

**Business Analytics and Information Technology**  
**COURSE NUMBER: 33:136:388**  
**COURSE TITLE: Foundations of Business Programming**

**COURSE OUTLINE:**

This course covers the principles of programming and software development in depth, with an emphasis on an object-oriented (OO) programming style, using Java, a modern OOP language. The course assumes no prior programming experience, and in the first part introduces programming for a general audience, using a hands-on approach. The course also studies the basic principles of object-oriented design and, time permitting, covers fundamental data structures and algorithm development. The course motivates programming concepts by examining its impact in various applications.

**Topics:**

1. Built-in data types and basic statements
2. Conditionals
3. Loops
4. Arrays
5. Input and Output
6. Functions
7. Recursion
8. Data types
9. Creating and Designing data types (OOP)

Tentative topics, depending on time:

10. Performance
11. Sorting and Searching
12. Stacks and Queues
13. Hashing and maps (“symbol tables”)

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**COURSE MATERIALS**

**Textbook:**

Robert Sedgewick, Kevin Wayne, [Introduction to Programming in Java: A Multidisciplinary Approach](#), Addison-Wesley, 2007.

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## **COURSE POLICIES:**

The final grade will be based on:

- 40% Programming homework assignments
- 20% Midterm
- 30% Final
- 10% Class participation

Students cannot pass the course if they miss more than one homework assignment, regardless of their grade in the other parts of the course. A total of five slip days can be used for all homework assignments.

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