

LESSON PLAN

Discipline: CS & IOT		Semester: 3 rd	Name of Faculty : Kumari Jyoti
Subject: Programming with C++	No. of days/ week Class allotted: 3	Effective From Date: 14.07.2025	
Week	Class Day	Theory	
1st	1st	UNIT 1: INTRODUCTION TO OBJECT ORIENTED PROGRAMMING	
	2nd	User defined types Structures Unions	
	3rd	Polymorphism Encapsulation Getting started with C++ syntax	
2nd	1st	Datatype Variables Strings	
	2nd	Functions Default values in functions Recursion	
	3rd	Namespaces Operators Flow control Arrays and pointers	
3rd	1st	1. Doubt Clearing class 2. Quiz test 3. Assignment	
	2nd	UNIT 2: ABSTRACTION MECHANISM	
	3rd	Classes Private Public	
4th	1st	Constructors Destructors Member Data	
	2nd	Member Functions, Inline Function Friend Functions	
	3rd	Static Members References	
5th	1st	INHERITANCE: Class Hierarchy Derived Classes Single Inheritance	
	2nd	Multiple Multilevel Hybrid Inheritance	
	3rd	Role Of Virtual Base Class	
6th	1st	Constructor	
	2nd	Destructor Execution	
	3rd	Base Initialization Using Derived Class Constructors.	

7 th	1 st	1. Doubt Clearing class 2. Quiz test 3. Assignment
	2 nd	UNIT 3: POLYMORPHISM
8 th	3 rd	Binding Static binding
	1 st	Dynamic binding
	2 nd	STATIC POLYMORPHISM:
9 th	3 rd	Function Overloading,
	1 st	Ambiguity in function overloading
	2 nd	Dynamic polymorphism:
10 th	3 rd	Base class pointer
	1 st	object slicing
	2 nd	Late binding
11 th	3 rd	method overriding with virtual functions
	1 st	pure virtual functions
	2 nd	abstract classes
12 th	3 rd	1. Doubt Clearing class 2. Quiz test 3. Assignment
	1 st	UNIT 4: OPERATOR OVERLOADING
	2 nd	This pointer
13 th	3 rd	Applications of this pointer
	1 st	Operator function
	2 nd	Member and non-member operator function
14 th	3 rd	Operator overloading, i/o operators.
	1 st	1. Doubt Clearing class 2. Quiz test 3. Assignment
	2 nd	UNIT 5: EXCEPTION HANDLING
15 th	3 rd	Try Throw Catch
	1 st	exceptions and derived classes
	2 nd	function exception declaration unexpected exceptions
15 th	3 rd	1. Doubt Clearing class 2. Quiz test 3. Assignment

Smt. Kumari Jyoti

Signature of Faculty

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Senior Lecture, IT

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LESSON PLAN

Department: IT		Semester: 5th	Name of Faculty: SMT. KUMARI JYOTI
Subject: Software Engineering (SE)	No. of days/ week Class allotted: 4	Effective From Date: 14.07.2025	
		No. of Week- 15	
		Topic to be Covered:	
Week	Class Day	Theory	
1st	1st	UNIT 1: INTRODUCTION TO SOFTWARE ENGINEERING	
	2nd	1.1 Program vs. Software product 1.2 Emergence of Software Engineering	
	3rd	1.3 Computer Systems Engineering 1.4 Software Life Cycle Models	
	4th	1.4.1 Classical Water fall model 1.4.2 Iterative Water fall model	
2nd	1st	1.4.5 Spiral model	
	2nd	1. Doubt Clearing class 2. Quiz test 3. Assignment	
	3rd	UNIT 2: SOFTWARE PROJECT MANAGEMENT	
	4th	2.1 Responsibility of Project Manager	
3rd	1st	2.2 Project Planning	
	2nd	2.3 Metrics for Project size estimation (LOC and FP)	
	3rd	2.4 Project Estimation Techniques	
	4th	2.5 COCOMO Models, Basic, Intermediate and complete	
4th	1st	2.6 Scheduling 2.7 Organization and Team structure	
	2nd	2.8 Staffing 2.9 Risk Management	
	3rd	2.10 Configuration Management	
	4th	1. Doubt Clearing class 2. Quiz test 3. Assignment	
5th	1st	UNIT 3: REQUIREMENT ANALYSIS AND SPECIFICATION	
	2nd	3.1 Requirements gathering and analysis	
	3rd	3.2 Software Requirements Specification	
	4th	3.2.1 Contents of SRS 3.2.2 Characteristics of Good SRS	
6th	1st	3.2.3 Organization of SRS 3.2.4 Techniques for representing complexing logic	
	2nd	1. Doubt Clearing class 2. Quiz test 3. Assignment	
	3rd	UNIT 4: SOFTWARE DESIGN	

	4th	4.1 What is a Good S/W design 4.2 Cohesion and coupling
7 th	1st	4.3 Neat arrangement 4.4 S/W Design approaches
	2nd	4.5 Structured analysis 4.6 Data Flow Diagrams
	3rd	4.7 Symbols used in DFD 4.8 Designing DFD
	4th	4.9 Developing DFD model of a system 4.10 Shortcomings of DFD
8 th	1st	4.11 Structured design 4.12 Principles of transformation of DFD to Structure Chart
	2nd	4.13 Transform analysis and Transaction Analysis 4.14 Design Review
	3rd	1. Doubt Clearing class 2. Quiz test 3. Assignment
	4th	UNIT 5: USER INTERFACE DESIGN
9 th	1st	5.1 Characteristics of Good Interface
	2nd	5.2 Basic concepts of UID
	3rd	5.3 Types of User interfaces
	4th	5.4 Components based GUI development
10 th	1st	1. Doubt Clearing class 2. Quiz test 3. Assignment
	2nd	UNIT 6: SOFTWARE CODING & TESTING
	3rd	6.1 Coding 6.2 Code Review
	4th	6.2.1 Code Walk through 6.2.2 Code inspections and software Documentation
11 th	1st	6.3 Testing 6.4 Unit testing
	2nd	6.5 Black Box Testing 6.6 Equivalence class partitioning and boundary value analysis
	3rd	6.7 White Box Testing
	4th	6.8 Different White Box methodologies statement coverage branch coverage, condition coverage, path coverage, cyclomatic complexity data flow-based testing and mutation testing
12 th	1st	6.9 Debugging approaches
	2nd	6.10 Debugging guidelines 6.11 Integration Testing
	3rd	6.12 Phased and incremental integration testing 6.13 System testing alphas beta and acceptance testing
	4th	6.14 Performance Testing, Error seeding 6.15 General issues associated with testing

13th	1st	1. Doubt Clearing class 2. Quiz test 3. Assignment
	2nd	UNIT 7: SOFTWARE RELIABILITY
	3rd	7.1 Software Reliability
	4th	7.2 Different reliability metrics
14th	1st	7.3 Reliability growth modelling
	2nd	7.4 Software quality
	3rd	7.5 Software Quality Management System
	4th	1. Doubt Clearing class 2. Quiz test 3. Assignment
15th	1st	Revision
	2nd	Revision
	3rd	Previous Year Question Discussions
	4th	Previous Year Question Discussions

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LESSON PLAN

Discipline:		Semester:	Name of Faculty : Kumari Jyoti
Subject: Introduction to IT Systems	No. of days/ week Class allotted: 3	Effective From Date:	
Week	Class Day	Theory	
1 st	1 st	UNIT 1: INTERNET SKILLS AND COMPUTERS 1.1 BASICS BASIC INTERNET SKILLS 1.1.1 What is the Internet? 1.1.2 Common Applications of the Internet.	
	2 nd	1.1.3 Glossary for the Internet Basics. 1.2 UNDERSTANDING A BROWSER 1.2.1 Elements of a Chrome Browser Window.	
	3 rd	1.2.2 Common Browser Features. 1.2.3 Constituent of a Web Browser	
2 nd	1 st	1.3 EFFICIENT USE OF SEARCH ENGINES 1.3.1 What is a Search Engine? 1.3.2 Some Popular Browser Variants. 1.3.3 Types of Web Searches.	
	2 nd	1.3.4 How do Search Engines Work? 1.3.5 How to Search the Web? 1.4 AWARENESS ABOUT DIGITAL INDIA PORTALS 1.4.1 What is Digital India?	
	3 rd	1.4.2 Pillars of Digital India Program: 1.5 STATE PORTAL 1.5.1 Features of State Portals.	
3 rd	1 st	1.5.2 How to Navigate a State Portal?	
	2 nd	1.6 COLLEGE PORTAL	
	3 rd	1.7 CENTRAL PROCESSING UNIT (CPU) 1.7.1 Microprocessor 1.7.2 Arithmetic and Logical Unit (ALU) 1.7.3 Control Unit (CU) 1.7.4 Memory Unit	
4 th	1 st	1.8 TYPES OF COMPUTER MEMORY 1.8.1 Primary Memory 1.8.2 Secondary Memory	
	2 nd	1.9 DISPLAY 1.10 KEYBOARDS	
	3 rd	1.11 MOUSE 1.12 HARD DISK DRIVE (HDD)	
5 th	1 st	1.13 OTHER PERIPHERAL DEVICES 1.13.1 Input Devices	
	2 nd	1.13.2 Output Devices 1.13.3 Storage Devices	
	3 rd	1. Doubt Clearing class 2. Quiz test 3. Assignment	
6 th	1 st	UNIT 2: OPERATING SYSTEMS 2.1 LINUX OS INSTALLATION	
	2 nd	2.2 WINDOWS OS INSTALLATION	

	3 rd	2.3 UNIX SHELL 2.3.1 Features of Shell 2.3.2 Shell Types
7 th	1 st	2.4 SHELL COMMANDS 2.4.1 Directory and File Manipulation Commands 2.4.2 Terminal, Information & Utility Commands
	2 nd	2.5 VI EDITOR 2.5.1 Command mode 2.5.2 Insert mode
	3 rd	1. Doubt Clearing class 2. Quiz test 3. Assignment
8 th	1 st	UNIT 3: HTML AND CSS 3.1 HYPER TEXT MARKUP LANGUAGE 4 (HTML4) 3.1.1 Structure of an HTML Document 3.1.2 How to create a Webpage? 3.1.3 Basic HTML Tags 3.1.4 Page Setting Tags
	2 nd	3.1.7 Working with HTML Tables 3.1.8 Linking Webpages 3.1.9 HTML Forms
	3 rd	3.2 CASCADED STYLE SHEETS (CSS) 3.2.1 Ways to Apply CSS to an HTML document 3.2.2 CSS Selectors 3.2.3 CSS Properties
9 th	1 st	3.3 MAKING BASIC PERSONAL WEBPAGE
	2 nd	1. Doubt Clearing class 2. Quiz test 3. Assignment
	3 rd	UNIT 4: OPEN OFFICE TOOLS 4.1 INSTALLATION OF OPENOFFICE 4.1.1 The Advantages of Open Office
10 th	1 st	4.2 OPENOFFICE WRITER 4.2.1 Parts of Writer Interface 4.2.2 Starting a Document 4.2.3 Opening a Document 4.2.4 Saving a Document 4.2.5 Closing a Document 4.2.6 Printing a Document 4.2.7 Selection, Cutting, and Pasting in a Document
	2 nd	4.2.8 Character Formatting 4.2.9 Paragraph Formatting 4.2.10 Finding and Replacing of Text 4.2.11 Spelling and Grammar Checking 4.2.12 AutoCorrect
	3 rd	4.3 OPENOFFICE CALC 4.3.1 Introduction to Spreadsheet, Sheets, and Cells 4.3.2 Parts of CALC Interface 4.3.3 Starting, Opening, Saving, and Closing a Document 4.3.4 Freezing/Unfreezing Rows and Columns

11th	1st	4.3.5 Creating a Chart 4.3.6 Creating Formulas 4.4 OPENOFFICE IMPRESS 4.4.1 Creating new Presentation
	2nd	4.4.2 Parts of IMPRESS Interface 4.4.3 Formatting a Presentation 4.4.4 Applying an Animation Effect 4.4.5 Running the Slide Show 4.4.6 Printing a Presentation
	3rd	1. Doubt Clearing class 2. Quiz test 3. Assignment
12th	1st	UNIT 5: INFORMATION SECURITY BEST PRACTICES 5.1 INTRODUCTION TO INFORMATION SECURITY 5.1.1 What is Information? 5.2.2 What is Information Security? 5.1.3 What are Information Security Goals?
	2nd	5.2 THREATS TO INFORMATION SECURITY 5.2.1 Malware 5.2.2 Social Engineering Attacks
	3rd	5.2.3 Network Threats 5.3 COMBATING INFORMATION SECURITY THREATS 5.4 INFORMATION SECURITY BEST PRACTICES 5.4.1 General Computer usage 5.4.2 General Internet Browsing
13th	1st	5.4.3 Password Management 5.4.4 Removable Information Storage Media 5.4.5 Email Communication 5.4.6 Home Wi-Fi Network
	2nd	5.4.7 Avoiding Social Engineering Attacks 5.4.8 Smart Device (Smart Phone, Tabs, etc.) 5.4.9 Social Networking
	3rd	5.4.10 Instant Messaging (IM) 5.4.11 Online transaction / ATM
14th	1st	1. Doubt Clearing class 2. Quiz test 3. Assignment
	2nd	SCTE&VT Question Bank UNIT-1 Discussion and Practice.
	3rd	SCTE&VT Question Bank UNIT-2 Discussion and Practice.
15th	1st	SCTE&VT Question Bank UNIT-3 Discussion and Practice.
	2nd	SCTE&VT Question Bank UNIT-4 Discussion and Practice.
	3rd	SCTE&VT Question Bank UNIT-5 Discussion and Practice.

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