

Career and Program Description

Web design and development represents a significant and growing industry segment that combines computer programming, extensive knowledge of software applications and proficiency in multimedia techniques. This program prepares students to plan, create, manage, supervise, and market web-based business operations, products, and services. These skills are transferable to a wide variety of web-related careers.

The Computer Applications/Office Systems (CAS/OS), Computer Information Systems (CIS), and Multimedia (MM) departments have partnered to create this Associate of Applied Science (AAS) two-year degree program. This interdisciplinary degree option combines back-end programming and development skills with front-end design skills to prepare students for a wide variety of web-related careers. Furthermore, students in this program will learn the designing, implementing, testing, and troubleshooting skills needed for web site construction and e-commerce applications, as well as incorporating multimedia techniques into web sites with audio and video applications.

In addition to foundational Web Design and Development skills, this program has two distinct focuses to choose from:

- Web Development – This emphasis will focus on web application development, networking, and server setup.
- Web Design – This emphasis will focus on multimedia, graphical as well as layout aspects of web site design.

Program Prerequisites and Requirements

Students must be competent with basic composition and math skills, word processing, spreadsheet, and basic formatting skills for common office documents. Basic browser navigation, searching the web, and electronic file management skills (creating, moving, copying, renaming, and deleting files and folders) are also essential to be successful in this program. Recommended (**not required**) courses to obtain these skills are CAS 104, CAS 133, CAS 170, CAS 216, OS 120, and BA 131.

MTH 65 or higher or passing the math competency exam is required for graduation.

Complete the following four parts to get **97 credits** minimum:

1. All of the Development and Design Core Requirements (65-66 credits)
2. Choose an emphasis and complete **one** of the following:
 - a. All the Development Emphasis Requirements (28 credits)
 - or**
 - b. All the Design Emphasis Requirements (27 credits)
3. Any additional Development/Design Elective courses until total credits are **97 or above**

All CAS/OS courses to be applied toward a CAS/OS certificate or degree must be passed with a “C” grade or better. (One credit classes must receive a pass grade.)

For additional information regarding CAS/OS programs:

- visit our websites at www.pcc.edu/cas and spot.pcc.edu/computers
- call us at (503) 977-4393.

Development and Design Core Requirements

(All courses required = 65-66 credits)

Course	Title	Credits	Course	Title	Credits
CAS 111D	Beginning Dreamweaver	3	BA 205	Solving Comm. Problems w/Tech.	
CAS 211D	Intermediate Dreamweaver	3	or MM 270	Writing for Multimedia	3 - 4
CAS 206	Principles of HTML/XHTML	4	or WR 227	Technical and Professional Writing I	
CAS 208	Beginning Photoshop for the Web	3	BA 207	Introduction to E-Commerce	4
CAS 215	CSS and Dynamic HTML	4	or CIS 243	E-Commerce Information Systems	
CAS 280W ^❶	Co-op Ed: Web Site Development	4	BA 223	Principles of Marketing	3
CIS 120 ^❷	Computer Concepts I	4	or BA 239	Advertising	
CIS 121 ^❷	Computer Concepts II	4	MM 110	Introduction to Multimedia	1
CIS 178	Applied Internet Concepts	4	MM 120	Multimedia Design	2
BA 101	Introduction to Business	4	MSD 279	Project Management	3
WR 121	English Composition	4		General Education (Arts & Letters)	4
				General Education (Social Sciences)	4

Choose one of the following emphases

Development Emphasis Requirements (All courses required = 28 credits)

Course	Title	Credits
CAS 213	Enhancing Web Pages with JavaScript	4
or CIS 233S	Internet Web Page Scripting	
CAS 214	Beginning ColdFusion	4
or CIS 234S	Web Application Development Using .NET	
or CIS 195P	PHP Web Development I	
CIS 133B	Intro to Visual Basic .NET Programming	4
or CIS 133J	Java Programming I	
CIS 122	Software Design	4
CIS 125D	Database Application Development I	4
CIS 179	Data Communication Concepts I	4
CIS 287I	Web Server Administration	4

Design Emphasis Requirements (All courses required = 27 credits)

Course	Title	Credits
CAS 175	Introduction to Flash	3
ART 115 ^❸	Basic Design	3
ART 116 ^❸	Basic Design	3
MM 130	Multimedia Graphic Video/Audio Production	3
MM 140	Multimedia Authoring I	3
MM 160	Marketing Yourself as Multimedia Pro	2
MM 220	Multimedia Design II	3
MM 230	Graphics for Multimedia	4
MM 231	Vector Graphics & Animation for the Web	3

Development/Design Electives

(Choose from these courses until total credits are 97 or above)

Course	Title	Credits	Course	Title	Credits
CIS 233B	Intermediate Visual Basic .NET Programming	4	ART 140	Digital Photography	3
or CIS 233J	Java Programming II		ART 197	Artist's Skills/Practical Issues	3
CIS 234B	Advanced Visual Basic .NET Programming	4	MM 235	Digital Video Editing and Production	3
or CIS 234J	Java Programming III		MM 236	Internet Delivery of Digital Video/Audio Files	3
CIS 275	Data Modeling and SQL Introduction	4	MM 245	Internet Delivery Methods	3
CIS 276	Advanced SQL	4	MM 236	Internet Delivery of Digital Video/Audio Files	3

Any course in either emphasis area above may be used as an elective as long as it is not being used as a requirement.

❶ Satisfactory progress through two terms of web site related courses or equivalent experience is required before enrolling in CAS 280W.

❷ CIS 120 and CIS 121 may be used toward the General Education Math/Physical Science/Computer Studies requirements.

❸ Students who choose the Design Emphasis cannot use ART 115 and ART 116 toward the General Education Arts & Letters requirements