Introduction to Computer Programming in Java

CSE 1223

**Course Description:**
Introduction to computer programming and to problem solving techniques using computer programs; programming lab experience.

**Course Goals / Objectives:**
- Be competent with using basic coding features provided by high-level imperative programming languages
- Be competent with writing computer programs to implement given simple algorithms
- Be familiar with analyzing simple real-life problems and choosing appropriate algorithms for their solution
- Be familiar with using basic data structures such as arrays in simple programs
- Be familiar with using methods and classes to help produce well-structured programs
- Be familiar with reading and programming for API?s
- Be familiar with designing simple text-oriented user interfaces
- Be familiar with working in a window-based computing environment
- Be exposed to the services provided by an operating system
- Be exposed to the virtual machine model of modern computer systems
- Be exposed to data abstraction concepts and other more advanced programming ideas

**Course Topics:**

- Basic concepts
- Primitive types and expressions; String; basic I/O
- Flow of control and Boolean expressions
- Defining methods
- Arrays
- Basic exception handling and standard Java I/O
- Classes and objects
### Grades Breakdown:

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Midterm</td>
<td>20%</td>
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<tr>
<td>Final exam</td>
<td>30%</td>
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<tr>
<td>Homeworks</td>
<td>10%</td>
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<tr>
<td>Labs</td>
<td>35%</td>
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<tr>
<td>Class participation</td>
<td>5%</td>
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### Designation:
Elective

### Instruction Modes:
In Person (75-100% campus; 0-24% online)

### Representative Textbooks and Other Course Materials:

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Year</th>
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<tbody>
<tr>
<td>Java: An Introduction to Computer Science &amp; Programming (3rd Edition)</td>
<td>Savitch, W.</td>
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