



Lesson plan for CSEPC 301-TH1/Internet Of Things
Academic Session 2026-27 (W)
Department of Computer Science & Engineering,
UCP Engineering School, Berhampur

DISCIPLINE:CSE	SEMESTER:5TH	NAME OF THE TEACHING FACULTY: SMT SUMITRA MAHAPATRA
SUBJECT: CSEPC 301/ TH1/Internet Of Things	NO.OF DAYS/PER WEEK CLASS ALLOTTED:3	SEMESTER FROM DATE: 14/07/2026 TO DATE: 05/11/2026 NO.OF WEEKS:15
WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
1st	1st	Introduction to Internet of Things (IoT) - Overview of IoT - Definition and significance of IoT, , and.
	2nd	Historical evolution and future prospects,
	3rd	Applications across various industries
2nd	1st	IoT Architecture and Components
	2nd	Basic architecture - sensors, actuators, connectivity,
	3rd	data processing, Hardware components: microcontrollers (e.g., Arduino, Raspberry Pi),
3rd	1st	data processing, Hardware components: microcontrollers (e.g., Arduino, Raspberry Pi),
	2nd	Software components: operating systems and middleware
	3rd	Sensors, Actuators, and Data Acquisition: Sensors and Actuators, Types of sensors: temperature, humidity, motion, etc.
4TH	1ST	Sensors, Actuators, and Data Acquisition: Sensors and Actuators, Types of sensors: temperature, humidity, motion, etc.,
	2nd	Sensors, Actuators, and Data Acquisition: Sensors and Actuators, Types of sensors: temperature, humidity, motion, etc.,
	3rd	Sensors, Actuators, and Data Acquisition: Sensors and Actuators, Types of sensors: temperature, humidity, motion, etc.,
5th	1st	Actuators: motors, relays, and control mechanisms, Interfacing sensors and actuators with microcontrollers
	2nd	Actuators: motors, relays, and control mechanisms, Interfacing sensors and actuators with microcontrollers
	3rd	Actuators: motors, relays, and control mechanisms, Interfacing sensors and actuators with microcontrollers
6^h	1st	Data Acquisition and Processing - Analog and digital data acquisition methods,
	2nd	Signal conditioning and filtering techniques, I
	3rd	Introduction to data processing and storage.
7th	1st	IoT Communication Protocols Wired communication:,
	2nd	Overview of protocols: MQTT, CoAP, HTTP, etc.,
	3rd	Overview of protocols: MQTT, CoAP, HTTP, etc.,
8th	1st	1st INTERNAL ASSESSMENT
	2nd	Wireless communication: Wi-Fi, Bluetooth, Zigbee, Lora WAN.,
	3rd	Wireless communication: Wi-Fi, Bluetooth, Zigbee, Lora WAN.,

9 th	1 st	Wired communication: Ethernet, Serial communication,
	2 nd	Networking Fundamentals - IP addressing and subnetting
	3 rd	Network topologies and architectures
10 th	1 st	Introduction to IPv6 and its relevance to IoT
	2 nd	IoT Platforms, Overview of popular IoT platforms (e.g., AWS IoT, Google Cloud IoT)
	3 rd	IoT Platforms, Overview of popular IoT platforms (e.g., AWS IoT, Google Cloud IoT)
11 th	1 st	Data analytics and visualization tools
	2 nd	Edge computing concepts
	3 rd	Cloud Computing for IoT
12 th	1 st	Introduction to cloud services: IaaS, PaaS, SaaS
	2 nd	Integration of IoT devices with cloud platforms
	3 rd	Integration of IoT devices with cloud platforms
13 th	1 st	Data storage, processing, and management in cloud
	2 nd	2 ND INTERNAL ASSESMENT
	3 rd	Security Challenges in IoT,
14 th	1 st	Common vulnerabilities and threats,
	2 nd	Authentication and authorization mechanisms,
	3 rd	Data encryption and secure communication
15 th	1 st	Privacy Considerations - Data privacy laws and regulations
	2 nd	User consent and data ownership
	3 rd	Best Practices for ensuring privacy in IoT applications.



Lesson Plan For: CSEPC 303/ TH2/WEB TECHNOLOGIES
Academic Session 2026-27(W)
Department Of Computer Science & Engineering
UCP Engineering School, Berhampur

DISCIPLINE:CSE	SEMESTER:5TH	NAME OF THE TEACHING FACULTY: SMT NAYANA PATEL
SUBJECT: CSEPC 303/ TH2/WEB TECHNOLOGIES	NO.OF DAYS/PER WEEK CLASS ALLOTTED: 3	SEMESTER FROM DATE: 14/07/2026 TO DATE: 05/11/2026 NO.OF WEEKS:15
WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
1 st	1 st	Protocols and programs
	2 nd	secure connections
	3 rd	application and development tools
2 nd	1 st	the web browser, what is server
	2 nd	setting up UNIX and LINUX web servers
	3 rd	Logging users
3 rd	1 st	dynamic IP Web Design: Website design principles
	2 nd	planning the site and navigation
	3 rd	Architecture of Web based systems client/server (2-tier) architecture,
4 TH	1 ST	Architecture of Web based systems client/server (2-tier) architecture
	2 nd	3-Tier architecture
	3 rd	Building blocks of fast and scalable data access Concepts - Caches- Proxies- Indexes-Load Balancers- Queues
5 th	1 st	Building blocks of fast and scalable data access Concepts - Caches- Proxies- Indexes-Load Balancers- Queues,
	2 nd	Building blocks of fast and scalable data access Concepts - Caches- Proxies- Indexes-Load Balancers- Queues,
	3 rd	Building blocks of fast and scalable data access Concepts - Caches- Proxies- Indexes-Load Balancers- Queues,
6 ^h	1 st	Web Application architecture (WAA)
	2 nd	Client-side scripting
	3 rd	What is JavaScript ,simple JavaScript, variables
7 th	1 st	What is JavaScript ,simple JavaScript, variables
	2 nd	Functions
	3 rd	conditions.
8 th	1 st	1 st INTERNAL ASSESSMENT
	2 nd	loops and repetition
	3 rd	loops and repetition
9 th	1 st	JavaScript and objects, JavaScript own objects, DOM and web browser environments, forms and validations
	2 nd	DHTML: Combining HTML, CSS and JAVASCRIPT
	3 rd	DHTML: Combining HTML, CSS and JavaScript
10 th	1 st	events and buttons, controlling your browser,
	2 nd	Ajax: Introduction advantages & disadvantages, Ajax based web

		application
	3 RD	alternatives of Ajax, XML, XSL and XSLT
11 th	1 st	JavaScript Introduction to XML, uses of XML, simple XML, XML key components
	2 nd	DTD and Schemas, XML with application, XSL and XSLT. Introduction to Web Services
	3 rd	PHP: Server-side scripting, Arrays, function and forms, advance PHP, ,
12 th	1 st	Databases - Basic command with PHP examples, Connection to server,
	2 nd	creating database, selecting a database, listing database
	3 rd	listing table names creating a table, inserting data
13 th	1 st	altering tables, queries, deleting Database, deleting data and tables,
	2 nd	2 ND INTERNAL ASSESMENT
	3 rd	deleting data and tables,
14 th	1 st	PHP my admin and database bugs.
	2 nd	Introduction to Modern Frameworks: React
	3 rd	Angular
15 th	1 st	Node JS
	2 nd	Bootstrap
	3 RD	Tailwind CSS.



Lesson plan for: CSEPE 301TH-3(A)Programming with Java
Academic Session2026-27(W)
Department of Computer Science & Engineering
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DISCIPLINE:CSE	SEMESTER:5th	NAME OF THE TEACHING FACULTY: SRI KAUSIK MURMU
SUBJECT: CSEPE 301TH-3(A) Programming with Java	NO.OF DAYS/PER WEEK CLASS ALLOTTED-3	SEMESTER FROM DATE: 01/07/2026 TO DATE: 05/11/2026 NO.OF WEEKS:15
WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
1 st	1 st	Introduction to Java History and features of Java
	2 nd	Setting up the Java Development Kit (JDK) Understanding the Java Virtual Machine (JVM)
	3 rd	Basic Java syntax: data types, variables, operators, control flow statements (if-else, switch, loops)
2 nd	1 st	Input/Output operations (using Scanner and System.out)
	2 nd	Writing a Simple Program Compiling and executing
	3 rd	Create Packaged class
3 rd	1 st	Introduction To Object Oriented Programming
	2 nd	Basic concepts of OOPs: objects, classes, data encapsulation, inheritance, Polymorphism etc.
	3 rd	Fundamentals of Class & Object,
4 th	1 ST	New Keyword, reference variable, Members methods of a class,
	2 nd	Access modifiers: public, private, protected, default
	3 rd	Encapsulation: Hiding data through access modifiers.
5 th	1 st	Access Control Static Methods, Static Variables, Static Block
	2 nd	Constructor, Overloading methods, Overloading constructors
	3 rd	Using of final keyword, Finalize method
6 ^h	1 st	Inheritance , Basics of Inheritance, members accessibility in inheritance
	2 nd	Types of inheritance: Single, multilevel, hierarchical.
	3 rd	Super keyword, Method overriding.
7 th	1 st	Final keyword (for classes, methods, and variables).
	2 nd	Dynamic Method Dispatch, Abstract class, Preventing Overriding, Preventing Inheritance
	3 rd	Interfaces: Defining and implementing interfaces, Interfaces , Purpose of interface
8 th	1 st	1 st INTERNAL ASSESSMENT
	2 nd	Defining an interface
	3 rd	implementing interfaces
9 th	1 st	Interface reference variables
	2 nd	Interface with variables , Extending interfaces
	3 rd	Arrays and Strings, Arrays declaring and initializing arrays
10 th	1 st	Multidimensional arrays
	2 nd	String manipulation

	3 rd	creating strings, string methods (length, concat, substring, etc.)
11 th	1 st	Wrapper classes
	2 nd	Integer, Float, Double, etc.
	3 rd	Exception Handling and File Handling
12 th	1 st	Exceptions: types of exceptions,
	2 nd	try-catch blocks, finally block
	3 rd	Throwing exceptions ,Custom exceptions
13 th	1 st	File input/output: reading from and writing to files Using File Input Stream, File Output Stream
	2 nd	2 ND INTERNAL ASSESMENT
	3 rd	Buffered Reader, Buffered Writer
14 th	1 st	Multithreaded programming Basics of threads
	2 nd	Java threaded model,
	3 rd	defining threads using Runnable interface
15 th	1 st	defining threads using Thread superclass,
	2 nd	Multiple threads, Thread Priority values,
	3 rd	Thread Synchronization Using synchronized blocks



Lesson Plan For: CSEPE 303TH-4(A) Mobile Computing
Academic Session 2026-27(W)
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DISCIPLINE: CSE	SEMESTER: 5th	NAME OF THE TEACHING FACULTY: SRI ABHIRAM BEHERA
SUBJECT: CSEPE 303TH-4(A) Mobile Computing	NO. OF DAYS/PER WEEK CLASS ALLOTTED: 3	SEMESTER FROM DATE: 01/07/2026 TO DATE: 05/11/2026 NO. OF WEEKS: 15
WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
1 st	1 st	Historic background
	2 nd	Cellular Industry
	3 rd	advantages & disadvantages of Mobile systems
2 nd	1 st	Cell concepts
	2 nd	Wireless Network
	3 rd	Wire based and wireless systems
3 rd	1 st	Infrared systems, cellular radio
	2 nd	Concepts of wireless LANS
	3 rd	voice signals-its characteristics
4 th	1 st	Frequency spectrum
	2 nd	Digital signal
	3 rd	Broadband and base band signals
5 th	1 st	Cell layout, path-loss, propagation delay
	2 nd	Fading size and shape of cell
	3 rd	Concepts of frequency reuse
6 th	1 st	Spectrum efficiency, Cell capacity to handle calls
	2 nd	Call demand in a cell, channel requirement
	3 rd	cell splitting, cell sectoring concept
7 th	1 st	Concepts of Multiplexing: FDM, FDMA, TDD, TDM, TDMA, CDMA,
	2 nd	Concepts of Multiplexing: FDM, FDMA, TDD, TDM, TDMA, CDMA,
	3 rd	Concepts of Multiplexing: FDM, FDMA, TDD, TDM, TDMA, CDMA,
8 th	1 st	1 st INTERNAL ASSESSMENT
	2 nd	Concepts of spread spectrum and frequency hopping.
	3 rd	Introductory idea on AMPS
9 th	1 st	Introductory idea on AMPS
	2 nd	Compression operations - voice compression and data compression,
	3 rd	Compression operations - voice compression and data compression,
10 th	1 st	V.42, fax compression-introductory idea.
	2 nd	Historical background

	3 rd	SIM and GSM
11 th	1 st	SIM and GSM
	2 nd	Overview of GSM operations Registration
	3 rd	Call Establishment
12 th	1 st	Roaming
	2 nd	GSM channel and operations
	3 rd	GSM channel and operations Need of compatibility, Bluetooth concepts
13 th	1 st	Comparison with IR system
	2 nd	2 ND INTERNAL ASSESSMENT
	3 rd	Architecture, potential applications
14 th	1 st	IEEE802.11x Wireless LAN standard-basic configuration and architecture
	2 nd	concepts of wireless home networking
	3 rd	Introduction, frequency hopping spread spectrum
15 th	1 st	Encryption concepts, Public Key Encryption
	2 nd	Authentication Model
	3 rd	Smart Card, Biometric Authentication



Lesson Plan For:CSEPC 305-PR1 Internet Of Things Lab
Academic Session2026-27(W)
Department Of Computer Science & Engineering
UCP Engineering School, Berhampur

DISCIPLINE:CSE	SEMESTER:5TH	NAME OF THE TEACHING FACULTY: SMT.SUMITRA MAHAPATRA
SUBJECT: CSEPC 305-PR1 Internet Of Things Lab	NO.OF DAYS/PER WEEK CLASS ALLOTTED:4	SEMESTER FROM DATE: 14/07/2026 TO DATE: 05/11/2026 NO.OF WEEKS:15
WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
1st	1st	Setting up Arduino and Raspberry Pi boards. Running a basic LED blink program
	2nd	Setting up Arduino and Raspberry Pi boards. Running a basic LED blink program
	3rd	Setting up Arduino and Raspberry Pi boards. Running a basic LED blink program
	4th	Setting up Arduino and Raspberry Pi boards. Running a basic LED blink program
2nd	1st	Setting up Arduino and Raspberry Pi boards. Running a basic LED blink program
	2nd	Setting up Arduino and Raspberry Pi boards. Running a basic LED blink program
	3rd	Connecting a temperature and humidity sensor (DHT11) to Arduino. Displaying sensor readings on the Serial Monitor.
	4th	Connecting a temperature and humidity sensor (DHT11) to Arduino. Displaying sensor readings on the Serial Monitor.
3rd	1st	Connecting a temperature and humidity sensor (DHT11) to Arduino. Displaying sensor readings on the Serial Monitor.
	2nd	Connecting a temperature and humidity sensor (DHT11) to Arduino. Displaying sensor readings on the Serial Monitor.
	3rd	Connecting a temperature and humidity sensor (DHT11) to Arduino. Displaying sensor readings on the Serial Monitor.
	4th	Connecting a temperature and humidity sensor (DHT11) to Arduino. Displaying sensor readings on the Serial Monitor.
4th	1st	Connecting a PIR motion sensor and LDR (Light Dependent Resistor). Displaying motion and light intensity values.
	2nd	Connecting a PIR motion sensor and LDR (Light Dependent Resistor). Displaying motion and light intensity values.
	3rd	Connecting a PIR motion sensor and LDR (Light Dependent Resistor). Displaying motion and light intensity values.
	4th	Connecting a PIR motion sensor and LDR (Light Dependent Resistor). Displaying motion and light intensity values.
5th	1st	Connecting a PIR motion sensor and LDR (Light Dependent Resistor). Displaying motion and light intensity values.
	2nd	Connecting a PIR motion sensor and LDR (Light Dependent Resistor). Displaying motion and light intensity values.
	3rd	Interfacing a relay module with Arduino. Turning an LED or motor ON/OFF based on sensor input.
	4th	Interfacing a relay module with Arduino. Turning an LED or motor ON/OFF based on sensor input.

6 ^h	1 st	Interfacing a relay module with Arduino. Turning an LED or motor ON/OFF based on sensor input.
	2 nd	Interfacing a relay module with Arduino. Turning an LED or motor ON/OFF based on sensor input.
	3 rd	Interfacing a relay module with Arduino. Turning an LED or motor ON/OFF based on sensor input.
	4 th	Interfacing a relay module with Arduino. Turning an LED or motor ON/OFF based on sensor input. .
7 th	1 st	Installing an MQTT broker (e.g., Mosquitto). Sending and receiving messages using MQTT.
	2 nd	Installing an MQTT broker (e.g., Mosquitto). Sending and receiving messages using MQTT.
	3 rd	Installing an MQTT broker (e.g., Mosquitto). Sending and receiving messages using MQTT.
	4 th	Installing an MQTT broker (e.g., Mosquitto). Sending and receiving messages using MQTT.
8 th	1 st	1 st INTERNAL ASSESSMENT
	2 nd	Installing an MQTT broker (e.g., Mosquitto). Sending and receiving messages using MQTT.
	3 rd	Connecting an ESP8266 module to a Wi-Fi network. Sending sensor data to a cloud platform (ThingSpeak).
	4 th	Connecting an ESP8266 module to a Wi-Fi network. Sending sensor data to a cloud platform (ThingSpeak).
9 th	1 st	Connecting an ESP8266 module to a Wi-Fi network. Sending sensor data to a cloud platform (ThingSpeak).
	2 nd	Connecting an ESP8266 module to a Wi-Fi network. Sending sensor data to a cloud platform (ThingSpeak).
	3 rd	Connecting an ESP8266 module to a Wi-Fi network. Sending sensor data to a cloud platform (ThingSpeak).
	4 th	Connecting an ESP8266 module to a Wi-Fi network. Sending sensor data to a cloud platform (ThingSpeak)
10 th	1 st	Collecting and processing real-time sensor data. Implementing basic edge computing using Python
	2 nd	Collecting and processing real-time sensor data. Implementing basic edge computing using Python
	3 rd	Collecting and processing real-time sensor data. Implementing basic edge computing using Python
	4 th	Collecting and processing real-time sensor data. Implementing basic edge computing using Python
11 th	1 st	Collecting and processing real-time sensor data. Implementing basic edge computing using Python
	2 nd	Collecting and processing real-time sensor data. Implementing basic edge computing using Python
	3 rd	Storing IoT sensor data in a CSV file. Visualizing the data using Matplotlib in Python
	4 th	Storing IoT sensor data in a CSV file. Visualizing the data using Matplotlib in Python
12 th	1 st	Storing IoT sensor data in a CSV file. Visualizing the data using Matplotlib in Python
	2 nd	Storing IoT sensor data in a CSV file. Visualizing the data using Matplotlib in Python
	3 rd	Storing IoT sensor data in a CSV file. Visualizing the data using Matplotlib

		in Python
	4 th	Storing IoT sensor data in a CSV file. Visualizing the data using Matplotlib in Python
13 th	1 st	Encrypting sensor data before transmission. Implementing simple AES encryption using Python.
	2 nd	2 ND INTERNAL ASSESSMENT
	3 rd	Encrypting sensor data before transmission. Implementing simple AES encryption using Python
	4 th	Encrypting sensor data before transmission. Implementing simple AES encryption using Python
14 th	1 st	Encrypting sensor data before transmission. Implementing simple AES encryption using Python
	2 nd	Encrypting sensor data before transmission. Implementing simple AES encryption using Python
	3 rd	Controlling home appliances using a web interface. Turning devices ON/OFF using HTTP requests.
	4 th	Controlling home appliances using a web interface. Turning devices ON/OFF using HTTP requests.
15 th	1 st	Controlling home appliances using a web interface. Turning devices ON/OFF using HTTP requests.
	2 nd	Controlling home appliances using a web interface. Turning devices ON/OFF using HTTP requests.
	3 rd	Controlling home appliances using a web interface. Turning devices ON/OFF using HTTP requests.
	4 th	Controlling home appliances using a web interface. Turning devices ON/OFF using HTTP requests.



Lesson plan for CSEPC 307- PR-2 Web Technologies Lab,
Academic Session 2026-27 (W)
Department Of Computer Science & Engineering
UCP Engineering School, Berhampur

DISCIPLINE:CSE	SEMESTER:5TH	NAME OF THE TEACHING FACULTY: SMT.NAYANA PATEL
SUBJECT: Web Technologies Lab	NO.OF DAYS/PERWEEK CLASS ALLOTTED:4	SEMESTER FROM DATE: 14/07/2026 TO DATE: 05/11/2026 NO.OF WEEKS:15
WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
1 st	1 st	Coding Server Client Programs
	2 nd	Coding Server Client Programs
	3 rd	Coding Server Client Programs
	4 th	Coding Server Client Programs
2 nd	1 st	Developing Web Application using HTML, JavaScript
	2 nd	Developing Web Application using HTML, JavaScript
	3 rd	Developing Web Application using HTML, JavaScript
	4 th	Developing Web Application using HTML, JavaScript
3 rd	1 st	Developing Web Application using HTML, JavaScript
	2 nd	Developing Web Application using HTML, JavaScript
	3 rd	Developing Advanced Web Application Programs using CSS
	4 th	Developing Advanced Web Application Programs using CSS
4 th	1 st	Developing Advanced Web Application Programs using CSS
	2 nd	Developing Advanced Web Application Programs using CSS
	3 rd	Developing Advanced Web Application Programs using CSS
	4 th	Developing Advanced Web Application Programs using CSS
5 th	1 st	Developing Advanced Web Application Programs using CSS
	2 nd	Developing Advanced Web Application Programs using CSS
	3 rd	Developing Advanced Web Application Programs using CSS
	4 th	Developing Advanced Web Application Programs using CSS
6 ^h	1 st	Practicing PHP: Basics
	2 nd	Practicing PHP: Basics
	3 rd	Practicing PHP: Basics
	4 th	Practicing PHP: Basics
7 th	1 st	Practicing PHP: Basics
	2 nd	Practicing PHP: Basics
	3 rd	Practicing PHP: Basics
	4 th	Practicing PHP: Basics
8 th	1 st	1 st INTERNAL ASSESSMENT
	2 nd	Practicing PHP: Basics
	3 rd	Practicing PHP: Web Application Development

	4 th	Practicing PHP: Web Application Development
9 th	1 st	Practicing PHP: Web Application Development
	2 nd	Practicing PHP: Web Application Development
	3 rd	Practicing PHP: Web Application Development
	4 th	Practicing PHP: Web Application Development
10 th	1 st	Practicing PHP: Web Application Development
	2 nd	Practicing PHP: Web Application Development
	3 rd	Practicing PHP: Web Application Development
	4 th	Practicing PHP: Web Application Development
11 th	1 st	Practicing PHP: MySql - tiered Applications
	2 nd	Practicing PHP: MySql - tiered Applications
	3 rd	Practicing PHP: MySql - tiered Applications
	4 th	Practicing PHP: MySql - tiered Applications
12 th	1 st	Practicing PHP: MySql - tiered Applications
	2 nd	Practicing PHP: MySql - tiered Applications
	3 rd	Practicing PHP: MySql - tiered Applications
	4 th	Practicing PHP: MySql - tiered Applications
13 th	1 st	Practicing PHP: MySql - tiered Applications
	2 nd	2 ND INTERNAL ASSESSMENT
	3 rd	Developing a fully functional Web Service Application using all the Technologies learned in this course.
	4 th	Developing a fully functional Web Service Application using all the Technologies learned in this course.
14 th	1 st	Developing a fully functional Web Service Application using all the Technologies learned in this course.
	2 nd	Developing a fully functional Web Service Application using all the Technologies learned in this course.
	3 rd	Developing a fully functional Web Service Application using all the Technologies learned in this course.
	4 th	Developing a fully functional Web Service Application using all the Technologies learned in this course.
15 th	1 st	Developing a fully functional Web Service Application using all the Technologies learned in this course.
	2 nd	Developing a fully functional Web Service Application using all the Technologies learned in this course.
	3 rd	Developing a fully functional Web Service Application using all the Technologies learned in this course.
	4 th	Developing a fully functional Web Service Application using all the Technologies learned in this course.



Lesson plan for: CSEPE 305/PR-3/Programming With Java Lab

Academic Session 2025-26 (W)

Department of Computer Science & Engineering

UCP Engineering School, Berhampur

DISCIPLINE:CSE	SEMESTER:5 TH	NAME OF THE TEACHING FACULTY: SRI KAUSIK MURMU
SUBJECT: CSEPE 305/PR3/Programming With Java Lab	NO.OF DAYS/PER WEEK CLASS ALLOTTED:4	SEMESTER FROM DATE:01/07/2026 TO DATE: 05/11/2026 NO.OF WEEKS:15
WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
1 st	1 st	Setting Up Java and Writing First Program:
	2 nd	Install Java JDK and configure environment variables
	3 rd	Install Java JDK and configure environment variables
	4 th	Write, compile, and run a basic “Hello World” program
2 nd	1 st	Demonstrate the use of variables
	2 nd	arrays, and different data types.
	3 rd	Expressions and Operators
	4 th	Create a program using arithmetic
3 rd	1 st	relational, and logical operators
	2 nd	relational, and logical operators
	3 rd	Practice operator precedence
	4 th	mixed- type expressions
4 th	1 st	Control Flow & Looping
	2 nd	Write programs using if-else
	3 rd	switch, while, do- while and for loops
	4 th	Implement examples with break
5 th	1 st	Implement examples with break
	2 nd	continue, and nested loops.
	3 rd	Classes, Objects & Constructors
	4 th	Define a class with fields and methods
6 ^h	1 st	Use constructors (default, parameterized)
	2 nd	Use constructors (default, parameterized)
	3 rd	method overloading
	4 th	Demonstrate the use of this and new keyword.
7 th	1 st	Static, Final and Access Control
	2 nd	Implement static variables
	3 rd	static methods
	4 th	static blocks
8 th	1 st	1 st INTERNAL ASSESSMENT
	2 nd	Use access modifiers (public, private, Protected) and final keyword
	3 rd	Inheritance and Method Overriding
	4 th	Create a class hierarchy
9 th	1 st	demonstrating multilevel inheritance
	2 nd	Use super keyword and show constructor execution sequence

	3 rd	Override methods
	4 th	implement dynamic method dispatch.
10 th	1 st	Abstract Classes and Preventing Overriding
	2 nd	Create an abstract class
	3 rd	implement its abstract methods in a subclass
	4 th	Use final to prevent Method overriding or class inheritance
11 th	1 st	Use final to prevent Method overriding or class inheritance
	2 nd	Create a packaged class
	3 rd	Handling Exceptions
	4 th	Write programs using try-catch-finally blocks
12 th	1 st	Write programs using try-catch-finally blocks
	2 nd	Create user-defined exceptions
	3 rd	Demonstrate throw, throws, and nested exception handling.
	4 th	Demonstrate throw, throws, and nested exception handling.
13 th	1 st	Working with Interfaces
	2 nd	2 ND INTERNAL ASSESSMENT
	3 rd	Define and implement interfaces
	4 th	Use interface reference variables
14 th	1 st	Use interface reference variables
	2 nd	interface inheritance
	3 rd	Using Java Standard Libraries
	4 th	Use String, StringBuilder
15 th	1 st	Math, and Date classes.
	2 nd	Practice with Java Collections (Array List, HashMap, etc.).
	3 rd	Practice with Java Collections (Array List, HashMap, etc.).
	4 th	Perform file input/output operations