

# COMPUTER TECHNOLOGIES

## SOFTWARE AND WEB DEVELOPMENT

### Software and Web Development Degree - A25590SW

-Day and Evening  
This curriculum prepares learners to design and develop desktop and web applications. Graduates will be proficient in C#, .NET, MVC, HTML, client/server-side JavaScript, and SQL. Graduates will be able to support the software development needs of businesses in a wide variety of industries, including healthcare, manufacturing, insurance, finance and software publishing.

Students will solve business computer problems through programming techniques and procedures. The primary emphasis of the curriculum is hands-on training in programming and related computer areas that provide the ability to adapt as systems evolve.

Graduates should qualify for employment in business, industry, and government organizations as programmers, programmer trainees, programmer/analysts, software developers, database specialists, software specialists, or information systems managers.

### IT Foundations Certificate - C25590F

-Online  
This certificate is designed to give individuals an all-around orientation to computer technologies. It is a recommended starting place for students who know they like computer technology, but are not sure what specific field of computers might be right to follow for their career. The courses introduce students to security, operating systems, programming, databases and other career options that involve computer technology. The courses also can prepare students for a variety of industry certifications

### C# Programming Certificate - C25590CZ

-Online  
Designed for individuals interested in acquiring programming skills necessary to design and implement C# programs. The student will learn how to design C# programs using event-driven programming techniques, implement current interface design standards, and create reusable code. Manipulate records in both a file-based system and a database system, and program customization using API calls. Emphasis is placed on proper program design techniques.

### JavaScript Certificate – C25590JS

-Day  
The certificate offers courses for students interested in programming JavaScript with Full Stack implementation

### .NET Programming Certificate - C25590NE

-Day  
The .NET Programming Certificate offers courses for students to become proficient in .NET technologies. **Prerequisites required: C25590CZ**

### Programming Fundamentals Certificate - C25590PF

-Day  
The Fundamentals of Computer Programming Certificate will give students the opportunity to achieve programming literacy.

## PROGRAM SEQUENCE

### FIRST SEMESTER

CSC 120	Computing Fundamentals I	4
CSC 121	Python Programming	3

CTI 110	Web, Pgm, and DB Foundations	3
CTI 120	Network & Sec Foundations	3
	MAT 121 or Higher	3
ACA 111	Student Success	1

### SECOND SEMESTER

CSC 153	C # Programming	3
DBA 120	Database Programming I	3
WEB 115	Web Markup and Scripting	3
NOS 110	Operating System Concepts	3
CTS 115	Information Systems Business Concepts	3

**Completes IT Foundations Certificate (C25590F):** CTI-110, CTI-120, CTS-115, CSC-120, NOS-110

### FIRST SUMMER SEMESTER

	Major Elective	3
CSC 253	Adv C# Programming	3

**Completes C# Programming Certificate (C25590CZ):** CSC-120, CSC-121, CSC-253, CSC-153

### THIRD SEMESTER

COM 120	Introduction to Interpersonal Comm	3
CSC 174	Server-Side JavaScript	3
WEB 180	Active Server Pages	3
CSC 163	C# Applications Development	3
CSC 154	Software Development	3

**Completes JavaScript Certificate (C25590JS)**

### FOURTH SEMESTER

CSC 226	.NET Programming	3
ECO 251	Prin of Microeconomics	3
ENG 111	Writing and Inquiry	3
	HUM/Fine Arts Elective	3
	Project Elective	3

**Completes .NET Programming Certificate (C25590NE):** CSC-174, WEB-180, CSC-163, CSC-226

**Completes Programming Fundamentals Certificate (C25590PF):** CSC-120, CSC-121, CSC-153, DBA-120

### Humanities and Fine Arts

(Select 1 Courses)

ART 111	Art Appreciation	3
HUM 115	Critical Thinking	3
MUS 110	Music Appreciation	3
PHI 240	Introduction to Ethincs	3

### Major Electives I

Select 3 hours from the following courses

CSC 116	Introduction to Functional Programming	3
CSC 122	Python Applications	3
CSC 256	Software Quality Assurance	3
DBA 130	Introduction to NoSQL Databases	3
DBA 115	Database Applications	3
DBA 221	SQL Server DB Programming II	3
WEB 215	Advanced Web Markup and Scripting	3
WEB 187	Programming for Mobile Devices	3
CTS 285	Systems Analysis and Design	3

### Project Electives

Select 3 hours from the following courses

CSC 227	Cloud Applications	3
CSC 289	Programming Capstone	3
*WBL 111	Work-Based Learning	1
*WBL 112	Work-Based Learning	2
*WBL 113	Work-Based Learning	3

# COMPUTER TECHNOLOGIES

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\*Work-Based Learning is an elective. Students must have approval from the department head and pre-register with the Computer Technologies Division office. The Work-Based Learning work period may be taken over two semester as WBL 112 or over two semesters as WBL-111, and WBL-121 or in one semester as WBL-113

**Graduation Requirements .....68 Credit Hours**