MINNESOTA STATE COLLEGE SOUTHEAST

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

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

PLACEMENT

75%

MAJORS WITHIN

IT Support	AAS	60 credits
IT Support	Diploma	47 credits
Software and Web Development	AAS	60 credits
Software and Web Development	Certificate	30 credits

Estimated costs for each major including tuition, books and supplies are posted on **southeastmn.edu** under Academics > Academic Programs by Degree.

www.southeastmn.edu

Software Development and Support
Sample Program Plan

IT Support - AAS

Course No.	Course Name	Credits
First Semester (Fall)		
ARTS 1222	Intro to Graphic Design	3
COMC 1741	Web Design, HTML, CSS	3
NWAT 1601	Windows Workstation I	2
NWAT 1602	Windows Workstation II	1
NWAT 1607	IT Fundamentals	3
COMC	Technical elective (see advisor)	3
Semester total		**15**
Second Semester (Spring)		
Goal 1	Written and Oral Communication	3
Goal 5	History, Social, and Behavioral Sciences	3
COMC 1746	Web Graphics and Animation	3
COMC	Technical elective (see advisor)	3
COMC	Technical elective (see advisor)	3
Semester total		**15**
Third Semester (Fall)		
COMM 1015	Job Seeking Skills	1
MnTC Goal 1-10 (see advisor)		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
Semester total		**15**
Fourth Semester (Spring)		
Goal 4	Mathematics	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
Semester total		**15**
	Total Required Credits - 60	

IT Support - Diploma

Course No.	Course Name	Credits
First Semester (Fall)		
ARTS 1222	Intro to Graphic Design	3
COMC 1741	Web Design, HTML, CSS	3
NWAT 1601	Windows Workstation I	2
NWAT 1602	Windows Workstation II	1
NWAT 1607	IT Fundamentals	3
Semester total		**12**
Second Semester (Spring)		
Gen Ed	English or Communications Requirement	2
COMC 1746	Web Graphics and Animation	3
COMC	Technical elective	3
COMC	Technical elective	3
Semester total		**11**
Third Semester (Fall)		
COMM 1015	Job Seeking Skills	1
Gen Ed	Math Requirement	2
COMC 1714	Intro to Visual Database Application Tools	3
COMC 1754	Microsoft Server Mgt for Web Developers	3
COMC	Technical elective (see advisor)	3
Semester total		**12**
Fourth Semester (Spring)		
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
Semester total		**12**
	Total Required Credits - 47	

Software & Web Development - AAS

Course No.	Course Name	Credits
First Semester (Fall)		
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	Windows Workstation I	2
Semester total		**14**
Second Semester (Spring)		
Goal 1	Written and Oral Communication	3
COMC 2722	Database Design & Mgt w/SQL	3
COMC 1746	Web Graphics and Animation	3
COMC 2740	Intro to Java/C/C++/Programming	3
COMC 2750	UML Modeling and Iterative Process	2
Semester total		**14**
Third Semester (Fall)		
Goal 5	History, Social, and Behavioral Sciences	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
Semester total		**16**
Fourth Semester (Spring)		
COMM 1015	Job Seeking Skills	1
Goal 4	Mathematics	3
Gen Ed	MnTC Goal 1-10 (see advisor)	3
COMC 1745	Web Design & Technologies II	3
COMC 2749	Web Application Development	3
COMC 2754	Computer Careers Capstone Project	3
Semester total		**16**
	Total Required Credits - 60	

Software & Web Development - Certificate

Course No.	Course Name	Credits
First Semester (Fall)		
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
Semester total		**9**
Second Semester (Spring)		
COMC 2722	Database Design & Mgt w/SQL	3
COMC 2740	Intro to Java/C/C++/Programming	3
COMC 2750	UML Modeling and Iterative Process	2
Semester total		**8**
Third Semester (Fall)		
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
Semester total		**13**
Four Semester (Spring)		
COMC 1745	Web Design & Technologies II	3
COMC 2749	Web Application Development	3
COMC 2754	Computer Careers Capstone Project	3
Semester total		**9**
	Total Required Credits - 30	