

SOFTWARE DEVELOPMENT

Delivery: Daytime, Evening and Weekend Classes
Start: Fall or Spring Semester, Full- or Part-Time
Location: Rosemount Campus

Outcomes

Software Development A.A.S. Degree69 cr.
 Software Development Diploma60 cr.
 Desktop Programming Certificate.....27 cr.
 Mobile Programming Certificate27 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

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
Total Credits		18

First Year - Second Semester

ISTC1033	Operating Systems II	3
ISTC1050	Database Systems	3
ISTC1060	Security I	3
ISTC1510	Web Programming I	3
ISTC2320	.NET I	3
ENGL1150	Composition I	3
Total Credits		18

Second Year - First Semester

ISTC2110	Web Programming II	3
ISTC1230	System Analysis and Design Certificate Dependent***	3 6
MATS1251	Statistics (or MATS1300 or PHIL1250) General Education Elective**	3 3
Total Credits		18

Second Year - Second Semester

ISTC2100	Project Management (or ISTC2970)	3
ISTC2330	Cross-Platform Mobile App. Development	3
ISTC2610	Web Programming III Certificate Dependent*** General Education Elective**	3 3 3
Total Credits		15

TOTAL PROGRAM REQUIREMENTS 69

*** Select General Education electives from any MnTC goal area.
 ***Students must choose one of the following certificates to complete the Software Development AAS: Desktop Publishing, Mobile Programming, Web Programming.*

SOFTWARE DEVELOPMENT - DIPLOMA

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First Year - First Semester

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
Total Credits		15

First Year - Second Semester

ISTC1033	Operating Systems II	3
ISTC1050	Database Systems	3
ISTC1060	Security I	3
ISTC1510	Web Programming I	3
ISTC2320	.NET I	3
Total Credits		15

Second Year - First Semester

ISTC2110	Web Programming II	3
ISTC1230	System Analysis and Design Certificate Dependent***	6
SPEE1020	Interpersonal Communication	3
Total Credits		15

Second Year - Second Semester

ISTC2330	Cross-Platform Mobile App. Development	3
ISTC2610	Web Programming III Certificate Dependent***	3
ENGL1150	Composition I	3
	General Education Elective**	3
Total Credits		15
TOTAL PROGRAM REQUIREMENTS		60

** Select General Education electives from any MnTC goal area.
***Students must choose one of the following certificates to complete the Software Development AAS: Desktop Publishing, Mobile Programming, Web Programming.

DESKTOP PROGRAMMING - CERTIFICATE

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Technical Courses

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 Credits		27

TOTAL PROGRAM REQUIREMENTS 27

MOBILE PROGRAMMING - CERTIFICATE

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Technical Courses

ISTC1300	Introduction to Programming	3
ISTC1510	Web Programming I	3
ISTC2110	Web Programming II	3
ISTC2130	Android Programming	3
ISTC2320	.NET I	3
ISTC2330	Cross-Platform Mobile App. Development	3
ISTC2500	iOS Programming	2
ISTC2550	Mobile Cloud Integration	2
ISTC2610	Web Programming III	3
WEBD2675	Design for Mobile Apps	2
Total Credits		27

TOTAL PROGRAM REQUIREMENTS 27

WEB PROGRAMMING - CERTIFICATE

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Technical Courses

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
WEBD1032	Web Fundamentals	2
WEBD2675	Design for Mobile Apps	2
WEBD2705	JavaScript for Designers	2
Total Credits		27
TOTAL PROGRAM REQUIREMENTS		27

2017-2018 CATALOG





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