



JAVA PROGRAMMING CERTIFICATE PROGRAM • ONLINE

The Java programming language lies at the core of many large-scale business applications – especially business-to-business commercial systems that fuel the Internet economy. In addition, the portability inherent in Java is useful for programming a wide variety of portable electronics, from smart phones to embedded systems in a rapidly expanding number of consumer products. Programmers currently using other languages are likely to encounter projects in the near future that require knowledge of Java.

WHO SHOULD ENROLL

This certificate program is designed for people who already have introductory Java programming experience or experience using another object-oriented language such as C++ or C#. If you already work with Java, you may find the courses on Unified Modeling Language (UML) and Object-Oriented Analysis and Design to be useful as stand-alone courses to help improve your application design skills.

Because most Java application development is conducted using an engineering approach, we recommend that you have at least a bachelor's degree in a technical field, such as computer science or engineering, before starting this program. If you don't have a bachelor's degree in a technical field or prior programming experience, we recommend that you begin the program by taking *I&C SCI X460.20 Introduction to Programming using Java*, which will prepare you for *I&C SCI X460.10 Java Programming I*.

PROGRAM BENEFITS

- Write applications using Java for stand-alone or client/server systems
- Develop Java applets for the Internet
- Apply good analysis and design procedures to software development in Java
- Use the Unified Modeling Language (UML) as a notation for software design
- Develop graphical user interfaces (GUIs) for Java applications
- Prepare for advanced Java study such as the Java Enterprise Development Certificate Program

CERTIFICATE ELIGIBILITY AND REQUIREMENTS

To receive the certificate in Java Programming, you must complete the 4 required courses and 3 units of elective courses (a total of 15 units of coursework), with a grade of "C" or higher in each course. All requirements must be completed within 5 years after the student enrolls in his/her first course. Students not pursuing a certificate are welcome to take as many individual courses as they wish.

PROGRAM FEES

The total cost of the program varies depending on the elective and prerequisite courses chosen. Actual fees may differ from the estimate below. Fees are subject to change without prior notice.

Course Fees (12 required and 3 elective units)	\$3,555
Candidacy Fee	\$125
Textbooks and Materials	\$373
Total Estimated Cost	\$4,053

TO ENROLL

Visit ce.uci.edu/java for full course descriptions, instructor biographies, and enrollment information.

FOR MORE INFORMATION:

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JAVA PROGRAMMING CERTIFICATE PROGRAM		
COURSE#	PREREQUISITE COURSE	UNITS
I&C SCI X460.20	Introduction to Programming Using Java	1
COURSE#	REQUIRED COURSES	UNITS
I&C SCI X471.71	Introduction to Unified Modeling Language	3
I&C SCI X471.91	Object-Oriented Analysis and Design	3
I&C SCI X460.10	Java Programming I	3
I&C SCI X460.11	Java Programming II	3
COURSE#	ELECTIVE COURSES (Minimum 3 units)	UNITS
I&C SCI X460.37	Data Structures and Algorithms	2.5
I&C SCI X460.33	Design Patterns for Java	3
I&C SCI X460.53	Cloud Computing Platform as a Service (PaaS)	1.5
I&C SCI X494.91	The Scrum Framework for Agile Project Management	2.5
I&C SCI X494.80	Agile Project Management	3
I&C SCI X494.83	Agile Development	2.5
I&C SCI X494.85	Agile Software Design and Programming	2.5
I&C SCI X494.87	Test Driven Development (TDD)	2
I&C SCI X460.72	Angular	1.5
Android Development		
I&C SCI X402.39	Introduction to Android Application Development with Java Essentials	1.5
I&C SCI X402.40	Application Development for Android Devices	1.5
I&C SCI X402.41	Advanced Application Development for Android	1.5

ADVISORY COMMITTEE

John Clingan, Principal Product Manager, Oracle Corp.
Craig S. Dickson, Software Engineer Architect, The Juggernaut Group
Martin Hubert, CEO, Freightgate (eLogistics)
Prakash Malani, Consultant, MCS LLC
Paul Moore, Senior Programmer/Analyst, Capital Group

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Jeff Shelley, Software Engineer, MedAvant Healthcare Solutions
Hong Tan, Developer, Accenture
Ray Tayek, Independent Consultant