

# IT 524 Programming with Java

## Course Overview

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### Course Objective

The main objective of the course is to give students an introduction to Java programming environment and provide information about approaching and solving coding problems from an object oriented programming perspective.

### Projected Outline

- **Overview**
- **Basic Concepts**
  - *Review of Basic Concepts*
    - *Java Types*
    - *Operators*
    - *Conditions & Loops*
    - *Primitive Type Casting*
    - *Shortcut operators*
    - *Memory Assignments and Data Types Summary*
- **Object Oriented Programming in Java**
  - *Classes & Objects*
  - *OOP Rule: Abstraction*
  - *Methods*
  - *Constructors*
  - *Primitive Types vs. Reference Types*
  - *Packages*
  - *Access Modifiers*
  - *OOP Rule: Encapsulation*
  - *Method Overloading*
  - *Static Methods*
  - *Constants*
  - *Argument Promotion and Casting*
  - *OOP Rule: Composition*
  - *Enumerations*
  - *OOP Rule: Inheritance*
  - *Method Overriding*
  - *OOP Rule: Polymorphism*
  - *Casting Objects*
  - *Abstract Classes*
  - *Interfaces*
- **Strings and Special Cases About Strings**
- **Exception Handling in Java**
- **Collections**
- **File Operations (I/O)**

## Homeworks/Labs

Following the lectures or at the end of each topic, randomly, 1 hour of coding lab will be held. Each student is required to write code under instructor's assistance. The lab performance will be graded.

## Grading

Homeworks/Labs	50%
Midterm	25%
Final	25%

## Reading Materials

- *Java: How to Program (Any Edition).*, Paul & Harvey Deitel, Pearson, New Jersey
- *Java Official Web Site* <https://docs.oracle.com/javase/tutorial/>
- *Online reading materials will be announced according to the subjects covered*

## Schedule

### **Class Hours:**

Saturdays 09:00 am, Altunizade

Tuesdays 19:00 pm, Altunizade

## Contact

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