

Laney College

Computer Programming With Java

Overview

College	Laney - Mathematics and Sciences
Originator	Kim Bridges
Award Type	Certificate of Achievement

Codes and Dates

State Approval Date	1/03/2018
Curriculum Committee Approval Date	5/12/2017
Board of Trustees Date	11/14/2017
Current Effective Date	1/22/2018
Program Control Number	35235
Top Code	0707.10 - Computer Programming/Programmer, General*
CIP Code	11.0201: Computer Programming/Programmer, General.

Description

The certificate in Computer Programming with Java prepares students for careers as software developers. The program provides the analytical, methodological, and language skills required within the computer industry, and serves as a partial foundation for continued education at four-year institutions. It provides a "merit badge" certification of a skill set needed in a vital career field. See a counselor for more information.

Career Opportunities

Computer programming continues to be an excellent career, with openings in all industries. Job titles include: Computer Programmer, Programmer/Analyst, Software Developer, Computer Systems Analyst, Computer Applications Developer, Computer Applications Engineer, Computer Language Coder, Computer Systems Consultant, Software Architect, Software Engineer.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Computer Software Development: Demonstrate the ability to apply data requirements, algorithmic principles, and software development practice in the modeling and design of computer-based systems in a way that proves comprehension of the tradeoffs involved in design choices.
2. Programming Skills: Analyze a problem, using algorithms to create computer systems and appropriate problem solving using a programming language.
3. Solve Business Problems with Computers: Interpret and analyze a business information problem and design, code, compile, test and debug a program solution in Java using proper program syntax balancing efficiency and maintainability, and manage project tasks required for completion of a computer system development project.

Degree Requirements:

Required Courses	Credit Hours: (13 Required)
CIS 006 or Introduction to Computer Programming	5
CIS 061 Structure and Interpretation of Computer Programs *	5
CIS 036A Java Programming Language I	4
CIS 036B Java Programming Language II	4
Choose at least 3 units from the following list.	Credit Hours: (3 - 4 Required)
BUS 001A Financial Accounting *	4
BUS 005 Human Relations in Business *	3
BUS 020 General Accounting *	3
BUS 024 Computerized Accounting Principles *	3
CIS 020 Microcomputer Assembly Language	4
CIS 025 Object Oriented Programming Using C++	4
CIS 025B C++ Programming Language II	4
CIS 027 Data Structures and Algorithms	4
CIS 062 Introduction to Systems Analysis and Design	3
CIS 081 Systems Analysis with UML	3
CIS 098 Database Programming with SQL	4
CIS 099 Database Administration with SQL	4
ECON 002 Principles of Economics (Micro-Economics) *	3
MATH 011 Discrete Mathematics **	4
MATH 013 Introduction to Statistics **	4

Complete at least 3 units. Any programming course, including those listed above, is acceptable if not duplicative of courses counted for the certificate in a

Total: 16.00 - 17.00

*: *Students planning to transfer to a Computer Science program, especially at UC Berkeley, should choose CIS 61

*: Finance courses mentioned

** : Mathematics courses mentioned

