Software Development Certificate

Design and build software applications to meet the needs of business.

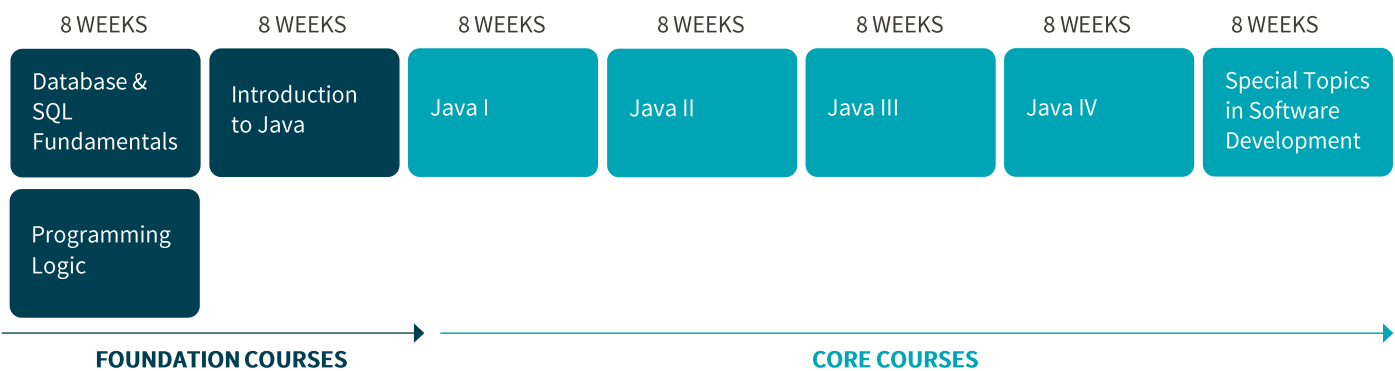Today's businesses rely on highly trained software developers that keep pace with business needs.

This 56-week program is intended for individuals with little-to-no background in software development who are interested in developing the skills that can lead to a job in the area. The program, which Columbus State designed in partnership with Nationwide, begins with essentials in computer science, followed by a series of software development courses using Java. Students who complete the series will be grounded in the fundamentals of application development in an enterprise environment.

Participants benefit from a mix of online coursework and virtual real-time instruction. Participants should expect to spend up to 10–15 hours per week on coursework, depending on the level of technology background.

Students who complete this program will receive a certificate of completion from Columbus State.

Software Development Certificate (56 weeks)

8 WEEKS	8 WEEKS	8 WEEKS	8 WEEKS	8 WEEKS	8 WEEKS	8 WEEKS
Database & SQL Fundamentals	Introduction to Java	Java I	Java II	Java III	Java IV	Special Topics in Software Development
Programming Logic						

FOUNDATION COURSES → CORE COURSES →

Advancing Opportunity Through Partnership

The Software Development Certificate, designed in partnership with Nationwide, provides adult learners a convenient and flexible way to enhance their careers with in-demand IT skills.

Software Development Certificate Courses

Database & SQL Fundamentals
8 weeks

This course introduces the student to the fundamental concepts and techniques of relational database technology, structured query language, database design, and database management. Students perform hands-on labs with commercial software and databases based on real-world scenarios.

Programming Logic
8 weeks

This course provides an introduction to the program development and design process, including computer-based concepts of problem-solving, structured programming logic and techniques, algorithm development, and program design. Topics include program flowcharting, algorithms, control structures, like sequence, selection/decision, and repetition/looping.

Introduction to Java*
8 weeks

This course provides instruction in basic concepts of object-oriented programming. Topics include classes and objects, UML, programming standards, variables, data types, operators, arrays, modularization, and procedures/functions/methods.

Java I
8 weeks

This course introduces the basics of designing, coding, and testing simple Java programs. Topics include class and inheritance, polymorphism, interfaces and exception handling, as well as an introduction to unit test tools.

Java II
8 weeks

This course builds on Java I and expands the topics to cover string manipulation, Java collections, sorting and searching. Students will work in groups to complete a project.

Java III
8 weeks

This course introduces students to more advanced Java concepts, including enumerations, MVC design patterns, database connectivity within programs and object relational mapping.

Java IV
8 weeks

This course wraps up the Java development series, covering servlets, web services including REST, and Jenkins. Students will work together to complete a group project.

Special Topics in Software Development
8 weeks

This course introduces topics specific to application development in an enterprise environment, including code refactoring, enterprise architecture, and secure app development principals.

For more information email workforce@cscc.edu or visit cscc.edu/it-workforce.