

# COMPUTER INFORMATION SYSTEMS - SOFTWARE DEVELOPMENT FUNDAMENTALS, SHORT-TERM TECHNICAL CERTIFICATE

Curriculum Code #6620

Effective May 2025

Division of Engineering, Business and Information Technologies (<http://catalog.lorainccc.edu/academic-programs/engineering-business-information-technologies/>)

The short-term technical certificate software development fundamentals represents the successful completion of select computer programming courses that prepare the student to develop business computer applications. Emphasis is placed on commonly used development technologies. Completion of this certificate prepares the student for entry-level software development positions or for further study leading to an associate degree in software development or web development. It is also especially well-suited for those individuals with experience in "legacy" technologies who wish to upgrade their skills.

Code	Title	Hours
CISS 121	MICROCOMPUTER APPLICATIONS I	3
SDEV 101	INTRODUCTION TO THE LCCC COMMUNITY	1
CISS 160	INTRODUCTION TO PROGRAMMING IN C# <sup>1</sup>	4
CISS 216	WEB DEVELOPMENT	3
CISS 143	DATABASE DESIGN AND IMPLEMENTATION <sup>1</sup>	3
CISS 222	ADVANCED PROGRAMMING IN C# <sup>1</sup>	3
CISS 226	INTRODUCTION TO PROGRAMMING IN JAVA <sup>1</sup>	3
Select one of the following:		3-4
CISS 232	SCRIPTING IN THE CLIENT SERVER ENVIRONMENT <sup>1</sup>	
CISS 243	WEB DATABASE INTEGRATION <sup>1</sup>	
CISS 264	INTRODUCTION TO ANDROID PROGRAMMING <sup>1</sup>	
<b>Total Hours</b>		<b>23-24</b>

<sup>1</sup>

Indicates that this course has a prerequisite.

While completion of this certificate may aid in obtaining employment, many employers recommend the minimum completion of a computer information systems degree program to gain employment in an IT-related field.

Program Contact(s):

**Mark Harms**  
440-366-7023  
jharms@lorainccc.edu

For information about admissions, enrollment, transfer, graduation and other general questions, please contact your advising team (<https://www.lorainccc.edu/admissions-and-enrollment/advising-and-counseling/>).

More program information can be found on our website. (<https://www.lorainccc.edu/it/programming-and-software-development/computer-information-systems-software-development-fundamentals-short-term-certificate/>)

Credit for Prior Learning (PLA) options may be available for your program. For more information, please visit our website: [www.lorainccc.edu/PLA](http://www.lorainccc.edu/PLA) (<http://www.lorainccc.edu/PLA/>)

Program Learning Outcomes

1. Design software solutions for business applications
2. Develop software programs and components
3. Demonstrate fundamental techniques and skills utilizing business computer applications and software development