### Web Design & Development (WEB)

#### Courses

**WEB 1400. Web Design I: Fundamentals. 3 Hours.**
For students pursuing a degree in Computer and Information Technology. Covers fundamental principles of front-end web design, including beginner's hands-on experience with HTML and CSS in planning, organizing, analysis, and designing websites. Introduces key foundation concepts such as Internet infrastructure, web page creation and publishing, wireframing, layout techniques, multimedia, content, color, typography, and accessibility. FA, SP.

**WEB 3100. Interaction Design. 3 Hours.**
For students pursuing an emphasis in Digital Design or Web Design and Development, or other students interested in interaction design and user interface design. Covers interaction design, with an emphasis on user interface and experience (UI/UX) design as a design process. Students will learn how to perform user research, develop user stories, and implement user testing. Students will also learn the process of user interface design, including crafting user flows, site mapping, sketching, wireframing, prototyping, and creating mockups. Students will design user interfaces for web and mobile applications, and learn the specific principles and techniques used for each. Dual listed with DES 3100 (students may take only one course for credit). Course fee required. Prerequisites: DES 2600 (Grade C- or higher); AND DES 2710 (Grade C- or higher); AND WEB 3400 (Grade C- or higher). FA.

**WEB 3200. Web Application Development I. 3 Hours.**
For students pursuing an emphasis in Web Design & Development, or other students interested in writing applications for the modern web. Covers the fundamentals of three-tier web applications, including client-side code for modern browsers, server code using representative languages, and integration with database systems; also covers the protocols that connect these components and the environments in which they run. Dual listed with CS 3200 (students may only take one course for credit). Course fee required. Prerequisites: CS 1410 (Grade C- or higher); AND WEB 1400 (Grade C- or higher). FA, SP.

**WEB 3400. Web Design II: Essentials. 3 Hours.**
For students pursuing a degree in Computer and Information Technology. Covers intermediate concepts of front-end web design and development, including essential hands-on experience with HTML, CSS, JavaScript, and other web publishing tools. Essential concepts such as domain and hosting infrastructure, modern web design frameworks & libraries, user interface and experience, e-commerce, web promotion, legal models, development environments, and interactivity are all examined. Course fee required. Prerequisites: DES 1300 (Grade C- or higher); AND WEB 1400 (Grade C- or higher). FA, SP.

**WEB 3450. Software Engineering. 3 Hours.**
Students will take on a challenging team project. Students will also learn about the software lifecycle and its phases. Dual listed with MIS 4450 & CS 2450 (students may take only one course for credit). Course fee required. Prerequisites: WEB 3200 (Grade C- or higher); AND WEB 3400 (Grade C- or higher). FA, SP.

**WEB 3500. Electronic Commerce. 3 Hours.**
For students pursuing a Computer & Information Technology degree. Also open to other interested students. Covers concepts and principles of electronic commerce from an interdisciplinary approach, including computer sciences, marketing, consumer behavior, finance, economics, and information systems. Specifics include electronic commerce process steps, Internet infrastructure, demographics, marketing and market research, advertising, promotion, strategy development, financing, competitive analysis, technical development, Web site review, launch, and ongoing innovation. Course fee required. FA, SP.

**WEB 3550. Internet & eCommerce Marketing. 3 Hours.**
For students pursuing a Computer & Information Technology degree. Also open to other interested students. Covers impact of new technologies and Internet expansion on marketing and advertising information intensive products and services on the Internet, particularly targeting and reaching customers. Course fee required. FA, SP.

**WEB 4200. Web Application Development II. 3 Hours.**
For students pursuing an emphasis in Web Design & Development, or other students interested in writing applications for the modern web. Covers advanced concepts and topics in client-side and server-side web application development. Students will be introduced to a variety of modern software frameworks, languages, architectural patterns, and techniques in order to create interactive, data-centric web applications. Dual listed with CS 4200 (students may only take one course for credit). Course fee required. Prerequisite: WEB 3200 (Grade C- or higher). SP.

**WEB 4400. Web Design III: Advanced Techniques. 3 Hours.**
For students pursuing a degree in Computer and Information Technology. Covers mastery-level web design and development practices. Hands-on experience developed using advanced technologies such as HTML, CSS, JavaScript, content management systems, advanced web frameworks & libraries, and other advanced front-end technologies. In-depth web topics are covered including: advanced design techniques, user interface and experience, interactivity, animation, and other web related concepts are covered. Course fee required. Prerequisites: DES 2300 (Grade C- or higher); AND DES 2600 (Grade C- or higher); AND DES 2710 (Grade C- or higher); AND WEB 3400 (Grade C- or higher). FA.

**WEB 4600. Senior Project. 3 Hours.**
For students pursuing a degree in Computer and Information Technology. Emphasizes application of skills to commercial projects through design of or contribution to various private sector or university internet projects, print, and multimedia projects. Includes portfolio development. Course fee required. Prerequisite: Senior standing. SP.
WEB 4900R. Independent Research. 1-3 Hours.
For students pursuing an emphasis in Web Design and Development with advanced standing who wish to pursue a specific focus of study related to their degree emphasis and/or research interest not otherwise available in the current Web Design and Development curriculum. Students are closely supervised by appropriate faculty in the design and successful completion of the course. The course is dependent upon a formal contractual arrangement with the faculty member that is submitted at the beginning of the semester in which coursework is undertaken, and is contingent upon the department chair's approval. Students meet with the faculty mentor each week and provide progress reports for feedback. Students are required to meet the university requirement of 45 hours of work per credit. Variable credit 1.0 - 3.0. Repeatable up to 3 credits subject to graduation restrictions. Offered by arrangement. Course fee required. Prerequisite: Instructor permission.

WEB 4920. Internship. 3 Hours.
For students pursuing a degree in Computer and Information Technology. Designed to integrate Web Design & Development students into working environments that increase aptitude, skills, and networking. The internship setting will nurture a mentor learning relationship with the student, and assist them in preparation for after graduation. Course fee required. Prerequisite: Instructor permission. FA, SP, SU.

WEB 4990. Seminar in Web Development. 3 Hours.
For students wishing instruction that is not available through other regularly scheduled courses in this discipline. Occasionally, either students need some type of non-traditional instruction, or an unanticipated opportunity for instruction presents itself. This course may include standard lectures, travel and field trips, guest speakers, laboratory exercises, or other nontraditional instruction methods. Repeatable for credit as topics vary, up to 6 credits. Course fee required. Prerequisite: Advanced standing. Offered by arrangement.