

SOFTWARE DEVELOPMENT

Delivery: Daytime, Evening and Weekend Classes

Start: Fall or Spring Semester, Full- or Part-Time

OUTCOMES

Software Development A.A.S. Degree	69 cr.
Software Development Diploma	60 cr.
Desktop Programming Certificate	27 cr.
Web Programming Certificate	27 cr.

MAJOR DESCRIPTION

This program prepares students to become computer programmers. Learning an array of programming languages used for software development. Students design, write, debug and test application software. Individual effort and teamwork are developed. Skilled graduates are prepared to provide software solutions for employers.

WORK ENVIRONMENT

Working conditions are generally indoors in offices or laboratories. Programmers convert data from project specifications and problem statements to develop computer programs. Often employed in a team setting, programmers are also working more from home or other remote locations as telecommuting becomes more prevalent.

POTENTIAL JOB TITLES

- Computer Programmer
- Computer Software Specialist
- Software Architect
- Software Developer
- Software Development Engineer
- Software Quality Assurance Specialist

SALARY DATA

- Average Wage: \$34.65/hour
- Top Earners: \$49.30/hour

SOFTWARE DEVELOPMENT

A.A.S. DEGREE

This is a sample course sequence.

Please contact your program advisor regarding your academic plans.

First Year - First Semester 18 cr

ISTC1015	Supporting Business Applications.....	3
ISTC1030	Operating Systems I.....	3
ISTC1045	Network Systems I: Introduction to Networking.....	3
ISTC1100	Business Communications.....	3
ISTC1300	Introduction to Programming.....	3
SPEE1020	Interpersonal Communication.....	3

First Year - Second Semester 18 cr

ISTC1033	Operating Systems II.....	3
ISTC1050	Database Systems.....	3
ISTC1061	Intro to IT Security.....	3
ISTC1510	Web Programming I.....	3
ISTC2320	.NET I.....	3
ENGL1150	Composition I.....	3

Second Year - First Semester 18 cr

ISTC2110	Web Programming II.....	3
ISTC1230	System Analysis and Design.....	3
	Certificate Dependent**.....	6
MATS1251	Statistics (or MATS1300 or PHIL1250).....	3
	General Elective (any MnTC area).....	3

Second Year - Second Semester 15 cr

ISTC2100	Project Management (or ISTC2970).....	3
ISTC2330	Cross Platform Mobile App Development.....	3
ISTC2610	Web Programming III.....	3
	Certificate Dependent**.....	3
	General Elective (any MnTC area).....	3

TOTAL PROGRAM REQUIREMENTS 69

**** Students must choose one of the following certificates to complete the Software Development AAS: Desktop Programming or Web Programming.**

SOFTWARE DEVELOPMENT DIPLOMA

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First Year - First Semester 15 cr

ISTC1015	Supporting Business Applications.....	3
ISTC1030	Operating Systems I.....	3
ISTC1045	Network Systems I: Introduction to Networking....	3
ISTC1100	Business Communications.....	3
ISTC1300	Introduction to Programming.....	3

First Year - Second Semester 15 cr

ISTC1033	Operating Systems II.....	3
ISTC1050	Database Systems.....	3
ISTC1061	Intro to IT Security.....	3
ISTC1510	Web Programming I.....	3
ISTC2320	.NET I.....	3

Second Year - First Semester 15 cr

ISTC2110	Web Programming II.....	3
ISTC1230	System Analysis and Design.....	3
	Certificate Dependent**.....	6
SPEE1020	Interpersonal Communication.....	3

Second Year - Second Semester 15 cr

ISTC2330	Cross Platform Mobile App Development.....	3
ISTC2610	Web Programming III.....	3
	Certificate Dependent**.....	3
ENGL1150	Composition I.....	3
	General Elective (any MnTC area).....	3

TOTAL PROGRAM REQUIREMENTS 60

*** Students must choose one of the following certificates to complete the Software Development AAS: Desktop Programming or Web Programming.*

DESKTOP PROGRAMMING CERTIFICATE

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Technical Courses 27 cr

ISTC1300	Introduction to Programming.....	3
ISTC1510	Web Programming I.....	3
ISTC2050	Data Structures.....	3
ISTC2110	Web Programming II.....	3
ISTC2315	Java II.....	3
ISTC2320	.NET I.....	3
ISTC2325	.NET II.....	3
ISTC2330	Cross Platform Mobile App Development.....	3
ISTC2610	Web Programming III.....	3

TOTAL PROGRAM REQUIREMENTS 27

WEB PROGRAMMING CERTIFICATE

This is a sample course sequence.

Please contact your program advisor regarding your academic plans.

Technical Courses 27 cr

ISTC1300	Introduction to Programming.....	3
ISTC1510	Web Programming I.....	3
ISTC2110	Web Programming II.....	3
ISTC2320	.NET I.....	3
ISTC2330	Cross Platform Mobile App Development.....	3
ISTC2610	Web Programming III.....	3
GRDT1016	Typography and Layout I.....	3
WEBD1650	Web Content I.....	3
WEBD2695	UX/UI Design.....	3

TOTAL PROGRAM REQUIREMENTS 27



**DAKOTA COUNTY
TECHNICAL COLLEGE**

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