technology itself but is a combination of HTML (HyperText Markup Language), CSS (Cascading Style Sheets) and JavaScript's use of the DOM (Document Object Model). Students will use AJAX to dynamically load data into a Web page. Topics include auto complete functionality and other interactive features to a Web page.

WEB 231   User Experience* (4 Hours)
Prerequisites : WEB 126.
This course will serve as a broad survey of the user experience design process for interactive products and services. Students will learn the building blocks of the user experience including interaction design, design research, information architecture and design principles. It will also provide knowledge of how to evaluate user experience concepts using methods such as heuristic evaluation, prototyping and usability studies. Through readings, critiques, exercises and discussions, students will explore what makes the experience of an interactive media application successful.

WEB 233   Visual Storytelling (3 Hours)
Storytelling is how people share ideas and meaning. It's how we communicate, reach each other and connect. This course provides an introduction to the methods and tools of visual storytelling. Students will explore the impact of visual storytelling and how to communicate visually. Students will use storytelling techniques enabling them to create, design and produce stories using digital media. This course will explore the key elements to tell realistic and compelling visual stories. Students will write scripts, design storyboards, create still and moving images using music and narration to tell their stories.

WEB 234   Web Apps I* (3 Hours)
Prerequisites : WEB 124.
Mobile devices outnumber desktop and laptop computers three to one worldwide. This course will cover practical guidelines, standards, techniques and best practices for building Web applications using Client-Side programming including Hypertext Markup Language (HTML), Cascading Style Sheet (CSS) and JavaScript, including basic design and development principles for all mobile devices and platforms. Students will have strong knowledge about the methods and tools used in developing Web applications.

WEB 236   Content Management Systems Development* (3 Hours)
Prerequisites : WEB 128.
Content Management Systems (CMS) have gained in popularity as the number of robust and complex websites continues to grow. Students will cover the life cycle of websites, including their creation, management, distribution and publishing of content. This hands-on course will cover open source CMS applications such as Joomla, Drupal, WordPress and other technologies and the resources available to designers and developers. Students will explore the fundamentals of planning dynamic websites, CMS database management, developing Cascading Style Sheet (CSS)-controlled site templates, and creating database-driven websites through the planning and creation of their own topic-based sites. Student exercises include how to interact, engage and contribute to online communities and projects.

WEB 237   Emerging Technologies* (3 Hours)
Prerequisites : WEB 126.
This course provides a practical approach to encourage greater understanding and analysis of emerging technologies such as the web, social media, mobile apps, video games and wearables. The course focuses on how companies, organizations and individuals are using digital media to communicate and connect with all of their various stakeholder groups, including consumers. As the media environment changes with new technological capabilities to distribute and retrieve messages, companies' promotional communication strategies must adapt as well. This course exposes students to the decision-making involved in a promotional communication context in terms of both message content development and placement.

WEB 238   Interactive Scripting: JQuery* (4 Hours)
Prerequisites : WEB 122 and WEB 124.
Designers and developers can use jQuery to have complete access to all Cascading Style Sheets (CSS) styles of any element on a Web page, effortless Web page content manipulation via filters and patterns, detection or creation of events (mouse movement or click), moving, hiding and fading elements and other features. Students will be exposed to how to write efficient jQuery selectors to round up sets of Document Object Model (DOM) elements, how to use the framework's many methods to manipulate DOM elements, how to use the jQuery event application programming interface (API) to set up event listeners and event delegation, how to manage Ajax requests with jQuery and how to extend jQuery with custom filters and methods.

WEB 240   HTML and CSS II* (3 Hours)
Prerequisites : WEB 124.
This course focuses on the latest generation of browser-based technologies for front-end design and development. Topics in the course include Cascading Style Sheets (CSS), HyperText Markup Language (HTML) elements, HTML Application Programming Interface (API), forms, audio and video, offline applications, Canvas drawing and animation, communication APIs, Web Sockets and Web Workers, Geolocation, local and session storage, Web Structured Query language (SQL) Database, and advanced topics such as mobile Web applications, performance analysis, browser issues and developer tools.

WEB 243   Search Engine Optimization* (1 Hour)
Prerequisites : WEB 110.
This course will cover how to optimize a website to maximize search engine ranking. Upon completion of the course students will be able to identify and implement effective website designs and strategies for search engine optimization.

WEB 244   Web Apps II* (3 Hours)
Prerequisites : WEB 234.
This course examines the theory, concepts and techniques for designing, producing and evaluating Web applications to meet specific information needs. Students will engage with concepts, techniques and system issues in advanced Web application design and development using advanced programming tools and techniques. Students will look beyond the current status of development and design techniques and conjecture what is possible in the future.

WEB 245   Motion Graphics Tools* (1 Hour)
Prerequisites or corequisites: WEB 125.
This course is designed to introduce students to motion graphics and special effects. All basic applications of the program will be touched upon including credits, transitions, filters, masks and mattes. Students will experience the complete motion graphics workflow, beginning by capturing their own still images and videos and concluding by rendering and exporting an original composition.

WEB 290   Web Development and Digital Media Capstone* (3 Hours)
Prerequisites : Department approval.
This course is the culmination of the course work that makes up the Web Development and Digital Media AAS degree. It incorporates elements from each of the core program courses to allow students to walk through the entire Web design process, including design/project documentation, wire framing, creating mock-ups, revisions, pages and final deliverables. Upon completion of course, students will have a professional website that can serve as part of their professional portfolio.

WEB 290H   HON: Web Development and Digital Media Capstone (1 Hour)
One-credit hour honors contract is available to qualified students who have an interest in a more thorough investigation of a topic related to this subject. An honors contract may incorporate research, a paper, or project and includes individual meetings with a faculty mentor. Student must be currently enrolled in the regular section of the courses or have completed it the previous semester. Contact the Honors Program Office, COM 201, for more information. Prerequsite: Honors department approval.

WEB 292   Special Topics:* (1-3 Hour)
Prerequisites : Department approval.
This course periodically presents specialized topics in Web Development and Digital Media that are not available in the regularly offered curriculum. Special Topics may be repeated for credit, but only on different topics.

WEB 292H   HON: Special Topics:* (1 Hour)
Prerequisites : Honors department approval.
One-credit hour honors contract is available to qualified students who have an interest in a more thorough investigation of a topic related to this subject. An honors contract may incorporate research, a paper, or project and includes individual meetings with a faculty mentor. Student must be currently enrolled in the regular section of the courses or have completed it the previous semester. Contact the Honors Program Office, COM 201, for more information.

WEB 294   Web Development and Digital Media Internship* (1 Hour)
Prerequisites : Department approval.
Web Development and Digital Media Internship provides students with the opportunity to gain experience in the workplace and translate classroom learning into practice. An internship experience provides the student with an opportunity to explore career interests while applying knowledge and skills learned in the classroom in a work setting. The experience also helps students gain a clearer sense of what they still need to learn and provides an opportunity to build professional networks. 180 hours minimum requirement of on-the-job training.