



**FACULTY OF ENGINEERING AND TECHNOLOGY  
SCHOOL OF COMPUTING  
DEPARTMENT OF CSE  
COURSE PLAN**

**Course Code: CS1005**  
**Course Title: Object Oriented Programming**  
**Semester: II**  
**Course Time: Jul-Dec 2014**

DAY	A	B	C	D	E	F	G	H	I	J	K	L	M
	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
	HOUR	HOUR	HOUR	HOUR	HOUR	HOUR	HOUR	HOUR	HOUR	HOUR	HOUR	HOUR	HOUR
DAY 1	4	2		5			2	2	6			1,3	
DAY 2		5	4		2	2,7	6		2		1		
DAY 3					6		1			2		6	2
DAY 4	2,6	1						1	4	3	5		4,5
DAY 5			2,6	3,6	6	1		4		6	7		

Timing:

1 hour: 8.45am-9.35am

2 hour: 9.35am-10.25am

3 hour: 10.35am-11.25am

4 hour: 11.25am-12.15pm

5 hour :01.30pm- 02.20pm

6 hour :2.20pm-3.10pm

7 hour: 3.10pm- 04.00pm

**Location: SRM University, Tech Park**

**Faculty Details:**

Sec	Name	Office	Office Hour	Mail id
A	Nithyakalyani.A	Tech park	8.00 – 4.00	nithyakalyani.a@ktr.srmuniv.ac.in
B	Ida seraphim.B	Tech park	8.00 – 4.00	idaseraphim.b@ktr.srmuniv.ac.in
C	Vathana.D	Tech park	8.00 – 4.00	vathana.d@ktr.srmuniv.ac.in
D	Vijayalakshmi.G	Tech park	8.00 – 4.00	vijayalakshmi.ga@ktr.srmuniv.ac.in
E	Anitha.J	Tech park	8.00 – 4.00	anitha.jo@ktr.srmuniv.ac.in
F	Priya.S	Tech park	8.00 – 4.00	priya.sn@ktr.srmuniv.ac.in
G	Sivagami.G	Tech park	8.00 – 4.00	sivagami.g@ktr.srmuniv.ac.in
H	Sowmiya.B	Tech park	8.00 – 4.00	sowmiya.b@ktr.srmuniv.ac.in
I	Jebakumar.R	Tech park	8.00 – 4.00	jebakumar.r@ktr.srmuniv.ac.in
J	Girija.S	Tech park	8.00 – 4.00	girija.s@ktr.srmuniv.ac.in
K	Selvakumar.A	Tech park	8.00 – 4.00	selvakumar.s@ktr.srmuniv.ac.in
L	Meena.A	Tech park	8.00 – 4.00	meenapriyadarsini.a@ktr.srmuniv.ac.in
M	Irene.P	Tech park	8.00 – 4.00	ireneberilyazhini.p@ktr.srmuniv.ac.in

**TEXT BOOK**

1. Deitel and Deitel, “C++ How to Program”, Sixth Edition, Prentice Hall, 2007.(UNIT 1,2,3)
2. Herbert Schildt, “Java The Complete Reference” , Eighth Edition, McGraw Hill Professional, 2011. (UNIT 4,5)

**REFERENCE BOOKS**

1. Balagurusamy E., “object Oriented programming with C++”, Fifth Edition, Third Reprint, Tata McGraw – Hill Education 2011
2. Ira Pohl, “Object Oriented Programming using C++” , Pearson Education, Second Edition, Reprint 2004.
3. Lippman S.B., Josee Lajoie, Barbara E.Moo, “C++ Primer”, Fourth Edition, Pearson Education, 2005.
4. ISRD Group, “Introduction to object – oriented programming through Java” , Tata McGraw – Hill publishing Company Ltd., 2007.

**Prerequisite :**

- CS1002 Programming Language Design and C Programming

**Objectives**

1. To perform object oriented programming solution and develop solutions to problems demonstrating usage of control structure, modularity, classes, I/O and the scope of the class members
2. To demonstrate adeptness of object oriented programming in developing solution to problems demonstrating usage of data abstraction, encapsulation and inheritance
3. To demonstrate ability to implement one or more patterns involving dynamic binding and utilization of polymorphism in the solution of problems
4. To learn syntax and features of exception handling
5. To demonstrate the ability to implement solution to various I/O manipulation operations and the ability to create two – dimensional graphic components using applets

**Assessment Details:**

<b>Cycle Test – I</b>	<b>:</b>	<b>10 Marks</b>
<b>Surprise Test</b>	<b>:</b>	<b>5 Marks</b>
<b>Cycle Test – II</b>	<b>:</b>	<b>10 Marks</b>
<b>Attendance</b>	<b>:</b>	<b>5Marks</b>
<b>Model Exam</b>	<b>:</b>	<b>20 Marks</b>

**Test Schedule**

<b>S.No.</b>	<b>DATE</b>	<b>TEST</b>	<b>TOPICS</b>	<b>DURATION</b>
<b>1</b>	As Per Calendar	<b>Cycle Test - I</b>	<b>Unit I &amp; Unit II</b>	<b>2 periods</b>
<b>2</b>	As Per Calendar	<b>Cycle Test - II</b>	<b>Unit II &amp; III</b>	<b>2 periods</b>
<b>3</b>	As Per Calendar	<b>Model Exam</b>	<b>Unit III &amp; IV&amp;V</b>	<b>3 Hrs</b>

**Outcomes**

**Students who have successfully completed this course will have full Understanding of the following concepts**

<b>Course outcome</b>	<b>Program outcome</b>
To Learn about Object Oriented Programming Concepts	The Students can ,
	Able to solve the object oriented Programming problems
	Able to demonstrate usage of control structure, methods
To Learn Data Abstraction, Encapsulation and Inheritance	Ability to adept OOP solutions and ability to involve one or more patterns.
To Learn about Java Concepts	An Ability to demonstrate the basic functions, datatypes

To Learn Packages, Interfaces and Exception Handling	An Ability to implement the various solutions for I/O manipulation operations
To learn about Threads and applets	Able to learn the syntax and features of applets

### Detailed Session Plan

<b>INTRODUCTION</b> <span style="float: right;">(8 hours)</span>					
Object-Oriented Paradigm – Features of Object Oriented Programming – C++ Fundamentals – data types – Operators and Expressions – Control flow – Arrays – Strings – Pointers and Functions.					
<b>Session No.</b>	<b>Topics to be covered</b>	<b>Time (min)</b>	<b>Ref</b>	<b>Teaching Method</b>	<b>Testing Method</b>
<b>1</b>	Introduction to object oriented Paradigm	50	1	BB	Group discussion Quiz
<b>2</b>	Features of Object Oriented Programming	50	1	BB	Group discussion Quiz
<b>3</b>	C++ Fundamentals – data types	50	1	BB	Quiz
<b>4</b>	Operators and Expressions – Control flow	50	1	BB	Quiz
<b>5</b>	Arrays- One dimensional and two dimensional	50	1	BB	Quiz
<b>6</b>	Strings- String handling functions	50	1	BB	Quiz Objective type test
<b>7</b>	Pointers- pointer to string, function, pointer	50	1	BB	Quiz, Assignment
<b>8</b>	Functions- Function with strings, arrays, pointers	50	1	BB	Group discussion Comparative study

**PROGRAMMING IN C++ :**

(10 hours)

Classes and Objects – Constructors and Destructors – Operator Overloading – Inheritance – Virtual Functions and Polymorphism – Exception Handling. □

<b>Session No.</b>	<b>Topics to be covered</b>	<b>Time (min)</b>	<b>Ref</b>	<b>Teaching Method</b>	<b>Testing Method</b>
<b>1</b>	Classes and Objects	50	1	BB	Group discussion Quiz
<b>2</b>	Constructors and Destructors	50	1	BB	Group discussion Quiz
<b>3</b>	Operator Overloading	50	1	BB	Quiz
<b>4</b>	Inheritance - Single, Multiple, Multilevel	50	1	BB	Quiz
<b>5</b>	Inheritance – Hierarchical, Hybrid	50	1	BB	Quiz
<b>6</b>	Virtual Functions- Pure virtual functions, this Pointers	50	1	BB	Quiz Objective type test
<b>7</b>	Polymorphism	50	1	BB	Quiz, Assignment
<b>8</b>	Polymorphism - Virtual Constructors and Destructors	50	1	BB	Group discussion Comparative study
<b>9</b>	ExceptionHandling- Throwing, ,	50	1	BB	Group discussion Comparative study
<b>10</b>	Exception Handling- Catching, Rethrowing Mechanism	50	1	BB	Group discussion

**JAVA INTRODUCTION :**

(9 hours)

An overview of Java – Data Types – Variables and Arrays – Operators – Control Statements – Classes – Objects – Methods – Inheritance □

Session No.	Topics to be covered	Time (min)	Ref	Teaching Method	Testing Method
1	An overview of Java	50	1	BB	Group discussion Quiz
2	Data Types	50	1	BB	Group discussion Quiz
3	Variables	50	1	BB	Quiz
4	Arrays – One , Multidimensional Arrays	50	1	BB	Quiz
5	Operators- Arithmetic, Bitwise, Relational, Logical, Assignment	50	1	BB	Quiz
6	Control statements- Selection, Iteration, Jump Statements	50	1	BB	Quiz Objective type test
7	Classes- objects	50	1	PPT	Quiz, Assignment
8	Methods	50	1	PPT	Group discussion Comparative study
9	Inheritance-Basics, Using Super	50	1	PPT	Group discussion Comparative study

**JAVA PROGRAMMING:**

(9 hours)

Packages – Abstract classes – Interfaces and Inner classes – Exception handling.

<b>Session No.</b>	<b>Topics to be covered</b>	<b>Time (min)</b>	<b>Ref</b>	<b>Teaching Method</b>	<b>Testing Method</b>
<b>1</b>	Packages	50	1	BB	Group discussion Quiz
<b>2</b>	Packages- Access Protection	50	1	BB	Group discussion Quiz
<b>3</b>	Abstract classes	50	1	BB	Quiz
<b>4</b>	Abstract Classes	50	1	BB	Quiz
<b>5</b>	Interfaces – Implementing Interfaces	50	1	BB	Quiz
<b>6</b>	Interfaces - Applying, Nested Interfaces	50	1	PPT	Quiz Objective type test
<b>7</b>	Inner Classes	50	1	BB	Quiz, Assignment
<b>8</b>	Exception Handling- using Try, Catch	50	1	PPT	Group discussion Comparative study
<b>9</b>	Exception handling- Throws	50	1	PPT	Group discussion Comparative study

**MULTITHREADING:**

(9 hours)

Introduction to Threads – Multithreading – String handling – Streams and I/O – Applets.

<b>Session No.</b>	<b>Topics to be covered</b>	<b>Time (min)</b>	<b>Ref</b>	<b>Teaching Method</b>	<b>Testing Method</b>
<b>1</b>	Introduction to Threads	50	1	BB	Group discussion Quiz
<b>2</b>	Threads- Thread priorities, Synchronization	50	1	BB	Group discussion Quiz
<b>3</b>	Multithreading	50	1	PPT	Quiz
<b>4</b>	Multithreading- Suspending, Resuming and stopping threads	50	1	BB	Quiz
<b>5</b>	String Handling	50	1	PPT	Quiz
<b>6</b>	String Handling	50	1	BB	Quiz Objective type test
<b>7</b>	Streams and I/O	50	1	BB	Quiz, Assignment
<b>8</b>	Applets – Reading Console I/P	50	1	PPT	Group discussion Comparative study
<b>9</b>	Applets- Writing Console O/P	50	1	PPT	Group discussion Comparative study

**Prepared by****Approved by**

**Ms.B.Sowmiya, AP,CSE**

**HOD/ CSE**