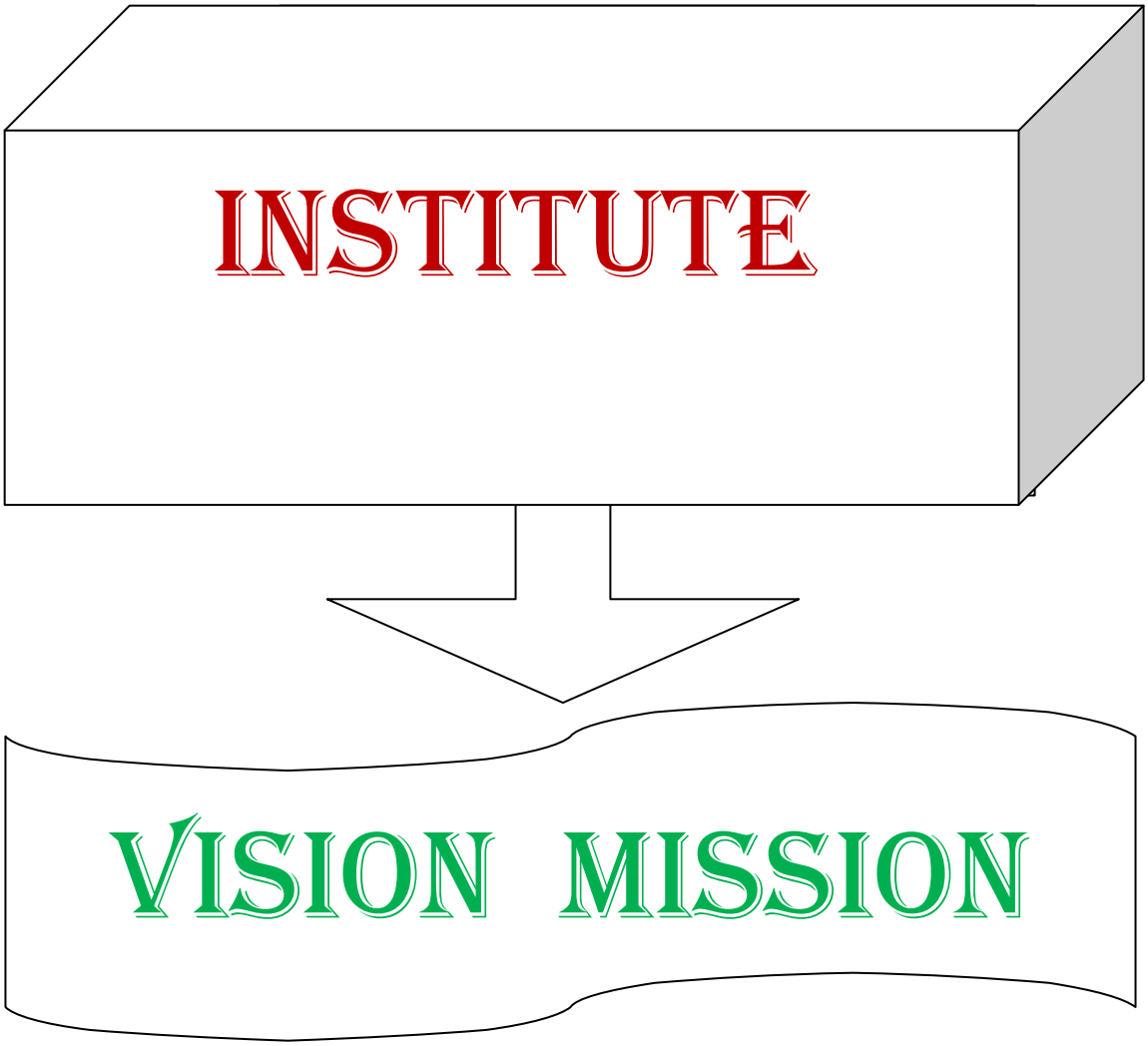
INDEX


INSTITUTE
VISION MISSION

INSTITUTE

VISION AND MISSION

VISION

To be a premier technological institute striving for excellence with global perspective and commitment to the nation.

MISSION

- To produce engineering graduates of professional quality and global perspective through Learner Centric Education.
- To establish linkages with government, industry and research laboratories to promote R&D activities and to disseminate innovations.
- To create an eco-system in the institute that leads to holistic development and ability for life-long learning..

DEPARTMENT

VISION MISSION

Vision:

- To evolve as a centre of academic and research excellence in the area of Computer Science and Engineering.

Mission :

- To utilize innovative learning methods for academic improvement.
- To encourage higher studies and research to meet the futuristic requirements of Computer Science and Engineering.
- To inculcate Ethics and Human values for developing students with good character

PROGRAM EDUCATIONAL OBJECTIVES, PROGRAM OUTCOMES & PROGRAM SPECIFIC OUTCOMES

Program Educational Objectives (PEOs)

Graduates of this programme will :

PEO 1: Adapt to evolving technology.

PEO 2: Provide optimal solutions to real time problems.

PEO 3: Demonstrate his/her abilities to support service activities with due consideration for Professional and Ethical Values.

Programme Specific Outcomes (PSO s):

A graduate of the Computer Science and Engineering Program will be able to:

PSO 1: Use Mathematical Abstractions and Algorithmic Design along with Open Source Programming tools to solve complexities involved in Programming. [K3]

PSO 2: Use Professional engineering practices and strategies for development and maintenance of software. [K3]

Program Outcomes (POs):

Computer Science Engineering Graduates will be able to:

1. **Engineering knowledge**: Apply the knowledge of Mathematics, Science, Engineering Fundamentals and Concepts of Computer Science Engineering to the solution of complex Engineering problems. **[K3]**
2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of Mathematics, Natural Sciences and Computer Science. **[K4]**
3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specific needs with appropriate consideration for the public health and safety, and the cultural, societal and environmental considerations. **[K5]**
4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions. **[K5]**
5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex Engineering activities with an understanding of the limitations**.** **[K3]**
6. **The Engineer and society**: 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. **[K3]**
7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. **[K3]**
8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the Engineering practice. **[K3]**
9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. **[K6]**
10. **Communication**: Communicate effectively on complex Engineering activities with the Engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions. **[K2]**
11. **Project management and finance**: Demonstrate knowledge and understanding of the Engineering and Management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments. **[K6]**
12. **Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. **[K1]**

ACADEMIC CALENDAR

✉ : principal@srivasaviengg.ac.in
svec.a8@gmail.com

☎: 08818- 284344, 355

SRI VASAVI ENGINEERING COLLEGE (AUTONOMOUS)

(Sponsored by Sri Vasavi Educational Society)

(Approved by AICTE, New Delhi & Permanently affiliated to JNTUK, Kakinada)
(Accredited by **NAAC** with '**A**' Grade ,Recognized by UGC under section 2(f) & 12(B))
(**NBA** Accreditation to B.Tech., EEE,CSE, ME and ECE Branches for 3 Years)
Pedatadepalli, **TADEPALLIGUDEM – 534 101.** W.G.Dist. **(A.P)**

Principal's Office,
Date: 08-06-2023.

Academic Calendar
For IV Year B.Tech , (2020 Admitted Batch)
Academic Year 2023-24

VII Semester			
Description	**From**	**To**	**Weeks**
Commencement of Class Work	**12.06.2023**		
I Unit of Instructions	12.06.2023	08.08.2023	8 W
I Mid Examinations	07.08.2023	12.08.2023	1 W
II Unit of Instructions	14.08.2023	07.10.2023	8 W
II Mid Examinations	09.10.2023	14.10.2023	1 W
Preparation & Practicals	16.10.2023	21.10.2023	1 W
End Examinations	23.10.2023	04.11.2023	2 W
VIII Semester			
Commencement of Class Work	**06.11.2023**		
Project - Project work, seminar and internship in industry	06.11.2023	04.05.2024	6 Months
Viva-Voce Examinations & submission of internship completion certificate	06.05.2024	18.05.2024	2 W

PRINCIPAL

PRINCIPAL
SRI VASAVI ENGINEERING COLLEGE
PEDATADEPALLI,
TADEPALLIGUDEM-534101

Copy to : ALL

Vision

To be a premier technological institute striving for excellence with global perspective and commitment to the nation.

Mission

- To produce Engineering graduates of professional quality and global perspective through learner-centric education.
- To establish linkages with government, industry and Research laboratories to promote R&D activities and to disseminate innovations.
- To create an eco-system in the institute that leads to holistic development and ability for life-long learning.

CLASS CONSOLIDATED TIME TABLE

Class: VII SEM **Section - A** **Class Coordinator:** Mrs. D. Suvarna Lakshmi Manikanteswari **Room: B-301**

Periods	1	2	3	4	1:00PM 2:00PM	5	6	7
Time / Day	(09.30 AM-10.30 AM)	(10.30 AM-11.20 AM)	(11.20 AM-12.10 PM)	(12.10 PM-01.00 PM)		(02.00 PM-02.50 PM)	(02.50 PM-03.40 PM)	(03.40 PM-04.30 PM)
Mon	CC	CC	DEVOPS	DEVOPS	LUNCH BREAK	MS	MS	HCI
Tue	HCI	FST LAB				CC	CC	SNSW
Wed	SNSW	SNSW	HCI	HCI		FST LAB		
Thu	DEVOPS	DEVOPS	SNSW	SNSW		HCI	HCI	MS
Fri	MS	MS	DEVOPS	DEVOPS		CC	CC	SNSW

Class: VII SEM **Section - B** **Class Coordinator:** Ms. D. Sasi Rekha **Room: B-302**

Periods	1	2	3	4	1:00PM 2:00PM	5	6	7
Time / Day	(09.30 AM-10.30 AM)	(10.30 AM-11.20 AM)	(11.20 AM-12.10 PM)	(12.10 PM-01.00 PM)		(02.00 PM-02.50 PM)	(02.50 PM-03.40 PM)	(03.40 PM-04.30 PM)
Mon	SPM	HCI	MS	MS	LUNCH BREAK	CC	CC	DEVOPS
Tue	CC	FST LAB				HCI	MS	SPM
Wed	MS	CC	CC	DEVOPS		FST LAB		
Thu	SPM	SPM	HCI	HCI		DEVOPS	DEVOPS	CC
Fri	HCI	HCI	SNSW	SNSW		MS	DEVOPS	DEVOPS

Class: VII SEM **Section - C** **Class Coordinator:** Mr. P. Rama Mohan Rao **Room: B-303**

Periods	1	2	3	4	1:00PM 2:00PM	5	6	7
Time / Day	(09.30 AM-10.30 AM)	(10.30 AM-11.20 AM)	(11.20 AM-12.10 PM)	(12.10 PM-01.00 PM)		(02.00 PM-02.50 PM)	(02.50 PM-03.40 PM)	(03.40 PM-04.30 PM)
Tue	DEVOPS	DEVOPS	SPM	SPM	**LUNCH BREAK**	FST LAB		
Wed	MS	FST LAB				HCI	HCI	CC
Thu	**SPM**	SPM	CC	CC		HCI	DEVOPS	DEVOPS
Fri	CC	HCI	HCI	DEVOPS		SPM	MS	**MS**
Sat	CC	**CC**	**SPM**	DEVOPS		MS	MS	HCI

Class: VII SEM **Section - D** **Class Coordinator:** Mrs. P. Ujawala Sai **Room: B-304**

Periods	1	2	3	4	1:00PM 2:00PM	5	6	7
Time / Day	(09.30 AM-10.30 AM)	(10.30 AM-11.20 AM)	(11.20 AM-12.10 PM)	(12.10 PM-01.00 PM)		(02.00 PM-02.50 PM)	(02.50 PM-03.40 PM)	(03.40 PM-04.30 PM)
Mon	HCI	HCI	DEVOPS	DEVOPS		CC	CC	SNSW
Tue	SNSW	CC	MS	HCI		FST LAB		
Wed	CC	FST LAB				SNSW	SNSW	DEVOPS
Thu	DEVOPS	DEVOPS	HCI	HCI		MS	MS	CC
Fri	DEVOPS	CC	SNSW	SNSW		MS	MS	HCI

STAFF DETAILS:

S. No.	Course Code	Course Name	Sections				
			A	B	C	D	CST
1.	**V20CSTPE12**	**Elective – III:** Human Computer Interaction	Mrs. D. Anjani Suputri Devi	Mrs. D. Anjani Suputri Devi	Mrs. G. Prasanthi	Mrs. G. Prasanthi	Mrs. G. Prasanthi
2.	**V20CSTPE13**	**Elective – IV:** Design Patterns **(only for Hons.)**	Mr. A. Rajesh	Mr. A. Rajesh	Mr. A. Rajesh	Mr. A. Rajesh	Mr. A. Rajesh
3.	**V20CSTPE16**	**Elective – IV:** Cloud Computing	Mr. P. Rama Mohan Rao	Mr. P. Rama MohanRao	Mr. P. Rama MohanRao	Mrs. P. Ujawala Sai	Mr. M.V.V. Krishna
4.	**V20CSTPE17**	**Elective-V:** Software Project Management	------	Ms. D. Sasi Rekha	Mr. A. Rajesh	-----	Mr. A. Rajesh
5.	**V20CSTPE17**	**Elective-V:** Social Networks and Semantic Web	Mrs. D. Suvarna Lakshmi Manikanteswari	------	------	Mrs. D. S L Manikanteswari	------
6.	**V20MBT52**	Management Science	Mrs. P.Devi	Mr.P.Bharath Kumar	Mr.T.Dileep	Mr. R.V.Raja Sekhar	Mrs.K.Lalitha Bhavani
7.	**V20CSTJE03**	**Job Oriented Elective –III:** Full Stack Technologies	Mrs. A. Leelavathi / Mr. T AnilKumar Reddy		Mr. R. Leela Phani Kumar / Mr. A. Rajesh		Dr. K. Shirin Bhanu / Mr. R. Leela Phani Kumar
8.	**V20CSTJE04**	**Job Oriented Elective –IV:** DevOps	Mr. Kalyan Babu.P	Mr. Kalyan Babu.P	Mr. N.V.Murali Krishna Raja	Mr. N.V.Murali Krishna Raja	Mr. Kalyan Babu.P
9.	**V20SOC05**	**Skill Advanced Course - V**	Mrs. D. Suvarna Lakshmi Manikanteswari	Ms. D. Sasi Rekha	Mr. P. Rama MohanRao	Mrs. P. Ujawala Sai	Mr. M.V.V. Krishna

Lab Name	Venue	
Full Stack Technologies	**Orange Seminar Hall**	**Students Student Carry Laptopsduring these Lab Sessions**

Head of the Department

COURSE STRUCTURE

VII - SEMESTER

S.No.	Course Code	Name of the Course		L	T	P	C
1	**Professional Elective-III**		PEC	3	0	0	3
	V20CSTPE09	Advanced Computer Architecture					
	V20CSTPE10	Big Data Analytics					
	V20CSTPE11	Deep Learning					
	V20CSTPE12	Human Computer Interaction					
2	**Professional Elective-IV**		PEC	3	0	0	3
	V20CSTPE13	Design Patterns					
	V20CSTPE14	NoSQL Databases					
	V20CSTPE15	Reinforcement Learning					
	V20CSTPE16	Cloud Computing					
3	**Professional Elective-V**		PEC	3	0	0	3
	V20CSTPE17	Software Project Management					
	V20CSTPE18	Scripting Languages					
	V20CSTPE19	Natural Language Processing					
	V20CSTPE20	Social Networks and Semantic Web					
4		**Open Elective -III / Job Oriented Elective –III**	OEC	3	0	0	3
			JOE	0	0	6	
5		**Open Elective -IV / Job Oriented Elective – IV**	OEC/JOE	3	0	0	3
6	V20MBT52	Management Science	HSS	3	0	0	3
7	V20SOC05	Skill Oriented Course-V*	SOC	1	0	2	2
8	V20CSP02	Mini Project /Internship	Internship	0	0	6	3
			Total	**16**	**0**	**14**	**23**

Total Contact Hours: 30 Total Credits: 23

** The Student need to select one Skill Oriented Course from the given pool of courses.*

LESSON PLANS

Human Computer Interaction

Academic Year : **2023-24** **Programme**: B.Tech
Semester : **VII** **Sections** :A,B,C&D
Name of the Course: **Human Computer Interaction(Elective-III) Course Code**: **V20CSTPE12**

COURSE OUTCOMES (Along with Knowledge Level):

After completion of this course, the students will be able to:

S.No.	Course Outcome	BTL
1.	Describe the principles and characteristics of GUI.	K2
2.	Describe how a computer system may be modified to include human diversity.	K2
3.	Select an effective style and screen design for a specific business application.	K2
4.	Discuss System Menus & Navigation Schemes.	K2
5.	Select Device and Screen based controls.	K2

Text Books:

1. "The Essential Guide to User Interface Design", Wilbert O. Galitz, 2nd edition,2002, Wiley India Edition.
2. Prece, Rogers, "Sharps Interaction Design", Wiley India.
3. "Designing the user interfaces". Ben Shneidermann 3rd Edition, Pearson Education Asia.

Reference Books:

1. "User Interface Design" , SorenLauesen, Pearson Education
2. "Essentials of Interaction Design", Alan Cooper, Robert Riemann, David Cronin, Wiley
3. "HumanComputer Interaction", Alan Dix, Janet Fincay, GreGoryd, Abowd, Russell, Bealg, Pearson Education.

Targeted Proficiency and attainment Levels (for each Course Outcome):

Cos		CO1	CO2	CO3	CO4	CO5
Targeted Proficiency Level		60	60	60	60	60
Targeted level of Attainment	Level 3	60	60	60	60	60
	Level 2	55	55	55	55	55
	Level 1	45	45	45	45	45

Lecture Plan:

UNIT-1

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours Required	Pedagogy	Teaching aids
1	CO1	Dissemination of Vision, Mission, PEOs,POs,PSOs		1	Lecture	ICT
2		Introduction, Explain Importance of the User Interface, Importance and benefits of Good Design.	K2	2	Lecture	BB
3		List Characteristics of Graphical and Web User Interface	K1	2	Lecture with Discussion	BB
4		Describe Graphical User Interface, popularity of graphics, concepts of Direct Manipulation	K2	2	Lecture	ICT
5		Explain Graphical System advantage and disadvantage	K2	1	Lecture with Discussion	BB
6		List Characteristics of GUI	K1	1	Lecture	BB
7		Explain Characteristics of Web Interface	K2	1	Lecture	BB
8		Describe Principles of User Interface Design	K2	2	Lecture	BB
		Total		**12**		

UNIT-2

S.No	**Course Outcome**	**Intended Learning Outcomes (ILO)**	**Knowledge Level of ILO**	**No. of Hours Required**	**Pedagogy**	**Teaching aids**
1	CO 2	**The User Interface Design Process:** Explain Obstacles and Pitfall in the development Process, Usability	K2	2	Lecture	ICT
2		Describe The Design Team, Human Interaction with Computers	K2	2	Lecture	ICT
3		List Important Human Characteristics in Design	K1	1	Lecture	ICT
4		Illustrate Human Consideration in Design, Human Interaction Speeds	K2	2	Lecture	BB
5		Distinguish Performance versus Preference	K2	1	Lecture with Discussion	BB
6		Explain Methods for Gaining and Understanding of Users.	K2	2	Lecture	BB
7		**Total**		**10**		

UNIT-3

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours Required	Pedagogy	Teaching aids
1	CO 3	**Understanding Business Functions:** Define Business Definitions & Requirement analysis	K1	2	Lecture with discussion	ICT
2		Explain Determining Business Functions	K2	2	Lecture	BB
3		**Principles of Good Screen Design:** Explain Human considerations in screen Design, interface design goals.	K2	2	Lecture	BB
4		Explain screen meaning and purpose	K1	2	Lecture	BB
5		Describe Technological considerations in Interface Design.	K1	2	Lecture	BB
		Total		**10**		

UNIT-4

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours Required	Pedagogy	Teaching aids
1	CO5	**System Menus and Navigation Schemes:** Illustrate Structure, Functions	K2	2	Lecture	ICT
2		Describe Context, Formatting	K1	1	Lecture	BB
3		Explain Phrasing and Selecting, Navigating of Menus	K2	2	Lecture with Discussion	ICT
4		List Kinds of Graphical Menus & Windows Interface	K1	2	Lecture	BB
5		Discuss Windows characteristic, Components of Window	K2	2	Lecture	BB
6		Explain Windows Presentation Styles	K2	2	Lecture with Discussion	BB
7		Discuss Types of Windows	K2	1	Lecture with Discussion	ICT

8		Explain Window Management.	K2	2	Lecture	BB
9		**Total**		**12**		

UNIT-5

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours Required	Pedagogy	Teaching aids
1	CO 6	**Device and Screen-Based Control:** Explain Device based controls, Operable Controls	K2	2	Lecture with Discussion	ICT
2		Discuss Text entry/read-Only Controls	K2	2	Lecture	BB
3		Explain Section Controls, Combining Entry/Selection Controls	K2	2	Lecture	ICT
4		Describe Presentation Controls	K1	2	Lecture	BB
5		Illustrate Selecting proper controls	K2	1	Lecture	BB
6		**Total**		**9**		

Total No. of Classes: 55

Design Patterns (only for Hons.)

Academic Year : 2023-24 **Programme: B.Tech**
Year/ Semester : VII Sem **Section:A, B, C, D**
Name of the Course: Design Patterns (only for Hons.) (Elective –IV)
Course Code: V20CSTPE13

Course Outcomes (Along with Knowledge Level):

After completion of this course, the students will be able to:

S.No.	Course Outcome	BTL
1.	Describe the design patterns view and its applications	K2
2.	Demonstrate Creational Patterns.	K3
3.	Construct Structural Patterns for a given Scenario.	K3
4.	Construct Behavioural Patterns for a given Scenario.	K3
5.	Examine various Case Studies in utilizing Software Architectures.	K3

Text Books:

1. Software Architecture in Practice, second edition, Len Bass, Paul Clements & Rick Kazman, Pearson Education, 2003.
2. Design Patterns, Erich Gamma, Pearson Education, 1995.

Reference Books:

1. Beyond Software architecture, Luke Hohmann, Addison wesley, 2003.
2. Software architecture, David M. Dikel, David Kane and James R. Wilson, Prentice Hall PTR, 2001
3. Software Design, David Budgen, second edition, Pearson education, 2003
4. Head First Design patterns, Eric Freeman & Elisabeth Freeman, O_REILLY, 2007.
5. Design Patterns in Java, Steven John Metsker & William C. Wake, Pearson education, 2006.

Targeted Proficiency and attainment Levels (for each Course Outcome):

COs		CO1	CO2	CO3	CO4	CO5
Targeted Proficiency Level		60	60	60	60	60
Targeted level of Attainment	Level 3	60	60	60	60	60
	Level 2	50	50	50	50	50
	Level 1	40	40	40	40	40

Lecture Plan:

Unit 1

S. No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO1	Introduction: What Is a Design Pattern?		1	Lecture	BB+ICT
2		Design Patterns in Smalltalk MVC	K1	1	Lecture with discussion	BB+ICT
3		Describing Design Patterns	K1	1	Lecture	BB+ICT
4		The Catalog of Design Patterns, Organizing the Catalog	K1	2	Lecture with discussion	BB+ICT
5		How Design Patterns Solve Design Problems	K1	2	Lecture with discussion	BB+ICT
6		How to Select a Design Pattern, How to Use a Design Pattern	K2	2	Lecture	BB+ICT

9 Hrs

Unit 2

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO2	Creational Patterns: Introduction		2	Lecture	BB+ICT
2		Abstract factory	K3	2	Lecture	BB+ICT
3		Builder	K3	2	Lecture	BB+ICT
4		Factory method	K3	2	Lecture	BB+ICT
5		Prototype, Singleton	K3	2	Lecture	BB+ICT

10 Hrs

Unit 3

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO3	Structural Patterns:Introduction	K1	1	Lecture	BB
2		Adapter	K3	2	Lecture	BB+ICT
3		Bridge	K3	2	Lecture	BB+ICT
4		Composite	K3	2	Lecture	BB+ICT
5		Decorator	K3	2	Lecture with Discussion	BB+ICT
6		Façade	K3	2	Lecture with Discussion and in class Assignment	BB+ICT
7		Flyweight and PROXY	K3	2	Lecture with Discussion	BB+ICT

13 Hrs

Unit 4

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO4	Behavioural Patterns: Introduction	K1	1	Lecture	BB
2		Chain of responsibility	K3	2	Lecture	BB+ICT
3		Command, Interpreter, Iterator,	K3	2	Lecture	BB+ICT
4		Mediator, memento, observer	K3	2	Lecture	BB+ICT
5		State, strategy, template method, visitor	K3	2	Lecture with Discussion and in class Assignment	BB+ICT

9 Hrs

Unit 5

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO5	Case Studies A-7E – A case study in utilizing architectural structures	K1	3	Lecture	ICT
2		The World Wide Web - a case study in Interoperability	K2	3	Lecture	ICT
3		Air Traffic Control – a case study in designing for high availability	K2	3	Lecture	ICT
4		Celsius Tech – a case study in product line development.	K2	3	Lecture	ICT

12 Hrs

Total No. of Classes: 53

Cloud Computing

Academic Year: 2022-23 **Programme: B.Tech**
Year/ Semester: VII **Section: A,B,C,D**
Name of the Course: Cloud Computing **Course Code : V20CSTPE16**

Course Outcomes (Along with Knowledge Level):

After successful completion of course the student will able to

S.No.	Course Outcome	BTL
1.	Explain the basic concepts of Cloud Computing.	K2
2.	Describe the Virtualization and Migration concepts of Cloud.	K2
3.	Explain the Cloud Application Design Methodologies.	K2
4.	Illustrate the security aspects of Cloud.	K2
5.	Illustrate the SLA management aspects of Cloud.	K2

Text Books:

1. Cloud Computing: Principles and Paradigms, Rajkumar Buyya, James Borberg,Andrzej Goscinski, Wiley Publication.
2. Cloud Computing: A Hands –on Approach, Arshdeep Bahga, Vijay Medisetti, University Press.

Reference Books:

1. Cloud Computing – Web Based Applications That Change the Way you Work and Collaborate Online, Michael Miller, Pearson Education.
2. Cloud Computing: A Practical Approach, Antony T.Velte, Toby J.Velte, Robert Elsenpeter, McGraw-Hill, (2010).

Targeted Proficiency and attainment Levels (for each Course Outcome):

Cos		CO1	CO2	CO3	CO4	CO5
Targeted Proficiency Level		65	60	60	65	60
Targeted level of Attainment	Level 3	60	60	60	60	60
	Level 2	50	50	50	50	50
	Level 1	40	40	40	40	40

Lecture Plan:

Unit 1

S. No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO1	Introduction to OBE, Dissemination of Vision, Mission of the Dept. and PEOs, POs & PSOs of the Programme.		1	Lecture	BB+ICT
2		Define the Cloud Computing and Explain the Types of clouds and Layers in Clouds	K1	2	Lecture with discussion	BB+ICT
3		Identify the Desired features of a Cloud.	K1	1	Lecture	BB+ICT
4		Describe the Infrastructure as a Service Providers (IaaS).	K1	2	Lecture with discussion	BB+ICT
5		Describe the Platform as a Service Providers (PaaS).	K1	2	Lecture with discussion	BB+ICT
6		Identify the Challenges and Risks in Cloud Computing	K2	1	Lecture	BB+ICT

9 Hrs

Unit 2

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO2	Outline The Concepts and enabling technologies of cloud computing	K1	1	Lecture	BB
2		Explain the Virtualization and its types.	K2	1	Lecture	BB
3		Describe the need for Load Balancing and Outline the Algorithms used.	K2	1	Lecture	BB
4		Define Replication and its types .	K2	1	Lecture	BB
5		Define SDN, and SDN Architecture Key elements	K1	1	Lecture	BB
6		Explain NFV in relationship to SDN and NFV Architecture	K2	2	Lecture with Discussion	BB+ICT
7		Demonstrate the seven step model of migration into a cloud	K2	2	Lecture with Discussion	BB+ICT
8		Discuss the Migration mitigation and Risks.	K2	1	Lecture with Discussion and in class Assignment	BB+ICT

10 Hrs

Unit 2

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO2	Outline The Concepts and enabling technologies of cloud computing	K1	1	Lecture	BB
2		Explain the Virtualization and its types.	K2	1	Lecture	BB
3		Describe the need for Load Balancing and Outline the Algorithms used.	K2	1	Lecture	BB
4		Define Replication and its types .	K2	1	Lecture	BB
5		Define SDN, and SDN Architecture Key elements	K1	1	Lecture	BB
6		Explain NFV in relationship to SDN and NFV Architecture	K2	2	Lecture with Discussion	BB+ICT
7		Demonstrate the seven step model of migration into a cloud	K2	2	Lecture with Discussion	BB+ICT
8		Discuss the Migration mitigation and Risks.	K2	1	Lecture with Discussion and in class Assignment	BB+ICT

10 Hrs

Unit 3

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO3	Outline Verification and Validation activities	K1	1	Lecture	BB
2		Explain the Design Considerations for Cloud Applications.	K2	1	Lecture	BB
3		Explain Reference Architectures for Cloud Applications.	K2	1	Lecture	BB
4		Demonstrate Cloud Application Design Methodologies: SOA	K2	1	Lecture	BB
5		Explain Cloud Component Model.	K2	2	Lecture with Discussion	BB+ICT
6		Demonstrate MVC	K2	1	Lecture with Discussion and in class Assignment	BB+ICT
7		Illustrate Data Storage Approaches.	K2	2	Lecture with Discussion	BB+ICT

9 Hrs

Unit 4

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO4	Outline **Cloud Security**	K1	1	Lecture	BB
2		Explain the Cloud Security Architecture (CSA).	K2	2	Lecture	BB
3		Interpret Authentication, Authorization, and Identity.	K2	3	Lecture	BB
4		Explain Access Management.	K2	2	Lecture	BB
5		Demonstrate Data Security, Key Management	K2	2	Lecture with Discussion and in class Assignment	BB+ICT

10 Hrs

Unit 5

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO5	Outline SLA **Management in Cloud Computing**	K1	1	Lecture	BB
2		Explain the Service Level Agreements (SLA).	K2	2	Lecture	BB
3		Interpret Traditional Approaches to SLO Management.	K2	2	Lecture	BB
4		Explain Types of SLA.	K2	2	Lecture	BB
5		Discuss Life Cycle of SLA	K2	1	Lecture with Discussion and in class Assignment	BB+ICT
6		Demonstrate SLA Management in Cloud	K2	2	Lecture with Discussion	BB+ICT

10 Hrs

Software Project Management

Academic Year: 2023-24 **Programme: B.Tech**

Year/ Semester: VII **Section: A,B,C,D**

Name of the Course: Software Project Management

Course Code : V20CSTPE17

Course Outcomes (Along with Knowledge Level):

After successful completion of course the student will able to

S.No.	Course Outcome	Knowledge Level
1.	Describe Software Project Management Terminology.	[K2]
2.	Explain various Software development process models and Software Lifecycle phases.	[K2]
3.	Illustrate various Effort Estimation Techniques and activity network models for Project Planning.	[K3]
4.	Demonstrate Risk Management Concepts and resource allocation.	[K3]
5.	Explain importance of project monitoring and control for accomplishing project goals and software quality.	[K2]

Text Books:

1. Software Project Management, Bob Hughes & Mike Cotterell, 6th Ed,TMH.
2. Software Project Management, Walker Royce, Pearson Education, 2005.

Reference Books:

1. Software Project Management in Practice, Pankaj Jalote, 9th Ed Pearson.
2. Software Project Management, Joel Henry, 3rd Ed, Pearson Education.

Targeted Proficiency and attainment Levels (for each Course Outcome):

Cos		CO1	CO2	CO3	CO4	CO5
Targeted Proficiency Level		60	60	60	60	60
Targeted level of Attainment	Level 3	70	70	70	70	70
	Level 2	65	65	65	65	65
	Level 1	60	60	60	60	60

Lecture Plan

Unit-1

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1		Dissemination of Vision, Mission of the Dept and PEOs, Pos,& PSOs of the Programme			Lecture	BB+ICT
2	CO1	Differentiate Software Project and other type of projects	K2	1	Lecture	BB+ICT
3		Describe software project management activities.	K1	1	Lecture	BB+ICT
4		Discuss various Categories in software Projects	K2	1	Lecture	BB+ICT
5		Identify types of stake holders, objectives and goals in software project management.	K1	2	Lecture	BB+ICT
6		Describe Stepwise project planning, project scope , Objectives and infrastructure.	K2	2	Lecture	BB+ICT
7		Identify Project products, Deliverables, activities and effort estimation.	K1	1	Lecture	BB+ICT

Unit- 2

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO2	Describe Build or buy approach	K1	1	Lecture	BB
2		Describe Process Models: Waterfall , Prototyping and Incremental	K2	2	Lecture	BB+ICT
3		Discuss Agile methods: Extreme programming, Atern method	K2	1	Lecture	BB+ICT
4		Select an appropriate model	K2	1	Lecture	BB
5		Classify Project Life Cycle Phases.	K2	2	Lecture	BB+ICT

Unit-3

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1		Describe Software Effort Estimation Techniques.	K1	1	lecture	BB
2		Discuss Function Point Analysis.	K2	1	lecture with Discussion	BB +ICT
3		Explain SLOC: Software Metrics and Measurements.	K2	1	lecture	BB + ICT
4	**CO3**	Demonstrate COCOMO: A Parametric Model	K3	2	lecture	BB + ICT
5		Demonstrate Use-Case based Estimation Techniques.	K3	1	lecture with Discussion	BB +ICT
6		Explain various Activity Identification Approaches: Sequencing and Scheduling Activities.	K2	1	lecture	BB +ICT
7		Illustrate Network Planning Models in Project Scheduling: Forward pass and Backward pass and Critical Path Analysis.	K3	2	lecture with Discussion	BB +ICT

Unit- 4

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO4	Describe various Risk Management Categories.	K1	2	Lecture	BB
2		Demonstrate concepts of Risk Identification, Assessment, Planning and Management.	K3	2	Lecture with discussion	BB+ICT
3		Demonstrate PERT Technique.	K3	1	Lecture	BB
5		Describe Resource Allocation types, Resource requirement and resource scheduling	K2	2	Lecture	BB

Unit-5

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO5	Describe the concept of Project Monitoring and Control.	K1	1	lecture	BB
2		Describe Data collection, Visualizing progress	K1	1	lecture	BB
3		Explain Cost monitoring and Earned Value Analysis.	K2	2	lecture	BB + ICT
4		Define Software Quality.	K1	1	Lecture	BB + ICT
5		Describe importance of quality and ISO 9126.	K1	1	lecture	BB
6		Explain the concepts of product Quality and Process Quality.	K2	1	lecture with discussion	BB
7		Describe Statistical Process Control Capability Maturity Model.	K2	1	Lecture with Discussion	BB
8		Discuss various Techniques to Enhance Software Quality.	K2	1	Lecture with Discussion	

Total No. of Classes: 60

Social Network and Semantic Web

Academic Year: 2023-24 **Programme: B.Tech**

Year/ Semester: VII **Section: A,B,C,D**

Name of the Course: Social Network and Semantic Web

Course Code : V20CSTPE20

Course Outcomes (Along with Knowledge Level):

After successful completion of course the student will able to

S.No.	Course Outcome	BTL
1.	Demonstrate knowledge by explaining the three different named generations of web [K3]	[K3]
2.	Construct a Social Network [K3]	[K3]
3.	Relate Knowledge representation methods for semantic web [K3]	[K3]
4.	Describe web services and its Applications [K2]	[K2]
5.	Develop "Linked data" Application using semantic web Technologies [K3]	[K3]

Text Books:

1. Social Networks and the Semantic Web, PeterMika, Springer,2007.
2. Semantic Web Technologies, Trends and Research in Ontology basedsystems, J.Davies,RudiStuder,PaulWarren,JohnWiley&Sons.

Reference Books:

1. Semantic Web and Semantic Web Services –Liyang Lu Chapman and Hall/CRC Publishers, (Taylor & Francis Group)
2. Information Sharing on the semantic Web – Heiner Stuckenschmidt; Frank Van Harmelen, Springer Publications

Targeted Proficiency and attainment Levels (for each Course Outcome):

Cos		CO1	CO2	CO3	CO4	CO5
Targeted Proficiency Level		60	60	60	60	60
Targeted level of Attainment	Level 3	70	70	70	70	70
	Level 2	65	65	65	65	65
	Level 1	60	60	60	60	60

Lecture Plan

Unit-1

S. No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1		Dissemination of Vision, Mission of the Dept and PEOs, Pos,& PSOs of the Programme			Lecture	BB
2	CO1	Explain The Semantic web	K2	1	Lecture	BB
3		Describe Limitations of the current Web	K1	2	Lecture	BB
4		Describe The Semantic Solution	K1	2	Lecture	BB
5		Explain Development of the semantic web	K2	2	Lecture	BB
6		Explain Emergence of social web	K2	1	Lecture	BB

Unit- 2

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO2	Describe What is network analysis? Development of Social Network Analysis	K1	1	Lecture	BB
2		Explain Key concepts and measures in network analysis	K2	2	Lecture	BB
3		Explain Electronic sources for network analysis	K2	2	Lecture	BB
4		DiscussElectronic discussion networks	K2	1	Lecture	BB
5		Discuss Blogs and online communities	K2	2	Lecture	BB+ICT
6		Explain Web-based networks	K2	2	Lecture	BB

Unit-3

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO3	Describe Knowledge Representation on the Semantic Web	K1	1	lecture	BB
2		Explain Ontologies	K2	2	lecture with Discussion	BB
3		Discuss Ontologies and their role in the Semantic Web	K2	2	lecture	BB + ICT
4		Discuss Ontology languages for the semantic Web	K2	2	lecture	BB + ICT
5		Explain Ontology languages for the semantic Web	K2	2	lecture with Discussion	BB
6		**Modeling and Aggregating Social Network Data:** Describe Modeling and Aggregating Social Network Data	K1	2	Lecture	BB
7		Classify State of the art in network data representation	K2	2	Lecture with discussion	BB+ICT
8		Explain Ontological representation of Social individuals	K2	2	Lecture	BB
9		Discuss Ontological representation of social relationships	K2	1	Lecture	BB
10		Explain Aggregating and reasoning with social network data.	K2	2	Lecture	BB

Unit-4

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO4	Identify developing social semantic applications	K1	1	lecture	BB
2		Discuss Building Semantic Web applications with social network features	K2	2	lecture	BB
3		Outline Flink- the social networks of the Semantic Web community	K1	2	lecture	BB + ICT
4		Explain Open academia	K2	1	Lecture	BB + ICT
5		Explain Open academia distributed	K2	1	lecture	BB
6		Discuss semantic-based publication management.	K2	2	lecture with discussion	BB
7		Disuss semantic-based publication management.	K2	1	Lecture with practical	BB

Unit-5

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO5	Demonstrate the Evaluation of Web-Based Social Network Extraction	K3	1	Lecture	BB + ICT
2		Outline Differences between survey methods and electronic data extraction	K1	1	Lecture	BB + ICT
3		Discuss context of the empirical study	K1	2	Lecture	BB + ICT
4		Describe Data collection	K1	2	Lecture with Discussion	BB + ICT
5		Describe Preparing the data	K1	1	Lecture	BB + ICT

6		Explain optimizing goodness of fit	K2	1	Lecture	BB + ICT
7		Explain Comparison across methods and network	K2	2	Lecture with Discussion	BB + ICT
8		Discuss Predicting the goodness of fi	K2	2	Lecture with Discussion	BB + ICT
9		Discuss Evaluation through analysis	K2	2	Lecture with Discussion	BB + ICT

Total No. of Classes: 60

Management Science

Academic Year: 2023-24 **Programme: B.Tech**
Year/ Semester: VII **Section: A,B,C,D**
Name of the Course: Management Science **Course Code : V20MBT52**

Course Outcomes (Along with Knowledge Level):

After successful completion of course the student will able to

S.No.	CO No.	Course Outcome	BTL
1.	CO1	Understand various approaches to Management.	K2
2.	CO2	To get familiarity with operations management in an organization	K2
3.	CO3	Understand the Functions of Human Resource Management, Marketing Management and Financial Management	K2
4.	CO4	To Sketch the networks for better project management	K3
5.	CO5	Understand the Concept of Strategic Management and to get familiarity with contemporary developments in business management.	K2

Text Books:

1. Dr. P. Vijayakumar&Dr. N. Apparao, Management Science, cengage,
2. Dr.AR.Arysri , Management Science,TMH2011

Reference Books:

1. Philip Kotler & Armstrong: Principles of Management, Pearson publications.
2. Hitt and vijayakumar: strategic Management, cengage learning

Targeted Proficiency and attainment Levels (for each Course Outcome):

Cos		CO1	CO2	CO3	CO4	CO5
Targeted Proficiency Level		60	60	60	60	60
Targeted level of Attainment	Level 3	60	60	60	60	60
	Level 2	55	55	55	55	55
	Level 1	50	50	50	50	50

Lecture Plan:

S. No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours Required	Pedagogy	Teaching aids
1	CO1	Definitions of management,	K1	1	Lecture	BB
2		Describe the Functions of management.	K1	2	Lecture	BB
3		Evaluation of management thought	K2	2	Lecture+ discussion	BB
4		Explain Theories of motivation.	K2	2	Lecture	BB
5		Managerial skills	K2	1	Lecture + discussion	BB
6		Types of organization structures	K2	1	Lecture + discussion	BB
7		State the International Management structure.	K2	2	Lecture + discussion	BB
1	CO2	Plant Location and Layout	K1	1	Lecture	BB
2		Work Study and Statistical Quality Control.	K2	2	Lecture + discussion	BB
3		Control charts (P- chart, R chart, and C chart)	K3	2	Lecture + discussion	BB
4		Explain the concept of Material Management	K2	1	Lecture + discussion	BB
5		Need for inventory control	K2	2	Lecture + discussion	BB
6		EOQ, ABC analysis simple problems and Types of ABC analysis.	K3	3	Lecture + discussion	BB
1	CO 3	Concept of HRM, HRD and PMIR	K1	1	Lecture	BB
2		Functions of HR manager	K2	2	Lecture + discussion	BB
3		Job Analysis	K2	1	Lecture + discussion	BB
4		Job Evaluation and Merit Rating methods.	K2	2	Lecture + discussion and In-class Assignment	BB+PPT
5		Marketing Management ,Functions of Marketing	K2	1	Lecture + discussion	BB
6		Four P's of marketing ,New product Development	K2	1	Lecture + discussion	BB
7		Product life cycle, Service Marketing	K2	2	Lecture + discussion and In-class Assignment	BB+PPT
1	CO 4	Construction of Network	K2	3	Lecture+ discussion	BB
2		Difference between PERT and CPM and Problems	K2	4	Lecture + discussion and In-class Assignment	BB

3		Compute Critical path, Probability, Project crashing (Simple problems)	K3	4	Lecture + discussion	BB
1	CO5	Describe Vision, Mission, Goals and Strategy.	K2	2	Lecture + discussion	BB
2		Describe Strategic Management Process	K2	2	Lecture + discussion	BB
3		Discuss Corporate Planning	K2	2	Lecture + discussion and In-class Assignment	BB+PPT
4		Explain Environmental Scanning	K2	1	Lecture	BB
5		Describe SWOT analysis.	K2	1	Lecture + discussion and In-class Assignment	BB+PPT
6		Describe the Concept of ERP	K2	1	Lecture + discussion and In-class Assignment	BB+PPT
7		Describe the concept of Total Quality Management	K1	1	Lecture	BB
8		Describe the concept of Six sigma	K2	1	Lecture + discussion	BB
9		Describe the concept of Supply chain Management.	K2	1	Lecture	BB
10		Describe the concept of Business process out sourcing	K2	1	Lecture + discussion	BB
11		Explain Lean Start-ups and Entrepreneurship	K2	1	Lecture + discussion and In-class Assignment	BB+PPT

Full Stack Technologies

Academic Year: 2023-24 **Programme: B.Tech**
Year/ Semester: VII **Section: A,B,C,D**
Name of the Course: Full Stack Technologies **Course Code : V20CSTJE03**

Course Outcomes (Along with Knowledge Level):

After successful completion of course the student will able to

CO	Course Outcomes	Knowledge Level
CO1	Demonstrate IDE tools Installation	K3
CO2	Develop programs using servlets.	K3
CO3	Illustrate MVC architecture.	K3
CO4	Demonstrate applications of Hibernate.	K3
CO5	Illustrate Spring MVC Framework.	K3

Targeted Proficiency and Attainment Levels (for each course Outcome):

Cos		CO1	CO2	CO3	CO4	CO5
Targeted Proficiency Level		70	70	70	70	70
Targeted level of Attainment	Level 3	70	70	70	70	70
	Level 2	60	60	60	60	60
	Level 1	50	50	50	50	50

Lecture Plan:

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO 1	Dissemination of COs	-	1	Lecture With Discussion	ICT
2		Installation of IDEs and Development Tools	K3	2	LectureWith Discussion	ICT ICT ICT
3						

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO 2	Describe about Introduction to Servlets. Develop Servlet application to print current date & time. Develop Servlet program to link Html & Servlet Communication. Develop Servlet program to Auto refresh a page. Demonstrate session tracking u Develop Servlet program to insert/delete/update the record into database. Develop Servlet program to add cookie to selected value	K3	9	Lecture with Discussion	ICT
2						

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO 3	Describe about Introduction to MVC in java. Develop sample program on Model Layer in MVC Using Java. Develop sample program on View Layer in MVC Using	K3	9	Lecture with Discussion	ICT
2						

		Java. Develop sample program on Controller Layer in MVC Using Java. Demonstrate MVC deployment in java. Develop the Rules for MVC Mapping in Server Side. Construct code for Web Server for MVC Deployment.				

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO 4	Describe about Introduction to Spring MVC.	K3	9	Lecture with Discussion	ICT
2		Demonstrate the usage of Dispatcher Servlet in Spring MVC. Construct code to Load the spring jar files or add dependencies in the case of Maven. Construct controller class. Illustrate Provide the entry of controller in the web.xml file. Develop bean in a separate XML file. Construct the code to Display the message in the JSP page. Illustrate the process to Start the server and deploy the project. Develop the application on web server using Spring MVC.				

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO 5	Describe about Introduction to Hibernate. Demonstrate the components of Hibernate with ORM Develop a code How to persist objects using Hibernate and how to use map using XML and Annotations Develop a code How to implement Inheritance in Hibernate Illustrate the Working with relationship between entities-association Develop Transactions in Hibernate Develop Querying with HQL (Hibernate Query Language) Construct various other forms of querying - Criteria, QBE etc. Construct tasks by using Some Debugging Tools in Java like NetBeans, Eclipse, IntelliJ IDEA, Visual Studio Code.	K3	12	Lecture with Discussion	ICT
2						

Total No. of Classes: 42

DevOps

Academic Year: 2023-24 **Programme: B.Tech**
Year/ Semester: VII **Section: A,B,C,D**
Name of the Course: DevOps **Course Code : V20CSTJE04**

Course Outcomes (Along with Knowledge Level):

After successful completion of course the student will able to

S.No.	Course Outcome	BTL
1.	Discuss the traditional software development.	K2
2.	Discuss the concepts of rise of agile methodologies.	K2
3.	Discuss the concept of DevOps and Agile.	K2
4.	Demonstrate the purpose of DevOps.	K3
5.	Illustrate the Operations of CAMS.	K2

Text Books:

1. The DevOps Handbook - Book by Gene Kim, Jez Humble, Patrick Debois, and Willis.

Reference Books:

1. What is DevOps? - by Mike Loukides.

Targeted Proficiency and attainment Levels (for each Course Outcome):

Cos		CO1	CO2	CO3	CO4	CO5
Targeted Proficiency Level		65	65	60	60	60
Targeted level of Attainment	Level 3	60	60	60	60	60
	Level 2	50	50	50	50	50
	Level 1	40	40	40	40	40

Lecture Plan:

Unit-1

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO1	Introduction to OBE, Dissemination of Vision, Mission of the Dept.and PEOs,POs & PSOs of the Programme.		1	Lecture	BB
2		Describe the software crisis problem.	K1	1	Lecture	BB
3		Identify the historical aspects of software development.	K1	1	Lecture	BB
4		Discuss the importance and challenges of software engineering.	K2	2	Lecture with discussion	BB
5		Explain the phases in software development life cycle.	K2	1	Lecture	BB+ICT
6		Describe the characteristics of good software.	K1	1	Lecture	BB+ICT
7		Explain in detail waterfall model.	K2	2	Lecture with Discussion and in class Assignment	BB+ICT
8		Explain the conflicts between developers and IT opeartions.	K2	1	Lecture	BB+ICT
			Total	10		

Unit- 2

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO2	Outline the growth of agile methodologies.	K1	1	Lecture	BB
2		Describe the principles of agile methodology.	K1	1	Lecture	BB
3		Explain the benefits of agile methodology.	K2	1	Lecture	BB
4		Discuss extreme programming agile model	K2	1	Lecture	BB+ICT
5		Explain scrum and DSDM agile models.	K2	1	Lecture	BB+ICT

6		Explain the pros and cons of agile methodologies over waterfall model.	K2	2	Lecture with discussion and in class Assignment	BB+ICT
7		Discuss iterative agile development.	K2	2	Lecture	BB+ICT
8		Explain the agile core values of Individual and team interactions and delivering working software.	K2	1	Lecture	BB
9		Describe the importance of Customer collaboration and handling change request in agile.	K1	1	Lecture	BB
			Total	11		

Unit-3

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO3	Define Devops and their purpose.	K1	2	Lecture	BB
2		Describe the life cycle of Devops.	K2	2	Lecture with Discussion and in class Assignment	BB+ICT
3		Explain the benefits of Devops.	K2	1	Lecture	BB+ICT
4		Describe the key components of Devops culture.	K2	2	Lecture	BB
5		Explain the similarities between Devops and agile.	K2	2	Lecture	BB+ICT
6		Explain the differences between Devops and agile.	K1	2	Lecture with Discussion and in class Assignment	BB+ICT
			Total	11		

Unit- 4

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO4	Define Minimum Viable Product.	K1	1	Lecture	BB
2		Explain the process to build MVP.	K2	1	Lecture	BB
3		Explain the advantages and drawbacks of MVP.	K2	2	Lecture	BB
4		Differentiate MVP and Prototype.	K2	2	Lecture	BB+ICT
5		Demonstrate the process of Continuous Integration	K3	2	Lecture	BB+ICT
6		Explain the benefits of Continuous Integration	K2	1	Lecture	BB+ICT
7		Demonstrate the role of Devops for CI.	K3	2	Lecture with Discussion and in class Assignment	BB+ICT
8		Define the need of continuous delivery	K1	1	Lecture	BB+ICT
9		Differentiate continuous delivery and continuous deployment.	K2	2	Lecture	BB+ICT

Total 14

Unit-5

S.No	Course Outcome	Intended Learning Outcomes (ILO)	Knowledge Level of ILO	No. of Hours	Pedagogy	Teaching aids
1	CO5	Explain the core values (CAMS) of Devops.	K2	2	Lecture	BB+ICT
2		Define Test driven development and its benefits.	K1	1	Lecture	BB
3		Explain Test driven development process.	K2	1	Lecture	BB
4		Differentiate traditional configuration management and Devops configuration	K2	1	Lecture	BB+ICT

		management .				
5		Describe the benefits of Devops configuration management.	K1	1	Lecture	BB
6		Discuss the challenges in infrastructure automation in Devops.	K2	1	Lecture with Discussion and in class Assignment	BB+ICT
7		Describe the benefits of infrastructure as a code in Devops.	K1	1	Lecture	BB
8		Define root cause analysis.	K1	1	Lecture	BB
9		Explain how to perform root cause analysis.	K2	1	Lecture	BB+ICT
10		Explain how to run blamelessness post-mortem.	K2	1	Lecture	BB+ICT
11		Discuss the importance of organizational learning.	K2	1	Lecture	BB+ICT
			Total	12		

Total No. of Classes: 58