

SOFTWARE DEVELOPMENT - ADVANCED TECHNICAL CERTIFICATE (ATC)

Explore More About This Program: <https://cwi.edu/program/software-development>

Certificate Quick Facts

- **Instructional School:** Science, Technology, and Math
- **Department:** Computer Science and Information Technology
- **Program Code:** SWDV.ATC
- **Program Type:** Career and Technical Education
- **Available Fully Online:** No
- **Eligible for Federal Financial Aid:** Yes

NOTE: Courses required for this program *may* have an additional fee; more information can be found on the [Special Course Fees](#) web page.

Certificate Requirements

Course	Course Title	Min Credits
General Education Requirements		
Select one of the following:		3
<u>GEM 1 - Written Communication course</u>		
<u>GEM 2 - Oral Communication course</u>		
<u>GEM 3 - Mathematical Ways of Knowing course</u>		3
PSYC 140	Human Relations for Career and Personal Success (GEM 6)	3
Major Requirements		
SWDV 105	Introduction to Programming	4
SWDV 110	Intermediate Programming	4
SWDV 115	Introduction to Web Application Development	4
SWDV 140	Intermediate Web Application Development	4
SWDV 143	Client-Side Frameworks	4
SWDV 152	Systems Analysis and Design	4
SWDV 210	Introduction to Server-Side Programming	4
SWDV 220	Fundamentals of Database Systems	4
SWDV 235	Advanced Web Application Development	4
SWDV 265	Mobile Development	4
SWDV 271	Game Development	4
SWDV 280	Collaborative Development	3
SWDV 293	Software Development Internship	1-3
Minimum Credit Hours Required		57

Certificate Plan: Fall or Spring Start

The course sequence listed below is strongly recommended in order to complete your program requirements. Many Career and Technical Education (CTE) courses have prerequisites and/or corequisites that have been accounted for within this Plan of Study Guide. Please register for your major requirements each semester as shown below using the Student Planning tool in myCWI. Consult your advisor for any questions regarding this plan.

NOTE: The required general education courses may be completed during any semester the student prefers, including summer semesters.

First Year

Fall		Credit Hours
SWDV 105	Introduction to Programming	4
SWDV 110	Intermediate Programming	4
SWDV 115	Introduction to Web Application Development	4
Total Semester Credit Hours		12
Spring		
SWDV 140	Intermediate Web Application Development	4
SWDV 143	Client-Side Frameworks	4

SWDV 152	Systems Analysis and Design	4
Select one of the following:		3
<u>GEM 1 - Written Communication course</u>		
<u>GEM 2 - Oral Communication course</u>		
Total Semester Credit Hours		15
Second Year		
Fall		
PSYC 140	Human Relations for Career and Personal Success (GEM 6)	3
SWDV 210	Introduction to Server-Side Programming	4
SWDV 220	Fundamentals of Database Systems	4
SWDV 235	Advanced Web Application Development	4
Total Semester Credit Hours		15
Spring		
SWDV 265	Mobile Development	4
SWDV 271	Game Development	4
SWDV 280	Collaborative Development	3
SWDV 293	Software Development Internship	1-3
<u>GEM 3 - Mathematical Ways of Knowing course</u>		3
Total Semester Credit Hours		15
Minimum Credit Hours Required		57

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Employ industry standard practices in the coding, design, and development of software.
- Utilize industry standard WYSIWIG authoring tools in the creation and deployment of websites.
- Use correct data modeling practices to develop databases designed for commerce.
- Develop dynamic websites utilizing industry standard scripting languages for database interaction.
- Install and configure software systems that provide website authoring, collaboration, and administration tools.
- Configure and deploy industry standard web servers.