Introduction to Java NYU CS9053

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| Instructor Dr. Constantine (Dean) Christakos Phone (617) 470-5731 Email dean@christakos.com Office Hours TBD | Course Overview Java is among the most widely used languages for the programming of large scale software applications as well as on small devices such as cell phones. The objective of this course is to give students a thorough and practical understanding of Core Java concepts including features introduced in Java 8. Apart from teaching the general syntax, this course is geared towards enabling students to understand and implement object oriented programming concepts using Java programming language. Recommended Texts There are various worthwhile texts I will be using as source material. The focus of this class will be Java 8. I recommend the following texts:  *Introduction to Java*, 12th Edition, Y. Daniel Young, Pearson  *Core Java, Volume I*, 11th Edition, Cay S. Horstmann, Pearson (this covers Java 9, 10, and 11, but this will be fine or you can use a previous edition)  *Java SE8 for Programmers,* 3rd Edition, Paul Deitel & Harvey Deitel, Deitel Developer Series  These aren’t strictly necessary, as there is also plenty of material online you can study. However, I will be referring to specific chapters in these books.  In the syllabus, readings will refer to Horstmann unless otherwise specified. Class Requirements  * Java Development Kit (Java 8.0 or Later) * An IDE such as Eclipse (Preferred) or NetBeans, etc. or a suitable text editor |

# Course Schedule

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| Week | Subject | Reading |
| Sept 8th | History, Importance, Introduction, Basics, JVM, JRE | Chapter 1-2 |
| Sept 15th | Procedural Programming, Data Types, Control Statements, Arrays | Chapter 3 |
| Sept. 22nd | Objects & Methods | Chapter 4 |
| Sept. 29th | Inheritance | Chapter 5 |
| Oct. 6th | IO and Exceptions | Deitel & Deitel, Chapters 7.5, 11, & 15 |
| Oct. 13th | Abstracts, Interfaces, and Generics | Chapter 6.1, Chapter 8 |
| Oct. 20th | Functional Java / Lambdas | Chapter 6.2 |
| Oct. 27th | GUI/Event Handlings | Deitel & Deitel Chapter 12 |
| Nov. 3rd | Collections | Chapter 9 & 5.2 |
| Nov. 10th | Concurrency / Multithreading | Chapter 14 |
| Nov. 17th | Networking | Horstmann Volume II, Chapter 4  Liang, Chapter 33 |
| Nov 24th | Databases/JDBC | Deitel & Deitel, Chapter 21 |
| Dec. 1st | REST APIs/Web Services with Java |  |
| Dec. 8th | TBD |  |

# Exam Schedule

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| Week | Subject |
| Oct. 13th | Midterm, Due Oct. 20th |

# Homework Policy

Homeworks will be released the day of the lecture and due at 11:59 PM the following week.

**Final Project**

There will be a final project assigned towards the end of the semester which will be due on the last day of finals.