FRONT-END WEB DEVELOPMENT, CERTIFICATE

Program Code: CC.WEBDESIGN2

This program should prepare students for technical positions related to web and graphic design. This multidisciplinary program incorporates classes from computer science and art. Course work includes a strong emphasis on computer graphics and design, data communications theory, operating systems, and web design with a focus on current industry standards. Cooperative Work Experience (CWE) is supervised real-world experience that supplements the academic classroom environment.

For information contact Debra Carino, 503-594-3170 or dcarino@clackamas.edu.

Outcomes
Related Instruction Outcomes
Computation
- 1 course - MTH-065 Algebra II or higher
- Use appropriate mathematics to solve problems.

Communication
- 1 course - WR-121Z Composition I
- Read actively, think critically, and write purposefully and capably for professional audiences.

Human Relations
- 3-4 credits - See Related Instruction for course list
- Engage in ethical communication processes that accomplish goals.

Program Outcomes
Upon successful completion of this program, students should be able to:

- apply knowledge of current graphic design software to capture or create images for use in client websites;
- use HTML, CSS, JavaScript, and current web editing technologies, to create standards-complaint, professional websites;
- leverage existing component tools to create e-commerce applications that solve real-world problems;
- perform client needs analyses to create web applications that solve real-world problems;
- articulate and justify technical solutions to an audience through oral, written, and graphical communication;
- communicate the importance of professional and ethical responsibilities and be aware of codes of conduct and other sources of guidance for professionally ethical decision making.

Requirements

Fall Term		Credits
ART-225	Computer Graphics I	4
CS-125H	HTML & Web Site Design	4
CS-140	Introduction to Operating Systems	4
Electives (p. 1)		4
	Credits	**16**
Winter Term		
CS-133J	Front-end JavaScript I	4
CS-135I	Advanced Web Design With Dreamweaver	4
CS-181	CMS Web Development	4
Electives (p. 1)		3
	Credits	**15**
Spring Term		
ART-226	Computer Graphics II	4
CS-233J	Front-end JavaScript II	4
CS-280	Computer Science/CWE	3
	Credits	**11**
Summer Term		
Select one of the following:		4-5
MTH-065	Algebra II	
	Higher Level Math or Statistics	
WR-121Z	Composition I	4
Human Relations requirement		3-4
	Credits	**11-13**
	Total Credits	**53-55**

Electives

Any CS course not included in the program, or any of the following:

Code	Title	Credits
ART-115	Basic Design: 2-Dimensional Design	4
ART-120	Creativity/Ideation	2
ART-262	Digital Photography & Photo-Imaging	4
ART-297	Professional Practices and Artist's Skills	3
BA-101	Introduction to Business	4
BA-103	Business Strategies for Computer Consultants	3
BA-120	Project Management Fundamentals	4
BA-250	Small Business Management	4
DMC-100	Introduction to Media Arts	3
DMC-104	Digital Video Editing	4
FYE-101	First Year Experience Level I	2

Careers
Career opportunities include:

- web designer
- web production staff
- graphic designer