K L Deemed to be University
Department of CSE -- KLVZA
Course Handout
2020-2021, Even Sem

Course Title	:Enterprise Programming
Course Code	:19CS2107S
L-T-P-S Structure	: 3-0-2-4
Pre-requisite	:
Credits	: 5
Course Coordinator	:ASLAM SHAIK
Team of Instructors	:
Teaching Associates	:

Syllabus :XML: Features, Attributes, Validation, DTD, XSD, XSLT,JDBC:callable Statements, Maven: integration with eclipse, POM.xml,Servlet: Lifecycle, HTTP Servlet, Servlet Config, Servlet Context, Servlet Collaboration, Session Tracking, CRUD operations, JSP: Scripting elements, Directive elements, CRUD operations,Hibernate: Architecture, JPA, generator class, Dialects, Mapping, TX Management, HQL, HCQL, CRUD operations, Spring: Architecture, Dependency Injection, Application Context, annotation based configuration, MVC CRUD operations,Spring Boot: Dependency Injection, Autowire, Web App using spring boot, Spring Rest

Text Books :1. Web Technologies: Concepts, Methodologies, Tools, and Applications,Information Science Reference,4th edition,Arthur Tatnall 2. Spring and Hibernate,Tata McGraw-Hill Education,2009,Santosh kumar k 3. Beginning Spring Boot 2 Applications and Microservices with the Spring Framework,Apress,1st edition,K. Siva Prasad Reddy 4. Java Persistence with Hibernate,Manning Publications,2nd edition ,Christian Bauer , Gavin King , Gary Gregory

Reference Books :1. XSLT: Working with XML and HTML, Khun Yee Fung,Addison-Wesley, 2001. 2. J2EE: The complete reference by James Keogh, publisher: McGraw-hill Osborne Media, 1st Edition, 2002. 3. Spring In Practice by Willie Wheeler with Joshua White, publisher: Manning, shelter Island 4. Beginning Hibernate for Hibernate 5 by Joseph B.Ottinger, Jeff Liwood, Dave Minter, publisher: Apress, 4th Edition

Web Links :1) https://www.udemy.com/java-enterprise-edition-8/ 2) https://www.udemy.com/spring-hibernate-tutorial/ 3) https://www.udemy.com/spring-tutorial-for-beginners/ 4) https://www.udemy.com/complete-jdbc-programming-part-1/ 5) https://www.udemy.com/complete-jdbc-programming-part-2/ 6) https://www.udemy.com/javawebtut/ (for servlets and JSP)

MOOCS :1. Master Java Web Services and RESTful API with Spring Boot. LINK:https://www.udemy.com/course/spring-web-services-tutorial/?ranMID=39197&ranEAID=JVFxdTr9V80&ranSiteID=JVFxdTr9V80wzCsxdOKGnoYJM0oIAgFWw&LSNPUBID=JVFxdTr9V80&utm_source=aff-campaign&utm_medium=udemyads 2.Web Technology for Entrepreneurs LINK:https://www.udemy.com/course/web-technology-for-entrepreneurs/ 3.Spring & Hibernate for Beginners (includes Spring Boot) LINKLINK: https://www.udemy.com/course/spring-hibernate-tutorial/ 4.JSP, Servlets and JDBC for Beginners: Build a Database App LINK:https://www.udemy.com/course/jsp-tutorial/ 5.Learn XML Crash Course: Discover Essential XML Fundamentals LINK: https://www.udemy.com/course/learn-xml-crash-course/ COURSERA: 1.HTML, CSS, and Javascript for Web Developers LINK: https://www.coursera.org/learn/html-css-javascript-for-web-developers 2.Microservices with Spring Boot LINK:https://www.coursera.org/projects/microservices-with-spring-boot 3.Building Scalable Java Microservices with Spring Boot and Spring Cloud LINK:https://www.coursera.org/learn/google-cloud-java-spring

Course Rationale : The current programming trend of the software industry due to the size of the problems handled totally based on Object oriented concepts. Most of the web applications and enterprise applications using different types of client side and server side technologies. Therefore it is essential for every CSE student must undergo these technologies. This course Enterprse Programming is to make the student understand and apply the technologies like xml, jdbc, servlet, jsp, Hibernate and Springs. All the relevant technologies will be demonstrated in tools like notepad, IDE's (ex:- eclipse, netbeans). The students will also develop an enterprise application in the Lab.

Course Objectives :MAKE STUDENT TO KNOW, UNDERSTAND AND APPLY CLIENT SIDE AND SERVER SIDE TECHNOLOGIES TO DEVELOP WEB BASED AND ENTERPRISE APPLICATIONS

COURSE OUTCOMES (COs):

CO NO	Course Outcome (CO)	PO/PSO	Blooms Taxonomy Level (BTL)
CO1	Understand the basic concepts of XML. Apply JDBC API and callable statements Learn Maven to build Enterprise Java applications. Implement servlets using Maven	PSO1,PO2	3
CO2	Implement enterprise application using JSP and Hibernate	PO3,PSO1	3
CO3	Implement enterprise application using Spring Framework	PSO1,PO3	3
CO4	Use Spring Boot, Rest APIs and integrating Enterprise Java applications	PSO1,PO3	3
CO5	Develop the programs for enterprise application development.	PSO2,PO3	3

COURSE OUTCOME INDICATORS (COIs)::

Outcome No.	Highest BTL	COI-1	COI-2	COI-3

CO1	3	**Btl-1** Name the applications and implementation of XML	**Btl-2** Demonstrate the concepts of JDBC with callable Statement and illustrate the framework of Maven	**Btl-3** Build server side implementation of the concept servlet
CO2	3	**Btl-1** Build server side implementation using Servlets and JSP.	**Btl-2** Tell the importance of frameworks for Database connectivity.	**Btl-3** Construct the applications using Hibernate framework
CO3	3	**Btl-1** List the advantages of Spring framework	**Btl-2** Illustrate the concept of Dependency injection	**Btl-3** Develop the web applications using Spring WEB MVC.
CO4	3	**Btl-1** Build the configurations for spring	**Btl-2** Develop restful services for Spring	**Btl-3** Web App on spring Boot
CO5	3	**Btl-1** Develop programs using enterprise programming concepts	**Btl-2** Develop projects using enterprise programming concepts	**Btl-3** Build a Web App by using Spring

PROGRAM OUTCOMES & PROGRAM SPECIFIC OUTCOMES (POs/PSOs)

Po No.	Program Outcome
PO1	Engineering Knowledge :An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization for the solution of complex engineering problems in engineering
PO2	Problem Analysis :An ability to identify, formulate, research literature, analyze complex engineering problems in mechanical engineering using first principles of mathematics, natural sciences and engineering sciences
PO3	Design/ development of solutions :An ability to design solutions for complex engineering problems and system component or processes that meet the specified needs considering public health & safety and cultural, societal & environment
PO4	Conduct investigations of complex problems :An ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to obtain solutions to engineering problems
PO5	Modern tool usage :Ability to create, select and apply appropriate techniques, resources and modern engineering activities, with an understanding of the limitations
PO6	The engineer and society :Ability to apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice
PO7	Environment and sustainability Ability to demonstrate the knowledge of engineering solutions, contemporary issues understanding their impacts on societal and environmental contexts, leading towards sustainable development
PO8	Ethics : An ability to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice
PO9	Individual and team work :An ability to function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings
PO10	Communication :Ability to communicate effectively oral, written reports and graphical forms on complex engineering activities
PO11	Project management and finance :Ability to demonstrate knowledge and understanding of the engineering and management principles and apply those one’s own work, as a member and leader in team, to manage projects and in multi-disciplinary environments
PO12	Lifelong learning An ability to recognize the need for and having the preparation and ability to engage independent and life-long learning in broadest context of technological change
PSO1	An ability to design and develop software projects as well as Analyze and test user requirements.
PSO2	An Ability to gain working Knowledge on emerging software tools and technologies.

Lecture Course DELIVERY Plan:

Sess.No.	CO	COI	Topic	Book No[CH No] [Page No]	Teaching-Learning Methods	EvaluationComponents
1	CO1	COI-1	XML Features and attributes	BOOK [1] 460-468	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
2	CO1	COI-1	Validations in XML by using DTD and XSD	BOOK [1] 469-476	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
3	CO1	COI-1	XSLT	Reference[1] 21-30	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
4	CO1	COI-2	Maven	Book:1[6][155]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1

Sess.No.	CO	COI	Topic	Book No[CH No] [Page No]	Teaching-Learning Methods	EvaluationComponents
5	CO1	COI-2	Callable Statements in JDBC	Book:1[9][255]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
6	CO1	COI-2	Servlet Life Cycle and Types of Servlets	Book:1[9][301]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
7	CO1	COI-3	servlet config and context	Book:1[9][322]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
8	CO1	COI-3	Servlet Collaboration	Book:1[9][324]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
9	CO1	COI-3	Session Management	Book:1[9][325]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
10	CO1	COI-3	CRUD operations	Book:1[9][326]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
11	CO2	COI-2	Limitations of Servlet and Introduction to JSP and advantages of JSP , JSP life cycle and different JSP elements introduction	6[10][355 - 361]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
12	CO2	COI-3	Jsp Template text, JspScriptlet Jsp Implicit objects and Jsp Directives and JSP Declarations	6[11][366 - 368] 6[11] [370 -378]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
13	CO2	COI-3	Jsp Action Tags	6[11][376 - 378], 6[12] [384 – 395]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
14	CO2	COI-3	Apply Different Types of Session Tracking Mechanisms Example by using URL Rewriting	6[8][262 - 264]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
15	CO2	COI-1	Http Cookies and Http Seession using JSP CRUD Operations	6[8][279 - 283] 6[8] [284 – 299]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
16	CO2	COI-1	Introduction to Hibernate framework and it’s architecture	3[1][1-7]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
17	CO2	COI-1	Illustrate Hibernate configuration, Mapping and POJO’s using simple example	3[1][1-7]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
18	CO2	COI-1	Hibernate Query Language	3[9][147-149]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
19	CO2	COI-1	Hibernate Criteria Query Language	3[3][30-35]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1
20	CO2	COI-1	Performing CRUD Operations using hibernate methods	3[3][19-29]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM1

Sess.No.	CO	COI	Topic	Book No[CH No] [Page No]	Teaching-Learning Methods	EvaluationComponents
21	CO3	COI-1	Spring introduction and modules	Book.2[1][1-3]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
22	CO3	COI-1	Spring Architecture	Book.2[1][3-5]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
23	CO3	COI-1	Introduction to Dependency injection	Book.2[1][5-8]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
24	CO3	COI-2	Types of Dependency injection	Book.2[1][8-14]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
25	CO3	COI-2	Explanation about setter and constructor injection	Book.2[1][8-14	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
26	CO3	COI-2	Setter injection with primitive and object type	Book.2[1][8-14]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
27	CO3	COI-1	. annotation-based configuration in spring	Book.2[1][25-28]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
28	CO3	COI-2	Spring JDBC Introduction	Book.2[2][33-35]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
29	CO3	COI-3	MVC CRUD operations in Spring Framework	Book.2[2][33-35]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
30	CO3	COI-3	MVC CRUD operations in Spring Framework	Book.2[2][33-35]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
31	CO4	COI-1	Spring Boot Introduction, Basics	Book:3[5][301]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
32	CO4	COI-2	Hello World Application, Dependency Injection	Book:3[5][314]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
33	CO4	COI-3	Creating Spring starter project	Book:3[5][315]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
34	CO4	COI-3	Web App using spring boot	Book:3[5][326]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
35	CO4	COI-2	Spring Boot and Rest Full	Book:3[5][326]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
36	CO4	COI-3	Spring boot with RestFull	Book:3[5][326]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2

Sess.No.	CO	COI	Topic	Book No[CH No] [Page No]	Teaching-Learning Methods	EvaluationComponents
37	CO4	COI-3	Spring Boot, Hibernate CRUD applications	Book:3[5][326]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2
38	CO4	COI-3	Web App with Spring boot	Book 3[6][299]	Chalk,PPT,Talk	ALM,End Semester Exam,MOOCs Certification,SEM-EXAM2

Lecture Session wise Teaching – Learning Plan

SESSION NUMBER : 1

Session Outcome: 1 Student can Understand the concept of XML

Session Outcome: 2 Student can Understand how to use XML

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
10	Course handout	1	Talk	--- NOT APPLICABLE ---
30	XML Introduction and Features	1	Talk	--- NOT APPLICABLE ---
5	Conclusion and summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 2

Session Outcome: 1 Understand the concept of validations in XML

Session Outcome: 2 Student can XML validation against DTD & XSD

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	XML validation against DTD & XSD	2	PPT	--- NOT APPLICABLE ---
20	Discuss about XML validation against DTD & XSDwith examples	1	Talk	--- NOT APPLICABLE ---
5	Conclusion and summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 3

Session Outcome: 1 Understand the concept of XSLT

Session Outcome: 2 transform the XML document into XHML

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Introduction to XSLT	2	Talk	--- NOT APPLICABLE ---
20	Explain about the Creation of an XSL Style Sheet and link to XML file with example.	2	PPT	--- NOT APPLICABLE ---
5	Conclusion and summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 4

Session Outcome: 1 Understand the concept of Maven

Session Outcome: 2 Understand how to integrate Maven with eclipse

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Explain about Maven structure	2	PPT	--- NOT APPLICABLE ---
20	Explain about Maven integration on eclipse and demo example	2	PPT	--- NOT APPLICABLE ---
5	Conclusion and summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 5

Session Outcome: 1 Understand the concept of JDBC

Session Outcome: 2 Apply the concepts how to write callable statements

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Explain about JDBC	2	Talk	--- NOT APPLICABLE ---
20	Explain about Callable Statements and a demo program	2	PPT	--- NOT APPLICABLE ---
5	Conclusion and summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 6

Session Outcome: 1 Understand the concept of servlets and its lifecycle

Session Outcome: 2 Differentiate between Generic Servlet and Http Serlet

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Explain about servlet	2	Talk	--- NOT APPLICABLE ---
20	Explain about servlet Lifecycle, Http Servlet, Generic Servlet	2	Talk	--- NOT APPLICABLE ---
5	Conclusion and summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 7

Session Outcome: 1 Understand the concept of servlet config

Session Outcome: 2 Understand how to write servlet context

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Explain about Servlet config, Context	2	Talk	--- NOT APPLICABLE ---
20	Explain about parameters	2	PPT	--- NOT APPLICABLE ---
5	conclusion and summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 8

Session Outcome: 1 Understand the concept of servlet collaboration

Session Outcome: 2 Understand differences between servlet forward and include

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Explain about Servlet collaboration	2	PPT	--- NOT APPLICABLE ---
20	Explain about RequestDispatcher and SendRedirect	2	PPT	--- NOT APPLICABLE ---
5	Conclusion and Summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 9

Session Outcome: 1 Understand the concept of Session Management

Session Outcome: 2 Apply the Techniques of Session Tracking

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Introduction to session tracking	2	Talk	--- NOT APPLICABLE ---
20	Explain session tracing techniques in detail	2	PPT	--- NOT APPLICABLE ---
5	Conclusion and Summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 10

Session Outcome: 1 Understand CRUD operations in servlets

Session Outcome: 2 Apply how to send, retrieve, modify, delete data from servlets

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Explain about connectivity to database	2	Talk	--- NOT APPLICABLE ---
20	Explain CRUD operation with the demo programme	2	PPT	Quiz/Test Questions
5	Conclusion and Summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 11

Session Outcome: 1 understands the limitations of servlet and advantages of JSP and its life cycle

Session Outcome: 2 Student understands about JSP elements

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Limitations of Servlet and Introduction to JSP & Advantages of JSP and JSP life cycle	1	Talk	--- NOT APPLICABLE ---
20	Different JSP elements introduction	2	Talk	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 12

Session Outcome: 1 Student able to write the code using JSP elements

Time(min)	Topic	BTL	Teaching- Learning	Active Learning

			Methods	Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Illustrate about Jsp elements like template text, scriptlet, Jsp directives and Implicit objects with example	1	Talk	--- NOT APPLICABLE ---
20	Develop a JSP application using expressions and Declarations	3	Chalk	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 13

Session Outcome: 1 Student able to write the applications using JSP Action tags

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Sample application using , and tags	3	Chalk	--- NOT APPLICABLE ---
20	Sample application using , and tags	3	Chalk	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 14

Session Outcome: 1 Understands the session tracking mechanism

Session Outcome: 2 Student able to implement the applications using URL re-writing mechanism

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Explaining about Session Tracking & Types of Session Tracking mechanisms	1	Talk	--- NOT APPLICABLE ---
20	Example by using URL Rewriting	3	Chalk	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 15

Session Outcome: 1 Student able to implement the applications using Http Cookies and Session mechanism

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Illustrate JSP HttpCookies with example	3	Chalk	--- NOT APPLICABLE ---
20	Illustrate JSP Http Session with example, CRUD Operations	3	Chalk	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 16

Session Outcome: 1 Student Understands Hibernate Framework and its architecture

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Introduction to Hibernate Framework	1	Talk	--- NOT APPLICABLE ---

20	Hibernate Architecture explanation	3	Chalk	Quiz/Test Questions
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 17

Session Outcome: 1 Student able to know how to implement a POJO.

Session Outcome: 2 Understand how to create hibernate mapping and configuration files

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Explaining Hibernate POJO object	3	Chalk	--- NOT APPLICABLE ---
20	Explain about Hibernate Mapping file and Hibernate Configuration file	3	Chalk	--- NOT APPLICABLE ---

SESSION NUMBER : 18

Session Outcome: 1 Student understands HQL vs SQL and how to write HQL queries

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	HQL Vs SQL and Illustrate about Hibernate Query language	2	Chalk	--- NOT APPLICABLE ---
20	Example to explain about all HQL operations.	3	Chalk	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 19

Session Outcome: 2 Hibernate Criteria Query Language

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance/Recap	1	Talk	--- NOT APPLICABLE ---
20	illustrate about hibernate criteria query language	2	Chalk	--- NOT APPLICABLE ---
20	Sample Example to explain about HCQL	2	Chalk	--- NOT APPLICABLE ---
5	Conclusion	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 20

Session Outcome: 2 Performing CRUD Operations using hibernate methods

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Introduction about different hibernate methods to perform crud operations in hibernate	1	Talk	--- NOT APPLICABLE ---
20	sample example to perform crud operations using hibernate frame work	3	Chalk	--- NOT APPLICABLE ---
5	conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 21

Session Outcome: 3 Spring introduction and modules

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
5	Recap	2	Talk	--- NOT APPLICABLE ---
10	Introduction to Spring framework	2	PPT	--- NOT APPLICABLE ---
25	Explain about Spring Modules in detail	2	PPT	--- NOT APPLICABLE ---
5	Summary & Conclusions	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 22

Session Outcome: 2 Spring Architecture

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
5	Recap	2	Talk	--- NOT APPLICABLE ---
10	Spring architectural overview of Spring Web MVC	2	PPT	--- NOT APPLICABLE ---
25	components of the architecture	2	PPT	--- NOT APPLICABLE ---
5	Summary & Conclusions	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 23

Session Outcome: 3 Introduction to Dependency injection

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
5	Recap	2	Talk	--- NOT APPLICABLE ---
10	Illustrate about Dependecy lookup Vs Dependency Injection	2	PPT	--- NOT APPLICABLE ---
25	What is Spring Core container and its responsibility with suitable example	2	PPT	--- NOT APPLICABLE ---
5	Summary & Conclusions	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 24

Session Outcome: 4 Types of Dependency injection

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
5	Recap	2	Talk	--- NOT APPLICABLE ---
10	Discuss about types of injections in spring	2	PPT	--- NOT APPLICABLE ---
25	Explain about setter injection with example	2	PPT	--- NOT APPLICABLE ---
5	Summary & Conclusions	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 25

Session Outcome: 5 Explanation about setter and constructor injection

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
5	Recap	2	Talk	--- NOT APPLICABLE ---
10	Explain about constructor injection with example	3	PPT	--- NOT APPLICABLE ---
25	Explain about constructor injection with example	3	PPT	--- NOT APPLICABLE ---
5	Summary & Conclusions	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 26

Session Outcome: 2 . Student able to apply Constructor inject using Primitive, Object

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	attendance	1	Talk	--- NOT APPLICABLE ---
5	Recap	2	Talk	--- NOT APPLICABLE ---
10	Construction injection using primitive types values	3	PPT	Immediate feedback
25	Construction injection using User defined objects	3	PPT	Quiz/Test Questions
5	Summary & Conclusions	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 27

Session Outcome: 3 annotation-based configuration in spring

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	ATTENDANCE	2	Talk	--- NOT APPLICABLE ---
5	RECAP	1	Talk	--- NOT APPLICABLE ---
10	Spring configuration infrastructure, Spring custom namespaces, Java 5 annotations	3	PPT	--- NOT APPLICABLE ---
25	An example demonstration with annotation based configuration	3	PPT	--- NOT APPLICABLE ---
5	Summary & Conclusions	2	Talk	Immediate feedback

SESSION NUMBER : 28

Session Outcome: 3 Spring JDBC Introduction

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	ATTENDANCE	1	Talk	--- NOT APPLICABLE ---
5	RECAP	2	Talk	--- NOT APPLICABLE ---
10	Introduction to Spring with JDBC Integration.	3	PPT	Immediate feedback
25	Spring with JDBC integration configuration requirments	3	PPT	Immediate feedback
5	Summary & Conclusions	2	PPT	Immediate feedback

SESSION NUMBER : 29

Session Outcome: 3 MVC CRUD operations in Spring Framework

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	ATTENDANCE	1	Talk	--- NOT APPLICABLE ---

5	RECAP	2	Talk	--- NOT APPLICABLE ---
10	Spring JDBC integration to perform create and update operations explanation	3	PPT	Immediate feedback
25	Spring JDBC integration to perform create and update operations example demonstration	3	PPT	Immediate feedback
5	Summary & Conclusions	1	Talk	Immediate feedback

SESSION NUMBER : 30

Session Outcome: 3 Student able to perform retrieve and delete operation on database using Spring JDBC

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	ATTENDANCE	1	Talk	--- NOT APPLICABLE ---
5	RECAP	2	Talk	--- NOT APPLICABLE ---
10	Spring JDBC integration to perform retrieve and delete operations explanation	3	PPT	Immediate feedback
25	Spring JDBC integration to perform retrieve and delete operationsexample demonstration	3	PPT	Quiz/Test Questions
5	Summary & Conclusions	2	Talk	Immediate feedback

SESSION NUMBER : 31

Session Outcome: 1 Introduction to Spring Boot

Session Outcome: 2 Spring Boot Basics

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Recap & Attendance	1	Talk	--- NOT APPLICABLE ---
10	Introduction to Spring Boot	2	PPT	--- NOT APPLICABLE ---
25	Spring Boot Basics	2	PPT	--- NOT APPLICABLE ---
5	Conclusion & Summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 32

Session Outcome: 1 Hello World Application

Session Outcome: 2 Dependency Injection

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Recap & Attendance	1	Talk	--- NOT APPLICABLE ---
10	Hello World Application	2	PPT	--- NOT APPLICABLE ---
25	Dependency Injection	2	PPT	--- NOT APPLICABLE ---
5	Conclusion & Summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 33

Session Outcome: 1 Creating Spring starter project

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Recap & Attendance	1	Talk	--- NOT APPLICABLE ---
35	Creating Spring starter project	2	PPT	--- NOT APPLICABLE ---
5	Conclusion & Summary	1	Talk	--- NOT

				APPLICABLE ---

SESSION NUMBER : 34

Session Outcome: 1 Web App using spring boot

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Recap & Attendance	1	Talk	--- NOT APPLICABLE ---
35	Web App using spring boot	3	PPT	--- NOT APPLICABLE ---
5	Conclusion & Summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 35

Session Outcome: 1 Student is able to understand SPRING Boot with RESTful service

Session Outcome: 2 Actions in the social media application will be understood by the student

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Explanation about GET, PUT, POST, DELETE operations Introduction to SPRING Boot with RESTful service	2	Talk	--- NOT APPLICABLE ---
20	Initializing a RESTful Web Services Project with Spring Boot	2	PPT	--- NOT APPLICABLE ---
5	Conclusion and Summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 36

Session Outcome: 1 Student is able to understand Characteristics of web services

Session Outcome: 2 Student is able to understand Spring Boot, Hibernate, spring data with RESTful web service

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Characteristics of web services	2	Talk	--- NOT APPLICABLE ---
20	Spring Boot, Hibernate, spring data with RESTful web service	2	PPT	--- NOT APPLICABLE ---
5	Conclusion and Summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 37

Session Outcome: 1 is able to understand Spring Boot, Hibernate CRUD Applications

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
30	Spring Boot	1	Talk	--- NOT APPLICABLE ---
10	Hibernate CRUD applications	3	PPT	Quiz/Test Questions
5	Conclusion and Summary	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 38

Session Outcome: 1 Student is able to understand about building of a Web App

Time(min)	Topic	BTL	Teaching- Learning	Active Learning

			Methods	Methods
5	Attendance	1	Talk	--- NOT APPLICABLE ---
20	Explain about the Spring Boot	2	Talk	--- NOT APPLICABLE ---
20	Explaining about the Building of Web App using Spring Boot	3	PPT	--- NOT APPLICABLE ---
5	Conclusion & Summary	1	Talk	--- NOT APPLICABLE ---

Tutorial Course DELIVERY Plan: NO Delivery Plan Exists

Tutorial Session wise Teaching – Learning Plan

No Session Plans Exists

Practical Course DELIVERY Plan:

Tutorial Session no	Topics	CO-Mapping
1	implement the xml program	CO5

Practical Session wise Teaching – Learning Plan

SESSION NUMBER : 1

Session Outcome: 1 implement the xml program

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	3	Talk	--- NOT APPLICABLE ---
45	implement the xml program	3	PPT	--- NOT APPLICABLE ---

Skilling Course DELIVERY Plan:

Skilling session no	Topics/Experiments	CO-Mapping
1	implement Project in EP	CO5

Skilling Session wise Teaching – Learning Plan

SESSION NUMBER : 1

Session Outcome: 1 Project

Time(min)	Topic	BTL	Teaching- Learning Methods	Active Learning Methods
5	Attendance	3	Talk	--- NOT APPLICABLE ---
45	implement the project	3	PPT	--- NOT APPLICABLE ---

WEEKLY HOMEWORK ASSIGNMENTS/ PROBLEM SETS/OPEN ENDEDED PROBLEM-SOLVING EXERCISES etc:

Week	Assignment Type	Assignment No	Topic	Details	co

COURSE TIME TABLE:

	Hour	1	2	3	4	5	6	7	8	9
Day	Component									
Mon	Theory	V-S9	---	--	--	V-S1,V-S2,V-S3,V-S4,V-S5,V-S6,V-S7,V-S8	V-S1,V-S2,V-S3,V-S4,V-S5,V-S6,V-S7,V-S8	---	---	---
	Tutorial	--	---	--	--	--	--	---	---	---
	Lab	--	---	V-S1,V-S1,V-S2,V-S2,V-S3,V-S3,V-S4,V-S4,V-S5,V-S5,V-S6,V-S6,V-S7,V-S7,V-S8,V-S8	V-S1,V-S1,V-S2,V-S2,V-S3,V-S3,V-S4,V-S4,V-S5,V-S5,V-S6,V-S6,V-S7,V-S7,V-S8,V-S8	V-S9,V-S9	V-S9,V-S9	---	---	---
	Skilling	--	---	--	--	--	--	---	---	---
Tue	Theory	V-S17	---	V-S9,V-S10,V-S11,V-S12,V-S13,V-S14,V-S15,V-S16	V-S9,V-S10,V-S11,V-S12,V-S13,V-S14,V-S15,V-S16	--	--	---	---	---
	Tutorial	--	---	--	--	--	--	---	---	---
	Lab	--	---	V-S17,V-S17	V-S17,V-S17	V-S9,V-S9,V-S10,V-S10,V-S11,V-S11,V-S12,V-S12,V-S13,V-S13,V-S14,V-S14,V-S15,V-S15,V-S16,V-S16	V-S9,V-S9,V-S10,V-S10,V-S11,V-S11,V-S12,V-S12,V-S13,V-S13,V-S14,V-S14,V-S15,V-S15,V-S16,V-S16	---	---	---
	Skilling	--	---	--	--	--	--	---	---	---
Wed	Theory	---	---	---	---	---	---	---	---	---
	Tutorial	---	---	---	---	---	---	---	---	---
	Lab	---	---	---	---	---	---	---	---	---
	Skilling	---	---	---	---	---	---	---	---	---
Thu	Theory	---	---	---	---	---	---	---	--	--
	Tutorial	---	---	---	---	---	---	---	--	--
	Lab	---	---	---	---	---	---	---	--	--
	Skilling	---	---	---	---	---	---	---	V-S1,V-S1,V-S2,V-S2,V-S3,V-S3,V-S4,V-S4,V-S5,V-S5,V-S6,V-S6,V-S7,V-S7,V-S8,V-S8	V-S1,V-S1,V-S2,V-S2,V-S3,V-S3,V-S4,V-S4,V-S5,V-S5,V-S6,V-S6,V-S7,V-S7,V-S8,V-S8
Fri	Theory	---	---	V-S1,V-S2,V-S3,V-S4,V-S5,V-S6,V-S7,V-S8	---	---	---	---	--	--

	Tutorial	---	---	--	---	---	---	---	--	--
	Lab	---	---	--	---	---	---	---	V-S17,V-S17,V-S18,V-S18,V-S19,V-S19,V-S20,V-S20,V-S21,V-S21,V-S22,V-S22,V-S23,V-S23,V-S24,V-S24,V-S25,V-S25	V-S17,V-S17,V-S18,V-S18,V-S19,V-S19,V-S20,V-S20,V-S21,V-S21,V-S22,V-S22,V-S23,V-S23,V-S24,V-S24,V-S25,V-S25
	Skilling	---	---	--	---	---	---	---	--	--
Sat	Theory	V-S1	---	--	--	---	---	---	V-S17,V-S18,V-S19,V-S20,V-S21,V-S22,V-S23,V-S24,V-S25	---
	Tutorial	--	---	--	--	---	---	---	--	---
	Lab	--	---	V-S1,V-S1	V-S1,V-S1	---	---	---	--	---
	Skilling	--	---	--	--	---	---	---	--	---
Sun	Theory	--	--	--	--	--	--	--	--	--
	Tutorial	--	--	--	--	--	--	--	--	--
	Lab	--	--	--	--	--	--	--	--	--
	Skilling	--	--	--	--	--	--	--	--	--

REMEDIAL CLASSES:

Supplement course handout, which may perhaps include special lectures and discussions that would be planned, and schedule notified according

SELF-LEARNING:

Assignments to promote self-learning, survey of contents from multiple sources.

S.no	Topics	CO	ALM	References/MOOCS

DELIVERY DETAILS OF CONTENT BEYOND SYLLABUS:

Content beyond syllabus covered (if any) should be delivered to all students that would be planned, and schedule notified accordingly.

S.no	Advanced Topics, Additional Reading, Research papers and any	CO	ALM	References/MOOCS

EVALUATION PLAN:

Evaluation Type	Evaluation Component	Weightage/Marks		Assessment Dates	Duration (Hours)	CO1	CO2	CO3	CO4	CO5
End Semester Summative Evaluation Total= 40 %	**SEM End Project**	Weightage	7.5		120					7.5
		Max Marks	50							50
	End Semester Exam	Weightage	20		180	5	5	5	5	
		Max Marks	100			25	25	25	25	
	Lab End Semester Exam	Weightage	7.5		120					7.5
		Max Marks	50							50
	Poster Presentation	Weightage	5		120					5
		Max Marks	50							50
In Semester	**Semester in Exam-I**	Weightage	7.5		120	3.75	3.75			

Summative Evaluation Total= 30 %		Max Marks	50			25	25			
	Semester in Exam-II	Weightage	7.5		120			3.75	3.75	
		Max Marks	50					25	25	
	MOOCs Certification	Weightage	5		120	1.25	1.25	1.25	1.25	
		Max Marks	100			25	25	25	25	
	Prototype Demonstration	Weightage	10		120					10
		Max Marks	50							50
In Semester Formative Evaluation Total= 30 %	**ALM**	Weightage	5		120	1.25	1.25	1.25	1.25	
		Max Marks	100			25	25	25	25	
	Continuous Evaluation - Lab Exercise	Weightage	10		120					10
		Max Marks	50							50
	Continuous Evaluation -Project	Weightage	15		120					15
		Max Marks	50							50

ATTENDANCE POLICY:

Every student is expected to be responsible for regularity of his/her attendance in class rooms and laboratories, to appear in scheduled tests and examinations and fulfill all other tasks assigned to him/her in every course
In every course, student has to maintain a minimum of 85% attendance to be eligible for appearing in Semester end examination of the course, for cases of medical issues and other unavoidable circumstances the students will be condoned if their attendance is between 75% to 85% in every course, subjected to submission of medical certificates, medical case file and other needful documental proof to the concerned departments

DETENTION POLICY :

In any course, a student has to maintain a minimum of 85% attendance and In-Semester Examinations to be eligible for appearing to the Semester End Examination, failing to fulfill these conditions will deem such student to have been detained in that course.

PLAGIARISM POLICY :

Supplement course handout, which may perhaps include special lectures and discussions

COURSE TEAM MEMBERS, CHAMBER CONSULTATION HOURS AND CHAMBER VENUE DETAILS:

Supplement course handout, which may perhaps include special lectures and discussions

Name of Faculty	Delivery Component of Faculty	Sections of Faculty	Chamber Consultation Day (s)	Chamber Consultation Timings for each day	Chamber Consultation Room No:	Signature of Course faculty:
VENKATA VARA PRASAD PADYALA	L	20-MA	-	-	-	-
VENKATA VARA PRASAD PADYALA	P	20-A	-	-	-	-
VENKATA VARA PRASAD PADYALA	S	16-B,20-A	-	-	-	-
VIJAYA KUMAR ADURY	L	4-MA	-	-	-	-
VIJAYA KUMAR ADURY	P	4-A	-	-	-	-
VIJAYA KUMAR ADURY	S	4-A	-	-	-	-
GONUGUNTLA KRISHNA MOHAN	L	23-MA	-	-	-	-
GONUGUNTLA KRISHNA MOHAN	P	23-A	-	-	-	-
GONUGUNTLA KRISHNA MOHAN	S	15-B,23-A	-	-	-	-
Miriyala Basu	P	17-B	-	-	-	-
Miriyala Basu	S	1-B,17-B	-	-	-	-
karthik kota	L	1-MA	-	-	-	-
karthik kota	P	1-A	-	-	-	-
karthik kota	S	1-A	-	-	-	-
Vasantham Kumar	L	6-MA	-	-	-	-
Vasantham Kumar	P	6-A,10-B	-	-	-	-

Vasantham Kumar	S	6-A	-	-	-	-
NICHENAMETLA RAJESH	L	24-MA	-	-	-	-
NICHENAMETLA RAJESH	P	13-B,24-A	-	-	-	-
NICHENAMETLA RAJESH	S	11-B,24-A	-	-	-	-
Chitta M H Saibaba	L	2-MA,11-MA	-	-	-	-
Chitta M H Saibaba	P	2-A,11-A,17-B	-	-	-	-
Chitta M H Saibaba	S	2-A,11-A	-	-	-	-
Kantha Rao Vinjamuri	L	18-MA	-	-	-	-
Kantha Rao Vinjamuri	P	5-B,18-A	-	-	-	-
Kantha Rao Vinjamuri	S	10-B,18-A	-	-	-	-
KRISHNA CHAITANYA GOGINENI	S	2-B	-	-	-	-
HARI VEGE	S	5-B	-	-	-	-
DASARI DURGA BHAVANI	L	10-MA	-	-	-	-
DASARI DURGA BHAVANI	P	10-A,24-B	-	-	-	-
DASARI DURGA BHAVANI	S	10-A	-	-	-	-
YELLASWAMY KANDULA	L	3-MA,16-MA	-	-	-	-
YELLASWAMY KANDULA	P	3-A,16-A	-	-	-	-
YELLASWAMY KANDULA	S	3-A,16-A	-	-	-	-
RAVINDER NELLUTLA	L	5-MA,13-MA	-	-	-	-
RAVINDER NELLUTLA	P	5-A,13-A	-	-	-	-
RAVINDER NELLUTLA	S	5-A,13-A	-	-	-	-
SURYA KIRAN JONNALAGADDA	L	9-MA	-	-	-	-
SURYA KIRAN JONNALAGADDA	P	4-B,9-A,19-B	-	-	-	-
SURYA KIRAN JONNALAGADDA	S	9-A	-	-	-	-
Ashesh Kinjirapu	L	17-MA	-	-	-	-
Ashesh Kinjirapu	P	1-B,15-B,17-A	-	-	-	-
Ashesh Kinjirapu	S	14-B,17-A	-	-	-	-
Chandra Sekhar Kolli	L	15-MA	-	-	-	-
Chandra Sekhar Kolli	P	15-A,20-B	-	-	-	-
Chandra Sekhar Kolli	S	15-A,18-B	-	-	-	-
VENKATA RAMANA NADAKUDURU	L	19-MA	-	-	-	-
VENKATA RAMANA NADAKUDURU	P	3-B,11-B,19-A	-	-	-	-
VENKATA RAMANA NADAKUDURU	S	19-A	-	-	-	-
HarikaLakshmi Sikhakolli	L	12-MA	-	-	-	-
HarikaLakshmi Sikhakolli	P	2-B,12-A,18-B	-	-	-	-
HarikaLakshmi Sikhakolli	S	12-A	-	-	-	-

ASLAM SHAIK	L	21-MA	-	-	-	-
ASLAM SHAIK	P	6-B,9-B,21-A	-	-	-	-
ASLAM SHAIK	S	21-A	-	-	-	-
Deepak V	L	7-MA	-	-	-	-
Deepak V	P	7-A,16-B,21-B	-	-	-	-
Deepak V	S	7-A	-	-	-	-
BELUGURU VENKATESWARLU	S	4-B	-	-	-	-
Kunda Prasad	L	22-MA	-	-	-	-
Kunda Prasad	P	7-B,12-B,22-A	-	-	-	-
Kunda Prasad	S	22-A	-	-	-	-
HARAN PELLAKURI	L	14-MA	-	-	-	-
HARAN PELLAKURI	P	14-A,23-B	-	-	-	-
HARAN PELLAKURI	S	14-A	-	-	-	-
Ravindra kumar Indurthi	L	25-MA	-	-	-	-
Ravindra kumar Indurthi	P	8-B,14-B,25-A	-	-	-	-
Ravindra kumar Indurthi	S	25-A	-	-	-	-
PRASAD CHITTURI	L	8-MA	-	-	-	-
PRASAD CHITTURI	P	8-A,22-B	-	-	-	-
PRASAD CHITTURI	S	8-A,19-B	-	-	-	-
OM PRAKASH P G	S	9-B,22-B	-	-	-	-
TIRANDASU KUMAR	S	12-B,21-B	-	-	-	-
Ganga Rao	P	25-B	-	-	-	-
Ganga Rao	S	15-B	-	-	-	-
Veerraju Gampala	S	13-B,20-B	-	-	-	-
Sunkara Babu	S	3-B,25-B	-	-	-	-
Pavan Ande	S	6-B	-	-	-	-
Murali Vutukuru	S	24-B	-	-	-	-
Balajee R M	S	8-B,23-B	-	-	-	-
Jyothi N.M	S	7-B	-	-	-	-

GENERAL INSTRUCTIONS

Students should come prepared for classes and carry the text book(s) or material(s) as prescribed by the Course Faculty to the class.

NOTICES

Most of the notices are available on the LMS platform.

All notices will be communicated through the institution email.

All notices concerning the course will be displayed on the respective Notice Boards.

Signature of COURSE COORDINATOR

(ASLAM SHAIK)

Signature of Department Prof. Incharge Academics & Vetting Team Member

Department Of CSE

HEAD OF DEPARTMENT:

Approval from: DEAN-ACADEMICS
(Sign with Office Seal) [object HTMLDivElement]