

Software Development Certificate



From mobile apps to enterprise systems, software development powers our digital world. Businesses across every industry need developers who can build secure, scalable, and innovative solutions. If you're ready to break into this high-demand field—or expand your programming expertise—a **Software Development Certificate** from **Columbus State Community College** can help you get there.

This flexible, noncredit certificate program is delivered in a structured, cohort-based format. You'll learn the tools, techniques, and coding practices used by today's software professionals while building a portfolio that demonstrates your abilities to employers.

Why Choose This Program?

Hands-on, skills-first curriculum: Learn by doing with guided labs, team projects, and real-world applications.

Built for working professionals: Courses are designed to fit your schedule, with practical assignments you can apply immediately.

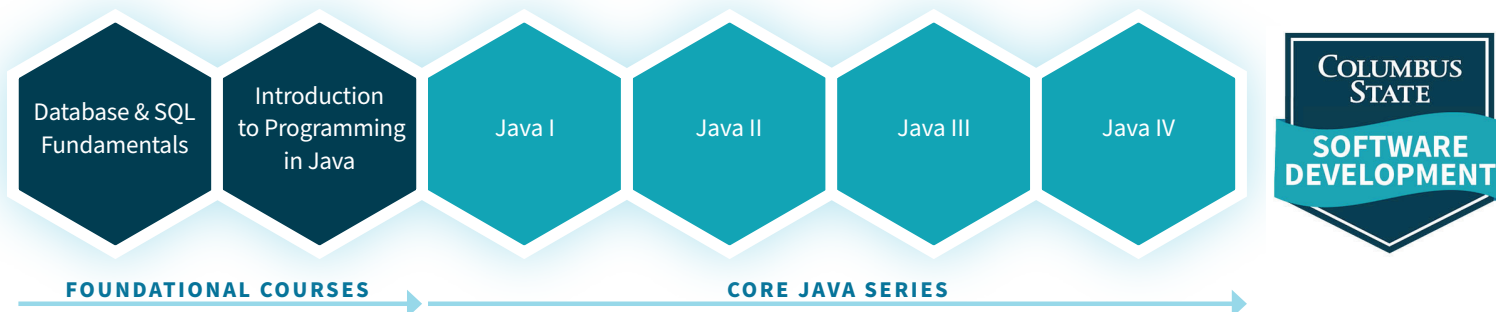
Career readiness: From fundamental logic to advanced Java applications, you'll build the skills to qualify for software development roles in today's job market.

What You'll Learn

The program focuses on the **Java programming language** and core development principles used by professional software engineers. You'll gain experience with object-oriented programming, databases, APIs, cloud services, and modern development workflows. You'll also practice tools like **Git, SQL, Maven, and Jenkins**, giving you the technical fluency employers expect.

Who Should Enroll

This certificate program is designed for working adults with some background in informational technology as well as professionals looking to reskill or upskill in IT-related fields.



Software Development Certificate Courses

FOUNDATION COURSES

Database & SQL Fundamentals

Gain experience working with relational databases and structured query language (SQL). Learn how to design, manage, and query databases to extract and structure data. Skills taught in this course are applicable to data analysts, cybersecurity professionals, and software developers alike.

Introduction to Programming in Java

Students are introduced to **programming logic** and problem-solving using Java. The course focuses on the basic building blocks of programming: **sequence, selection, and looping**. Students develop algorithmic solutions, debug logical and syntactical errors, and use **Unified Modeling Language (UML)** to model problem-domain objects through class design.

Core Java Series

Java I

Building on Introduction to Programming in Java, this course explores the **core features of the Java language**, including **declarations, statement sequences, decision-making constructs, loops, arrays, and object-oriented programming** with **classes, objects, and inheritance**. Students begin applying foundational Java techniques in structured programs.

Java II

This course expands upon Java I with more complex topics and development tools. Students explore **Java collections**, use **Git and GitHub** for version control, and are introduced to **unit testing, switch statements, and enums**. Object-oriented principles such as **abstraction** and **encapsulation** are reinforced. Students gain experience working within an existing codebase to prepare for **enterprise-level development environments**.

Java III

Students deepen their understanding of Java by applying **advanced programming techniques**. This course introduces **Model-View-Controller (MVC)** design patterns, **XML and JSON** data handling, **multithreading**, and **database integration** using **JDBC**. Students also work with Hibernate and other **relational mapping tools** and use **Docker** to support containerized development.

Java IV

This final course focuses on the development of **web applications** using Java. Students are introduced to **web technologies**, including the **Spring Framework**, and engage in a **capstone project** that simulates the software development process in an enterprise setting.

For program dates and tuition information visit csc.edu/it-workforce or email acceleratedtraining@csc.edu



Ready to Start Coding Your Future?

With Columbus State's Software Development Certificate, you'll gain the technical skills, portfolio experience, and industry knowledge to stand out in the job market—and take the next step in your career.