

IT SOFTWARE DEVELOPMENT SPECIALIST

About the Software Development Specialist Program

This diploma provides students the knowledge necessary to gain entry level employment as a business programmer. Students learn to gather user requirements, develop software applications, and develop technical documentation.

PROGRAM OUTLINE

COURSE #	COURSE TITLE	CREDITS
1015211500	<p>Database Fundamentals</p> <p>Students learn the fundamental concepts and applications of relational database tables using a hands-on approach. Topics include database architectures, data structures, planning, creation, inquiry, updating, input and output forms (reporting), and importation of data from an outside source for use in databases.</p> <p>Competencies</p>	3.00
10152115C01	<p>Database Fundamentals A</p> <p>This course explores relational database concepts including nomenclature, keys, functional dependencies, and normalization.</p>	1.00
10152115C02	<p>Database Fundamentals B</p> <p>This course examines database security concepts including user roles, backup and recovery, encryption, and concurrency.</p>	0.50
10152115C03	<p>Database Fundamentals C</p> <p>This course explores the creation of use case, class, and entity relationship diagrams.</p>	1.00
10152115C04	<p>Database Fundamentals D</p> <p>This course explores the creation of database based on a scenario, including development of a scenario, database requirements, and summary report.</p>	0.25
10152115C05	<p>Database Fundamentals E</p> <p>This course explores an administrator's role and responsibilities relating to a database, including the creation of a report and a relational database examining the role of a database administrator.</p>	0.25
1015212000	<p>Introduction to Programming</p> <p>Introduces the learner to programming concepts using structured logic and basic concepts related to computer programming and program development. Programs will be developed using sequential, selection, and looping control structures, functions, arithmetic calculations.</p> <p>Competencies</p>	3.00
10152120C01	<p>Introduction to Programming A</p> <p>Students learn how to develop a basic Visual Basic Program.</p>	1.50
10152120C02	<p>Introduction to Programming B</p> <p>Students learn how to develop a basic Java Program</p>	1.50

COURSE #	COURSE TITLE	CREDITS
1015214600	Programming 2 Further develops concepts introduced in Introduction to Programming and explores more advanced topics such as methods, classes and arrays. Prerequisite: 1015212000 Introduction to Programming (C or better).	3.00
Competencies		
10152146C01	Programming 2A Students learn to implement methods in Java Prerequisite: 10152120C02 Introduction to Programming B (B or better).	0.75
10152146C02	Programming 2B Students learn to implement arrays in Java Prerequisite: 10152120C02 Introduction to Programming B (B or better).	0.75
10152146C03	Programming 2C Students learn to implement objects in Java Prerequisite: 10152120C02 Introduction to Programming B (B or better).	0.75
10152146C04	Programming 2D Students combine methods, arrays, and objects into a Java Program Prerequisite: 10152120C02 Introduction to Programming B (B or better).	0.75
1015216000	Programming 3 Further develops concepts introduced in Programming 2 and explores more advanced topics such as Graphical User Interfaces and databases. Prerequisite: 1015214600 Programming 2 (C or better).	3.00
Competencies		
10152160C01	Programming 3A Students learn to implement inheritance in Java Prerequisite: 10152146C04 Programming 2D (B or better).	0.50
10152160C02	Programming 3B Students learn to implement exceptions in Java Prerequisite: 10152146C04 Programming 2D (B or better).	0.50
10152160C03	Programming 3C Students learn to implement GUIs in Java Prerequisite: 10152146C04 Programming 2D (B or better).	0.50
10152160C04	Programming 3D Students learn to implement a database in Java Prerequisite: 10152146C04 Programming 2D (B or better).	0.50
10152160C05	Programming 3E Students combine inheritance, exceptions, gui, and a database into a Java Program Prerequisite: 10152146C04 Programming 2D (B or better).	1.00
1080119600	Oral Interpersonal Communication	3.00

COURSE #	COURSE TITLE	CREDITS
	Focuses upon developing speaking, verbal and nonverbal communications, and listening skills through individual presentations, groups activities, and other projects.	
Competencies		
10801196C00	Oral Interpersonal Communication	3.00
	Focuses upon developing speaking, verbal and nonverbal communications, and listening skills through individual presentations, groups activities, and other projects.	
2081020100	Fundamentals of Speech	3.00
	Examines theory and process of communication, the role of speech in self-development, the art of persuasion, topic selection, the use of research-based evidence, and audience analysis. Includes organizing speech content, speech delivery, and critique via presentation of informative and persuasive speeches and development of effective extemporaneous speaking style. Students gain self-confidence, proficiency, and poise.	

Total Credits:

15.00

Talk with an Academic Advisor about the program outline. Together, you will determine if credits you've already earned satisfy any requirements, discuss possible alternative courses, and choose the best classes if you're thinking of transferring.

AT A GLANCE

How You'll Learn



ONLINE MULTIPLE START DATES FLEXIBLE PACE

2021 Start Dates

January 6	May 7	September 1
February 1	June 7	October 4
March 1	July 5	November 1

2022 Start Dates

January 5	March 1	June 6
February 7	May 2	July 11

[VIEW FULL ACADEMIC CALENDAR](#)

What is Competency-Based Education?

Competency-Based Education (CBE) is learning at your own pace by mastering competencies through demonstration. Once all competencies for a program have been assessed and mastered, students will earn a certificate, diploma, or degree.

[LEARN MORE ABOUT CBE](#)

Approximate Cost

\$2,264*

*Based on 10-level courses—materials, books, and fees may be additional

What You'll Learn

- Design Applications
- Utilize essential data technologies
- Develop basic applications

Your Potential Careers

- Programmer
- Software Developer
- Programmer/Analyst
- Business Analyst

Median Annual Salary

\$81,782	\$84,358	\$103,381
Local	State	National

EMSI 2020.1

Get Started

Your application can be submitted online, it takes just a few minutes to complete.

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