



**Department of Computer Science and Engineering**  
**Lesson Plan:**

<b>Course Title: Object Oriented Programming Language</b>	<b>Course Code: CSE 211</b>
<b>Level/Term: 2</b>	<b>Section: A</b>
<b>Credit: 03</b>	<b>Contact Hours: 39</b>
<b>Prerequisite: CSE 111: Structured Programming Language</b>	<b>Type: Core</b>
<b>Session: FEB,2019</b>	

**Instructor: Sheikh Md Rukunuddin Osmani, Assistant Professor, DCSE**  
**Class schedule: Sunday (11:30am-1:00pm) and Monday (11:30am-1:00pm)**  
**Counseling Time: Monday (1:30pm-2:30pm)**  
**Room No: 502**  
**Email: rukuncse@gmail.com**

**Course Objectives:**

1. Its main objective is to teach the basic concepts and techniques which form the object-oriented programming paradigm
2. Build an understanding of the object-oriented approach in programming.
3. Familiarize the student with the writing of computer programs to solve real world problems in Java.
4. To make students learn and appreciate the importance and merits of proper comments in source code and API documentations.
5. Be able to write GUI interfaces for a computer program to interact with users, and to understand the event-based GUI handling principles.

**Learning Outcomes (COs):**

Upon completion of this course students should be able to:

1. Understand the steps in creating an executable object-oriented program for a Computer, including the intermediate representations and their purpose.
2. Apply good programming style and understand the impact of style on developing and maintaining programs.
3. Explain the benefits of object-oriented design and understand when it is an appropriate methodology to use.
4. Design object-oriented solutions for small systems involving multiple objects.
5. Implement solutions in Java. Test and debug Java implementation.

**Text and Reference books:**

1. Java the Complete Reference --- (Herbert Schildt)
2. Java How to Program--- (Deitel and Deitel)

### 3. Programming with Java A Primer--- (E. Balagurusamy)

Besides the above books some power point slides, pdf tutorials will be provided.

**Teaching Strategy:** Typical methodologies are Class lectures, web-access, problem formulation, and student presentation.

**Assessment Strategy:** Class tests, assignments, class attendance, midterm exam, final exam.

#### Marks Distribution:

Description	Marks
Class Attendance/ Participation	10
Class Test	10
Quizzes/Assignments/Home works	10
Midterm	20
Final Exam	50

#### Class Schedule:

Lecture	Date	Topic	Teaching Strategy	Course Outcome	Assessment strategy
1		Introduction to Object Orientation, Elements of Object Orientation, An Overview of Java	Lecture notes, slide, problem solving	1,2	Final
2		Comparison with C programming language and discussing on the syntax of Java to handle different elements in C Programming Language.	Lecture notes, slide, problem solving	1,2	Final
3		Introducing Classes ,Objects and Constructor (Class Fundamentals, Declaring Objects, Assigning Object Reference Variables)	Lecture notes, slide, problem solving	1,2,5	CT-1, final
4		Introducing Methods, The this Keyword, Garbage Collection,	Lecture notes, slide, problem	1,2,5	CT-1, final

		The finalize( ) Method	solving		
5		Overloading Methods, Using Objects as Parameters, Returning Objects	Lecture notes, slide, problem solving	1,2,5	CT-1, final
6		Recursion in Java, Understanding Static, Introducing Final, Nested and Inner class	Lecture notes, slide, problem solving	2,4,5	Ct-1, midterm, final
7		CT-01 & Solution of CT-01	Lecture notes, slide, problem solving		
8		Exploring the String Class, Using Command -Line Arguments	Lecture notes, slide, problem solving	2,4,5	Assignment-1, midterm, final
9		Varargs: Variable-Length Arguments	Lecture notes, slide, problem solving	2,4,5	Assignment-1, midterm, final
10		Inheritance Basics, Using Super, Creating a multilevel hierarchy	Lecture notes, slide, problem solving	2,3,5	midterm, final
11		Method overriding, dynamic method dispatch	Lecture notes, slide, problem solving	4,5	midterm, final
12		Using Abstract Classes, Using Final with Inheritance	Lecture notes, slide, problem solving	4,5	Midterm, final
13		The Object Class, Package (defining package, importing package, access protection)	Lecture notes, slide, problem solving	4,5	Midterm, final
14		Interfaces(Defining interface, implementing interfaces, accessing through interface	Lecture notes, slide, problem	4,5	Midterm, final

		reference)	solving		
15		Interfaces (nested interface, interface variable, extending interface)	Lecture notes, slide, problem solving	4,5	Midterm, final
16		Exception Handling(Fundamental mechanism, Exception Types, Try and Catch, Displaying a description of an Exception)	Lecture notes, slide, problem solving	4,5	CT-2,final
17		Exception Handling (multiple catch clauses, nested try statements, use of throw, throws and finally keywords)	Lecture notes, slide, problem solving	4,5	CT-2, final
18		Collection frameworks(Collection interface, collection classes)	Lecture notes, slide, problem solving	4,5	CT2, final
19		Generics Basic(Generic class, generic constructor, generic methods and generic interface )	Lecture notes, slide, problem solving	3,4,5	CT2, final
20		CT-2 & Solution of CT-2			
21		Multithread Programming(Creating thread by implementing runnable interface and extending thread class)	Lecture notes, slide, problem solving	3,4,5	Assignment 2, final
22		Multithread Programming (creating multiple thread, thread priority, synchronization, suspending, resuming and stopping thread)	Lecture notes, slide, problem solving	4,5	Assignment 2, final
23		File handling	Lecture notes, slide, problem solving	4,5	Assignment 2, final

24		File handling(continue)	Lecture notes, slide, problem solving	4,5	Assignmen t2, final
25		Graphics Programming.	Lecture notes, slide, problem solving	4,5	Assignmen t3, final
26		Graphics Programming (continue).	Lecture notes, slide, problem solving	4,5	Assignmen t3, final