FULL-STACK WEB DEVELOPMENT, AAS

Program Code: AAS.FULLSTACK

This program prepares students for technical positions related to web programming and design. This multidisciplinary program incorporates classes from computer science, art, English, and business. Course work includes computer graphics and design, web development with a focus on current industry standards, web server administration, data-driven web programming, digital media and animation, and technical writing. Cooperative Work Experience (CWE) is supervised real-world employment that supplements the academic classroom environment.

Oregon Tech Transfer Courses

The Business Department, in cooperation with Oregon Tech, offers a number of transferable classes into Oregon Tech's Bachelor of Applied Technology and Management degree program. Students planning to continue their studies at a four-year college should consult an advisor to obtain the most recent transfer information.

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.

Physical Education/Health/Safety/First Aid

- 1 credit - See Related Instruction for course list
- Use effective life skills to improve and maintain mental and physical well-being.

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.
- create sophisticated custom logos, graphics, and animations for a wide variety of client applications;
- describe the significance of relational databases to web development and apply these database concepts along with server-side scripting technologies towards the creation of data-driven web applications;
- interview and communicate with clients to create web applications that match client vision, personality, and needs;
- describe and complete the steps to begin a consulting business, including initial market research, marketing plans, and budgeting;
- exhibit good teamwork skills and serve as effective members of project teams.

Requirements

First Year

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. 2)		3-4
	Credits	**15-16**
Winter Term		
CS-133J	Front-end JavaScript I	4
CS-135I	Advanced Web Design With Dreamweaver	4
CS-181	CMS Web Development	4
	Credits	**12**
Spring Term		
ART-226	Computer Graphics II	4
BA-103	Business Strategies for Computer Consultants	3
CS-233J	Front-end JavaScript II	4
CS-280	Computer Science/CWE	3
	Credits	**14**
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
PE/Health/Safety/First Aid requirement		1
	Credits	**12-14**
Second Year		
Fall Term		
CS-135DB	Microsoft Access	3
CS-233W	Full-Stack Web Development I	4
CS-280	Computer Science/CWE	3
WR-122Z	Composition II	4
	Credits	**14**
Winter Term		
CS-151	Networking 1	4

CS-234W	Full-Stack Web Development II	4
CS-275	Database Design	3
WR-227Z	Technical Writing	4
	Credits	**15**
Spring Term		
ART-227	Computer Graphics III	4
CS-234P	PHP/MySQL Web Development	4
CS-280	Computer Science/CWE	3
CS-297W	Website Capstone	3
	Credits	**14**
	Total Credits	**96-99**

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-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/consultant
- webmaster
- web programmer
- web systems specialist
- graphic designer