

WEB DEVELOPER: CS

Certificate of Specialization | 20 credit hours minimum

Area of Interest: Science, Technology, Engineering, and Math (STEM)

Program Website (<https://stlcc.edu/programs-academics/pathways/s-t-e-m/web-developer/>)

Academic Advising (<https://stlcc.edu/admissions/advising/>)

Program Description:

The Web Developer Certificate of Specialization is designed for students seeking skills to qualify for positions as Web Developers. The certificate was developed to include topics that will build the programming and design skills a Web Developer needs in order to build and maintain an organization's website. Emphasis is placed upon object-oriented and scripted languages that are widely used for the Internet and intranets. The courses provide students with both the theoretical and technical knowledge and practical hands-on experience to be successful in the high demand Web Developer occupation.

Location. This program is offered in its entirety at Meramec.

Related Program. The Computer and Information Technology Department offers an associate in the following area:

Software Developer, Associate in Applied Science
(<http://catalog.stlcc.edu/programs/software-developer-aas/>)

Cost of Attendance. For more information on cost of attendance visit MoSCORES (<https://scorecard.mo.gov/Search/>).

Program Career and Salary Information. Pursuant to Missouri HB 1606 (2018), information regarding the number of credit hours, program length, employment rate, wage data, and graduates employed in careers related to their program of study at St. Louis Community College can be found at the following URL: <https://scorecard.mo.gov/scorecard/> (https://www.google.com/url?q=https://scorecard.mo.gov/scorecard/&sa=D&ust=1555536894857000&usg=AFQjCNG1xf3E_i2lO96zEytILO-s5xaJCQ). Search using School / Program "St. Louis Community College" and choose the degree or credential type of interest.

The following limitations to the data apply: Information provided is based on the most recent cohorts available. Typically, most recent cohorts for wage and completion data are six years prior to the current academic year. Time to complete a program of study varies depending on the number of credit hours students earn per semester.

Interested in this program? Start the enrollment process by visiting the Apply to STLCC (<https://www.stlcc.edu/admissions/apply-to-stlcc/>) page.

At the completion of the program, students are expected to:

1. use HTML5, CSS3, and JavaScript to create proficiently responsive and aesthetically pleasing websites.
2. implement front-end frameworks such as React and Angular to develop dynamic user interfaces and single-page applications
3. implement server-side programming with Python and Node.js to build robust web applications.
4. integrate and manage third-party APIs (such as social media, payment gateways, and mapping services) and develop custom RESTful services and GraphQL APIs.
5. implement web security protocols, including data encryption, authentication (OAuth, JWT), and secure API usage.
6. utilize essential development tools like Docker, GitHub, and popular IDEs to streamline development and foster collaborative coding.
7. develop websites that operate efficiently on various devices and screen sizes using modern CSS techniques and design principles.
8. utilize the fundamentals of UX design to enhance user satisfaction and accessibility in web applications.
9. manage relational and NoSQL databases, focusing on efficient data storage, retrieval, and scalability to support dynamic web applications.
10. manage web applications on cloud platforms such as AWS and Azure, emphasizing the optimization of performance, scalability, and reliability in cloud environments.

| Code | Title | Credit Hours |
|-----------------------------|--|--------------|
| Program Requirements | | |
| IS 139 | Web Publishing | 3 |
| IS 153 or IS 187 | C# Programming I Java Programming I | 4 |
| IS 265 | Web Scripting Technologies | 3 |
| IS 142 | Web Development | 3 |
| IS 141 | Graphics for the Web | 3 |
| IS 253 or IS 287 | C# Programming II Java Programming II | 4 |

Total Credit Hours 20

PLEASE NOTE: If you originally enrolled at STLCC prior to Fall 2024, you may need to view an archived catalog (<https://www.stlcc.edu/programs-academics/course-catalog/>) for your correct program requirements. Please speak with an advisor or the program coordinator for more information.

Full-Time Academic Plan:

| Code | Title | Hours | Prerequisites | Milestones/Notes |
|-------------------|---|-------|---|------------------------------|
| First Year | | | | |
| Fall | | | | |
| IS 139 | Web Publishing | 3 | Reading Proficiency | 1st 8-week class |
| IS 153 or 187 | C# Programming I or Java Programming I | 4 | Reading Proficiency | 1st 8-week class |
| IS 141 | Graphics for the Web | 3 | IS 139 with a minimum grade of "C" and Reading Proficiency | 8-week class starting week 4 |

| | | | | |
|------------------|---|-----------|---|-----------------------------------|
| IS 265 | Web Scripting Technologies | 3 | IS 139 with a minimum grade of "C" and Reading Proficiency | 2nd 8-week class, starting week 9 |
| IS 253 or 287 | C# Programming II or Java Programming II | 4 | IS 153 or IS 167 or IS 187 or IS 166 with minimum grades of "C" and Reading Proficiency | 2nd 8-week class, starting week 9 |
| IS 142 | Web Development | 3 | IS 153 or IS 167 or IS 187 with a minimum grade of "C", IS 139 with a minimum grade of "C", concurrent or prior enrollment in IS 265 with a minimum grade of "C", and Reading Proficiency | 6-week class, starting week 11 |
| | Credit Hours | 20 | | |
| | Total Credit Hours | 20 | | |

*Click on the hyperlinked course number to view additional information about the course.

**Students completing a course that has been assigned a MOTR number may transfer that course to any public institution in Missouri. Those who complete CORE 42 requirements will have that verification on their transcript.

*** It is your responsibility to verify that the courses listed above will transfer to the four-year institution of your choice. Maximize your transfer credits/classes by meeting with an academic advisor.

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Part-Time Academic Plan:

| Code | Title | Hours | Prerequisites | Milestones/Notes |
|-------------------|---|-----------|---|-----------------------|
| First Year | | | | |
| Fall | | | | |
| IS 139 | Web Publishing | 3 | Reading Proficiency | 1st 8-week class |
| IS 153 or 187 | C# Programming I or Java Programming I | 4 | Reading Proficiency | |
| IS 141 | Graphics for the Web | 3 | IS 139 with a minimum grade of "C" and Reading Proficiency | |
| | Credit Hours | 10 | | |
| Spring | | | | |
| IS 265 | Web Scripting Technologies | 3 | IS 139 with a minimum grade of "C" and Reading Proficiency | Apply for graduation. |
| IS 253 or 287 | C# Programming II or Java Programming II | 4 | IS 153 or IS 167 or IS 187 or IS 166 with minimum grades of "C" and Reading Proficiency | |
| IS 142 | Web Development | 3 | IS 153 or IS 167 or IS 187 with a minimum grade of "C", IS 139 with a minimum grade of "C", concurrent or prior enrollment in IS 265 with a minimum grade of "C", and Reading Proficiency | |
| | Credit Hours | 10 | | |
| | Total Credit Hours | 20 | | |

*Click on the hyperlinked course number to view additional information about the course.

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(05/08/24)

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