

# Software Development and Support

Online & Red Wing Campus

## OVERVIEW

**Software Development and Support are some of the most highly sought skills in today's job market. Build your future!**

At Minnesota State College Southeast, you will learn computer programming, web development, and support using a hands-on approach. These courses use broad concepts leading to detailed approaches to help you become an expert.

Learn from anywhere. All courses are available online. A rich online application environment, instructor developed recordings, and computer programming demonstrations make learning convenient.

High quality instruction. All of the lessons and exercises are designed to move students through the process of becoming software developers. You will learn a huge variety of skills ranging from broad concepts (analysis and design, software engineering, and teamwork) down to the details of coding for different environments (web servers, web clients, and IoT). Our students also use hands-on learning and cutting edge tools to create a production-level system of their own design.

Programming students design, code, and deploy applications using a wide variety of languages, tools, and computer environments, including:

- C#, Java, C, JavaScript, Angular
- HTML, CSS
- UML, SQL
- Programming/design tools: Visual Studio, IntelliJ, Android Studio
- Iterative design and coding methods
- Create business applications for the Web, Windows, and Android

Students in all of the Software Development and Support majors also learn to create web content, and install, deploy, and support many technologies. These include:

- Web content authoring (Adobe Dreamweaver, Photoshop, Animate)
- GitHub
- Cloud services, such as Azure web applications and databases
- Windows desktop and server operating systems
- Database and Web server management
- PC hardware

## MAJORS WITHIN

IT Support	AAS	60 credits
IT Support	Diploma	47 credits
Software and Web Development	AAS	60 credits
Software and Web Development	Certificate	39 credits

See backside for program plan



## PROGRAM HIGHLIGHTS

All Software Development and Support courses are available online

All Computer Programming lectures are available through lecture capture technology

Computer Programming assessment tests are online

Curriculum is constantly evolving to keep up with technology

Skilled programmers are needed in every industry

## CAREER OPPORTUNITIES

Computer Programmers for Software Development Firms  
 Consulting Firms  
 Education  
 Business & Industry

## PROGRAM COSTS - estimated cost including tuition, books and supplies

IT Support - AAS	\$14,975
IT Support - Diploma	\$11,570
Software and Web Development - AAS	\$14,825
Software and Web Development Certificate	\$9,374

## PLACEMENT

100%

[www.southeastmn.edu](http://www.southeastmn.edu)

# Software Development and Support

## Sample Program Plan

### IT Support - AAS

Course No.	Course Name	Credits
<b>First Semester (Fall)</b>		
ARTS 1222	Intro to Graphic Design	3
COMC 1741	Web Design, HTML, CSS	3
NWAT 1601	MS Workstation I	2
NWAT 1602	MS Workstation II	1
NWAT 1607	PC Hardware Support	3
COMC	Technical elective	3
<b>Semester total</b>		<b>15</b>
<b>Second Semester (Spring)</b>		
ENGL	Gen Ed (English)	3
SOCS	Gen Ed (Social Science)	3
COMC 1746	Web Graphics and Animation	3
COMC	Technical elective	3
COMC	Technical elective	3
<b>Semester total</b>		<b>15</b>
<b>Third Semester (Fall)</b>		
COMP 1509	Job Seeking Skills	1
	Gen Ed (elective)	3
COMC 1714	Intro to Visual Database Application Tools	3
COMC 1754	Microsoft Server Mgt for Web Developers	3
COMC	Technical elective	3
COMC	Technical elective	2
<b>Semester total</b>		<b>15</b>
<b>Fourth Semester (Spring)</b>		
MATH	Gen Ed (Math)	3
COMC 2722	Database Design & Mgt w/SQL	3
COMC 1745	Web Design and Technologies	3
COMC 2754	Computer Careers Capstone Project	3
COMC 2793	Computer Careers Internship	3
<b>Semester total</b>		<b>15</b>
		<b>Total Required Credits - 60</b>

### IT Support - Diploma

Course No.	Course Name	Credits
<b>First Semester (Fall)</b>		
HUMA 2522	Intro to Graphic Design	3
COMC 1741	Web Design, HTML, CSS	3
NWAT 1601	MS Workstation I	2
NWAT 1602	MS Workstation II	1
NWAT 1607	PC Hardware Support	3
<b>Semester total</b>		<b>12</b>
<b>Second Semester (Spring)</b>		
ENGL	Gen Ed (English)	2
COMC 1746	Web Graphics and Animation	3
COMC	Technical elective	3
COMC	Technical elective	3
<b>Semester total</b>		<b>11</b>
<b>Third Semester (Fall)</b>		
COMP 1509	Job Seeking Skills	1
MATH	Gen Ed (Math)	2
COMC 1714	Intro to Visual Database Application Tools	3
COMC 1754	Microsoft Server Mgt for Web Developers	3
COMC	Technical elective	3
<b>Semester total</b>		<b>12</b>
<b>Fourth Semester (Spring)</b>		
COMC 2722	Database Design & Mgt w/SQL	3
COMC 1745	Web Design and Technologies	3
COMC 2754	Computer Careers Capstone Project	3
COMC 2793	Computer Careers Internship	3
<b>Semester total</b>		<b>12</b>
		<b>Total Required Credits - 47</b>

### Software & Web Development - AAS

Course No.	Course Name	Credits
<b>First Semester (Fall)</b>		
ARTS 1222	Intro to Graphic Design	3
COMC 1714	Intro to Visual Database Application Tools	3
COMC 1730	Intro to Programming with .Net	3
COMC 1741	Web Design, HTML, CSS	3
NWAT 1601	MS Workstation I	2
<b>Semester total</b>		<b>14</b>
<b>Second Semester (Spring)</b>		
ENGL	Gen Ed (English)	3
COMC 2722	Database Design & Mgt w/SQL	3
COMC 1746	Web Graphics and Animation	3
COMC 2740	Intro to Java/C/C++/C#	3
COMC 2750	UML Modeling and Iterative Development	2
<b>Semester total</b>		<b>14</b>
<b>Third Semester (Fall)</b>		
SOCS	Gen Ed (Social Science)	3
COMC 2733	JavaScript and Web App Frameworks	3
COMC 1754	Microsoft Server Mgt for Web Developers	3
COMC 2742	Java/C++/C# Programming II	3
COMC 2747	Database Application Development	4
<b>Semester total</b>		<b>16</b>
<b>Fourth Semester (Spring)</b>		
COMM 1015	Job Seeking Skills	1
MATH	Gen Ed (Math)	3
	Gen Ed Elective	3
COMC 1745	Web Design & Technologies II	3
COMC 2749	Web Application Development	3
COMC 2754	Computer Careers Capstone Project	3
<b>Semester total</b>		<b>16</b>
		<b>Total Required Credits - 60</b>

### Software & Web Development - Certificate

Course No.	Course Name	Credits
<b>First Semester (Fall)</b>		
COMC 1714	Intro to Visual Database Application Tools	3
COMC 1730	Intro to Programming with .Net	3
COMC 2733	JavaScript and Web App Frameworks	3
<b>Semester total</b>		<b>9</b>
<b>Second Semester (Spring)</b>		
COMC 2722	Database Design & Mgt w/SQL	3
COMC 2740	Intro to Java/C/C++/C#	3
COMC 2750	UML Modeling and Iterative Development	2
<b>Semester total</b>		<b>8</b>
<b>Third Semester (Fall)</b>		
COMC 1741	Web Design, HTML, CSS	3
COMC 1754	Microsoft Server Mgt for Web Developers	3
COMC 2742	Java/C++/C# Programming II	3
COMC 2747	Database Application Development	4
<b>Semester total</b>		<b>13</b>
<b>Four Semester (Spring)</b>		
COMC 1745	Web Design & Technologies II	3
COMC 2749	Web Application Development	3
COMC 2754	Computer Careers Capstone Project	3
<b>Semester total</b>		<b>9</b>
		<b>Total Required Credits - 30</b>