COURSE SYLLABUS

Java Summer Program NYC (High School)

This course will prepare you to excel as a programmer throughout college and beyond! Beginners will become advanced coders through our fast-moving curriculum and project-based approach to learning.

> Group classes (NYC) and onsite training are available for this course. For more information, email hello@nextgenbootcamp.com or visit: https://www.nextgenbootcamp.com/classes/java-programming-summer-camp



hello@nextgenbootcamp.com •
212-226-0884

Course Outline

Section 1

Coding Overview

- Lexical & Syntax Analysis
- Working with the Terminal
- Computer Systems
- First Program

Variables, Data Types, and Operators

- Basic Variable Usage
- Data Types
- Operators
- Proper Programming Practices

Section 2

Control Flow

- Conditional Statements
- Truth Tables
- For Loops
- While Loops

Functions

- Declarations
- Overloading

- Return Values

Section 3

Arrays, Strings, and Dictionaries

- Array Processing
- Multi-dimensional Arrays
- String Methods
- String Manipulation
- Operations in Dictionaries

Section 4

Input/Output Files

- Streams and Files
- String Formatting
- Redirecting Output

Section 5

Object Oriented Programming

- Encapsulation
- Classes
- Inheritance
- Polymorphism
- Abstraction

Section 6

Recursion

- Recursive Functions
- Recurrence Relation
- Base Case Analysis
- Motivation Behind Recursion