SRK INSTITUTE OF TECHNOLOGY
Enikepadu, Vijayawada 521108
Approved by AICTE,Affiliated toJNTUK, Kakinada
(ISO9001:2015 Certified Institution)
Department of Information Technology

TENTATIVE LESSON PLAN: R194201M
DISASTER MANAGE MENT

Course Title: DISASTER MANAGEMENT(R194201M)			
Section : See A	Date :05-12-2022	Page No : 01 of 03	
Revision No : 00	Prepared By :B.SAIKUMAR REDDY	Approved By : HOD	

Tools : Black board, PPTs, Model

No. of Periods	TOPIC	Date	Mode of delivery
UNIT –I NATURAL HAZARDS AND DISASTER MANAGEMENT			
CO1:The student will be able to Affirm the usefulness of integrating management principles in disaster mitigation work.			
T1: An Introduction of Disaster Management- Natural Disasters & Vulnerable Hazards– S.Vaidyanathan: CBS Punblishers& Distributors Pvt. Ltd			
T2: Natural Hazards & Disaster Management, Vulnerability and Mitigation by RB Singh- Rawat Publications			
1	Introduction of DM		
2	Inter disciplinary nature of the subject		
3	Disaster Management cycle		
4	Five priorities for action		
5	Case study methods-Introduction		
6	Case study on Vegetal Cover floods		
7	Case study on Droughts		
8	Case study on earthquakes	From: 5-12-2022 To: 22-12-2022	Lecture interspersed with discussions ppt
9	Case study on Landslides		
10	Case study on Global warming		
11	Case study on Cyclones		
12	Case study on Tsunamis		
13	Post Tsunami hazards along the Indian coast		
14	Hazards along Indian coast		
15	Tutorial on disaster management cycle		
UNIT –II MAN MADE DISASTER AND THEIR MANAGEMENT ALONG WITH CASE STUDY METHODS OF THE FOLLOWING			
CO2:The student will be able Distinguish between the different approaches needed to manage pre- during and post- disaster periods			
T1: An Introduction of Disaster Management- Natural Disasters & Vulnerable Hazards– S.Vaidyanathan: CBS Punblishers& Distributors Pvt. Ltd			
T2:Natural Hazards & Disaster Management, Vulnerability and Mitigation by RB Singh- Rawat Publications			

16	Man Made Disaster		
17	Fire hazards		
18	Transport hazard dynamics		
19	Solid waste management	From:	Lecture
20	Management- post disaster	23-12-2022	interspersed
21	Bioterrorism	To:	with
22	Threat in mega cities	30-01-2023	discussions
23	Rail accidents		ppt
24	Aircraft accidents		
25	Ground water in industries		
26	Emerging infectious diseases		
27	Aids and their management		
28	Management of diseases		
29	Case studies		
30	Tutorial on bio terrorism		

UNIT –III RISK AND VULNERABILITY

CO3:The student will be able to explain the process of risk management

T1: An Introduction of Disaster Management- Natural Disasters & Vulnerable Hazards– S.Vaidyanathan: CBS Punblishers& Distributors Pvt. Ltd

T2:Natural Hazards & Disaster Management, Vulnerability and Mitigation by RB Singh- Rawat Publications

31	Risk		
32	Vulnerability		
33	Building codes		
34	Land use planning		Lecture
35	Types of Vulnerability	From:	interspersed
36	Social Vulnerability	30-01-2023	with
37	Environmental vulnerability	To:	discussions
38	Risk-types	27-02-2023	ppt
39	Elements of risk		
40	Factors affecting vulnerability		
41	Elements of vulnerability		
42	Tutorial on types of vulnerability		

UNIT – IV   ROLE OF TECHNOLOGY IN DISASTER MANAGEMENTS

CO4:The student will be able to learn the role of technology in disaster management.

T1: An Introduction of Disaster Management- Natural Disasters & Vulnerable Hazards– S.Vaidyanathan: CBS Punblishers& Distributors Pvt. Ltd

T2:Natural Hazards & Disaster Management, Vulnerability and Mitigation by RB Singh- Rawat Publications

43	Disaster management for infra structures		
44	Taxonomy of infra structure		
45	Treatment plants and process facilities		
46	Electrical substations Roads and bridges		Lecture
47	Mitigation programme for earth quakes		interspersed

			with discussions ppt
48	Flowchart, geospatial information in agriculture drought assessment	From: 27-02-2023 To: 16-03-2023	
49	Multimedia Technology in disaster risk management training		
50	Training		
51	Transformable Indigenous Knowledge		
52	Disaster risk reduction		
53	Role of RS		
54	Role of GIS		
55	Tutorial on Role of RS& GIS		

UNIT –V MULTI-SECTIONAL ISSUES, EDUCATION AND COMMUNITY PREPAREDNESS

CO5:The student will be able to relate to risk transfer

T1: An Introduction of Disaster Management- Natural Disasters & Vulnerable Hazards–S.Vaidyanathan: CBS Publishers& Distributors Pvt. Ltd

T2:Natural Hazards & Disaster Management, Vulnerability and Mitigation by RB Singh-Rawat Publications

56	Multi-sectional Issues, Education and Community Preparedness- Impact of disaster on poverty and deprivation	From: 17-03-2023 To: 25-03-2023	Lecture interspersed with discussions ppt
57	Climate change adaptation and human health		
58	Exposure Health hazards and environmental risk		
59	Forest management and disaster risk reduction		
60	The Red cross and red crescent movement		
61	Corporate sector and disaster risk reduction		
62	Education in disaster risk reduction		
63	Essentials of school disaster education		
64	Community capacity and disaster resilience		
65	Community based disaster recovery		
66	Community based disaster management		
67	social capital, Designing resilience		
68	Building community capacity for action Tutorial		

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TENTATIVE LESSON PLAN: R2032011

Course Title: Machine Learning (R2032011)			A.Y:2022-23	
			Approved By : HOD	
UNIT-II	Date : 04/01/23		Date	Mode of Delivery
Revision No : 00	Prepared By : G.SRILAKSHMI			

No. of Periods	TOPIC		

UNIT-1 : Introduction, Statistical Learning

CO1 : Explain the fundamental usage of the concept Machine Learning system

Text Books:
1. Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 2nd Edition, O'Reilly Publications, 2019

No. of Periods	TOPIC	Date	Mode of Delivery
1	Introduction to - Artificial Intelligence		
2	Introduction to - Machine Learning, Deep learning		
3	Difference between Artificial Intelligence, Machine Learning, Deep learning.	From: 09/01/23	On board and PPTs
4	Types of Machine Learning Systems		
5	Main Challenges of Machine Learning	To: 04/02/23	
6	Introduction to Statistical Learning		
7	Supervised and Unsupervised Learning		
8	Training and Test Loss		
9	Tradeoffs in Statistical Learning		
10	Estimating Risk Statistics		
11	Sampling distribution of an estimator		
12	Empirical Risk Minimization		
13	Tutorial		

UNIT-II : Supervised Learning

CO2: Demonstrate on various regression Technique

Text Books:
1. Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 2nd Edition, O'Reilly Publications, 2019

No. of Periods	TOPIC	Date	Mode of Delivery
14	Basic Methods: Distance based Methods		
15	Nearest Neighbours		
16	Decision Trees		
17	Naive Bayes	From: 06/02/23	On board and PPT
18	Linear Models: Linear Regression		
19	Logistic Regression		
20	Generalized Linear Models	To: 22/02/23	
21	Support Vector Machines		
22	Binary Classification		
23	Multiclass/Structured outputs		
24	MNIST		
25	Ranking		
26	Tutorial		

UNIT-III: Ensemble Learning and Random Forests, Support Vector Machine

CO3: Analyze the Ensemble Learning Methods

Text Books:

1. Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 2nd Edition, O'Reilly Publications, 2019

27	Introduction to Ensemble Learning and Random Forests		
28	Voting Classifiers		
29	Bagging and Pasting	From: 23/02/23	On board and PPTs
30	Random Forests		
31	Boosting		
32	Stacking		
33	Support Vector Machine: Linear SVM Classification	To: 25/03/23	
34	Nonlinear SVM Classification		
35	SVM Regression		
36	Naïve Bayes Classifiers		
37	Tutorial		

UNIT-IV: Unsupervised Learning Techniques

CO4: Illustrate the Clustering Techniques and Dimensionality Reduction Models in Machine Learning

Text Books:

1. Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 2nd Edition, O'Reilly Publications, 2019

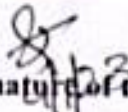|			
38	Unsupervised Learning Techniques: Clustering		
39	K-Means, Limits of K-Means		
40	Clustering for Image Segmentation		
41	Clustering for Preprocessing		
42	Clustering for Semi-Supervised Learning		
43	DBSCAN	From: 27/03/23	On board and PPTs
44	Gaussian Mixtures		
45	Dimensionality Reduction: The Curse of Dimensionality	To: 18/04/23	
46	PCA		
47	Using Scikit-Learn		
48	Randomized PCA		
49	Kernel PCA		
50	Tutorial		

UNIT-V:Neural Networks and Deep Learning

CO 5: Discuss the Neural Network Models and Fundamentals concepts of Deep Learning

Text Books:

1. Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 2nd Edition, O'Reilly Publications, 2019

51	Introduction to Artificial Neural Networks with Keras		
52	Biological Neurons, Logical Computations with Neurons		

53	The Perceptron		
	Multilayer Perceptron and Backpropagation		On board and PPTs
55	Regression , Classification MLPs		
56	Implementing MLPs with Keras: Installing TensorFlow		
57	Building an Image Classifier Using the Sequential API		
58	Building a Regression MLP Using the Sequential API		
59	Building Complex Models Using the Functional API	From: 19/04/23	
60	Using the Subclassing API to Build Dynamic Models, Saving and Restoring a Model	To: 06/05/23	
61	Using Callbacks		
62	Using TensorBoard for Visualization		
63	Loading and Preprocessing Data with TensorFlow		
64	The Data API, The TFRecord Format		
65	Preprocessing the Input Features, TF Transform		
66	Tutorial		

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Accredited with NAAC 'A' grade
DEPARTMENT OF INFORMATION TECHNOLOGY

TENTATIVE LESSON PLAN

Course/Code: cryptography and network security / R2032053

Year / Semester: III/II   **Section:** I   **A.Y:** 2022-23

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT 1: Basic Principles CO1 :Explain different security threats and countermeasures and foundation course of cryptography mathematics. TB:Cryptography and Network security, 3rd edition Behrouz A Forouzan, Deb deep Mukhopadhyay, McGraw Hill,2015.			
1	**UNIT:I** Introduction		
2	Security Goals		
3	Cryptographic Attacks		
4	Security Services		
5	Security Mechanisms		
6	Cryptography Techniques	From:09.01.2023	Lecture interspersed with discussions
7	Integer Arithmetic	To : 02.02.2023	
8,9,10	Modular Arithmetic congruence Operation on Z_N		
11,12	Matrices		
13	Linear congruence		
14	Tutorial		
UNIT-II Symmetric Encryption CO2: Classify the basic principles of symmetric key algorithms and operations of some symmetric key algorithms and asymmetric key cryptography. TB: Cryptography and Network security, 3rd edition Behrouz A Forouzan, Deb deep Mukhopadhyay, McGraw Hill,2015..			
15	**UNIT:II**Mathematics of Symmetric Key Cryptography	From:03.02.2023	Lecture interspersed with discussions
16	Algebraic Structure	To : 25.02.2023	

	17	GF Fields		
	18	Introduction to Modern Symmetric Key Ciphers		
	19	Modern Block Ciphers		
	20	Tutorial class		
	21	Modern Stream Ciphers		
	22	Introduction Data Encryption Standard		
	23	DES Structure		
	24	DES Analysis		
	25	Multiple DES, Security of DES		
	26	Advanced Encryption Standard		
	27	Transformations		
	28	Key Expansion		
	29	Example Ciphers,Analysis of AES		
	30	Tutorial		

UNIT-III: Asymmetric Encryption

CO 3: Revise the basic principles of public key algorithms and working operations of some Asymmetric key algorithms such as RSA,ECC and some more.

TB: Cryptography and Network security, 3rd edition Behrouz A Forouzan, Deb deep Mukhopadhyay, McGraw Hill,2015.

	31	**UNIT-III** Mathematics of Asymmetric Key Cryptography: **PRIMES**		
	32	Primality Testing		
	33	Factorization		
	34	Chinese Remainder Theorem	**From:27.02.2023**	
	35	Quadratic Congruence	**To : 23.03.2023**	Lecture interspersed with discussions
	36	**Introduction to Asymmetric Encryption**		
	37	RSA Cryptosystem		
	38	RABIN Cryptosystem		
	39	ELGAMAL Cryptosystem		
	40	ELLIPTIC CURVE Cryptosystem		
	41	Tutorial		

UNIT 4: Data Integrity, Digital Signature Schemes & Key Management

CO4: Design applications of hash algorithms, digital signatures and key management techniques.

TB: Cryptography and Network security, 3rd edition Behrouz A Forouzan, Deb deep Mukhopadhyay, McGraw Hill,2015

	42	**UNIT:IV**Message Integrity		
	43	Random Orcale Model	**From:24.03.2023** **To: 12.04.2023**	Lecture interspersed with discussions
	44	Message Authentication		

45	Cryptography Hash Functions		
46	SHA-512,WHIRLPOOL		
47	Key Management		
48	kerberos		
49	Symmetric key Agreement		
50	Public key Distribution		
51	Tutorial		

UNIT 5: Network Security- I, Network Security- II,

CO5:Determine the knowledge of Application layer, Transport layer and network layer security protocols such as PGP, S/MIME,SSL,TSL, and IPsec.

TB: Cryptography and Network security, 3rd edition Behrouz A Forouzan, Deb deep Mukhopadhyay, McGraw Hill,2015

52	UNIT-V: Network Security-I Security at application layer		
53	E-mail		
54	PGP		
55	S-MIME		
56	Security at the Network Layer		
57	Two security protocols		
58	Security Associations		
59	Security Policy		
60	Internet Key Exchange (IKE)	From:13.04.2023	
61	ISAKMP	To : 06.05.2023	Lecture interspersed with discussions
62	SSL		
63	TSL		
64	IP Security Architecture		
65	IPSec services.		
66	INTRUDERS		
67	Statistical Anomaly Detection		
68	Distributed Intrusion Detection		
69	Honeypots		
70	System Security		
71	Tutorial		

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TENTATIVE PLAN:R2022121

Course Title: STATISTICS WITH R				
Section : IT	Date : 28/02/22		AY:2021-22	
Revision No : 00	Prepared By : G D K KISHORE		Approved By : HOD	

Tools : Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I Introduction **CO1**: List motivation for learning R programming language **TB** : The Art of R Programming, Norman Matloff, Cengage Learning			
1,2	How to run R	28/2/22, 2/3/22	Lecture interspersed with discussions
3	R Sessions and Functions	3/3/22	
4	Basic Math	4/3/22	
5	Variables	5/3/22	
6	Data Types	7/3/22	
7	Vectors, Conclusion	8/3/22	
8	Advanced Data Structures	9/3/22	
9	Data Frames	10/3/22	
10	Lists, Matrices	11/3/22	
11	Tutorial	14/3/22	
12	Arrays	15/3/22	
13,14	Classes	16/3/22, 17/3/22	
UNIT -II: R Programming Structures **CO2**: Access online resources for R and import new function packages into the R workspace and manipulating data. **TB** : The Art of R Programming, Norman Matloff, Cengage Learning			
15,16	Control Statements	19/3/22, 21/3/22	Lecture interspersed with discussions
17,18	Loops, Looping Over Nonvector Sets	22/3/22, 23/3/22	
19,20	If-Else, Arithmetic and Boolean Operators and values	24/3/22, 25/3/22	
21	Default Values for Argument Return Values	26/3/22	
22,23	Deciding Whether to explicitly call return- Returning Complex Objects, Functions are Objective	28/3/22, 29/3/22	
24	No Pointers in R	30/3/22	
25	Recursion	31/3/22	
26,27	A Quicksort Implementation	1/4/22, 4/4/22	
28,29	Extended Extended Example: A Binary Search Tree.	5/4/22, 6/4/22	
UNIT -III: Doing Math and Simulation in R **CO3**: Import, review, manipulate and summarize data-sets in R **TB** : The Art of R Programming, Norman Matloff, Cengage Learning			
30	Math Function	11/4/22	Lecture interspersed with discussions
31	Extended Example Calculating Probability- Cumulative Sums and Products-Minima and Maxima-Calculus	26/4/22	
32	Functions For Statistical Distribution	27/4/22	
33	Sorting	30/4/22	

34	Linear Algebra Operation on Vectors and Matrices	2/5/22	
35	Extended Example: Vector cross Product	4/5/22	
36	Extended Example: Finding Stationary Distribution of Markov Chains	7/5/22	
37	Set Operation	9/5/22	
38	Input /out put	10/5/22	
39,40	Accessing the Keyboard and Monitor, Reading and writer Files	11/5/22, 12/4/22	

UNIT -IV: Graphics
CO4: Explore data-sets to create testable hypotheses and identify appropriate statistical tests
TB : R for Everyone, Lander, Pearson

No. of Periods	TOPIC	Date	Mode of Delivery
41	Creating Graphs, The Workhorse of R Base Graphics	13/4/22	
42	Tutorial	16/4/22	
43	the plot() Function	25/4/22	
44	Tutorial	26/4/22	
45,46	Customizing Graphs	27/4/22, 28/4/22	
47,48	Saving Graphs to Files	29/4/22, 30/4/22	
49,50	Normal Distribution	2/5/22, 4/5/22	
51	Binomial Distribution	7/5/22	Lecture interspersed with discussions
52	Poisson Distributions	9/5/22	
53	Other Distribution	11/5/22	
54,55	Basic Statistics	12/5/22, 13/5/22	
56,57	Correlation and Covariance	14/5/22,16/5/22	
58,59	ANOVA, T-Tests	17/5/22, 18/5/22	

UNIT -V: Probability Distributions
CO5: Perform appropriate statistical tests using R , Create and edit visualizations with R
TB : R for Everyone, Lander, Pearson

60,61	Linear Models :Simple Linear Regression	19/5/22, 20/5/22	
62,63	Multiple Regression Generalized Linear Models	21/5/22,23/5/22	
64,65	Tutorial	24/5/22,25/5/22	
66,67	Logistic Regression	26/5/22,27/5/22	
68,69	Poisson Regression	28/5/22, 30/5/22	Lecture interspersed with discussions
70,71	other Generalized Linear Models	31/5/22,1/6/22	
72,73	Survival Analysis	2/6/22,3/6/22	
74,75	Nonlinear Models	4/6/22,6/6/22	
76,77	Splines	7/6/22,8/6/22	
78,79	Decision- Random Forests	9/6/22,10/6/22	

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Department of Information Technology

TENTATIVE LESSON PLAN: R203201G
DISASTER MANAGE MENT

Course Title: DISASTER MANAGEMENT(R203201G)			
Section : Sec A	Date : 9-01-2023	Page No : 01 of 03	
Revision No : 00	Prepared By :B.SAIKUMAR REDDY	Approved By : HOD	

Tools : Black board, PPTs, Model

No. of Periods	TOPIC	Date	Mode of delivery
UNIT –I NATURAL HAZARDS AND DISASTER MANAGEMENT			
CO1:The student will be able to Affirm the usefulness of integrating management principles in disaster mitigation work. T1: An Introduction of Disaster Management- Natural Disasters & Vulnerable Hazards– S.Vaidyanathan: CBS Punblishers& Distributors Pvt. Ltd T2: Natural Hazards & Disaster Management, Vulnerability and Mitigation by RB Singh-Rawat Publications			
1	Introduction of DM		
2	Inter disciplinary nature of the subject		
3	Disaster Management cycle		
4	Five priorities for action		
5	Case study methods-Introduction		
6	Case study on Vegetal Cover floods		
7	Case study on Droughts	From: 9-01-2023 To: 3-02-2023	Lecture interspersed with discussions ppt
8	Case study on earthquakes		
9	Case study on Landslides		
10	Case study on Global warming		
11	Case study on Cyclones		
12	Case study on Tsunamis		
13	Post Tsunami hazards along the Indian coast		
14	Hazards along Indian coast		
15	Tutorial on disaster management cycle		
UNIT –II MAN MADE DISASTER AND THEIR MANAGEMENT ALONG WITH CASE STUDY METHODS OF THE FOLLOWING			
CO2:The student will be able Distinguish between the different approaches needed to manage pre- during and post- disaster periods T1: An Introduction of Disaster Management- Natural Disasters & Vulnerable Hazards– S.Vaidyanathan: CBS Punblishers& Distributors Pvt. Ltd T2:Natural Hazards & Disaster Management, Vulnerability and Mitigation by RB Singh-Rawat Publications			

16	Man Made Disaster		
17	Fire hazards		
18	Transport hazard dynamics		
19	Solid waste management		
20	Management- post disaster	From: 4-02-2023 To: 4-03-2023	Lecture interspersed with discussions ppt
21	Bioterrorism		
22	Threat in mega cities		
23	Rail accidents		
24	Aircraft accidents		
25	Ground water in industries		
26	Emerging infectious diseases		
27	Aids and their management		
28	Management of diseases		
29	Case studies		
30	Tutorial on bio terrorism		

UNIT –III RISK AND VULNERABILITY

CO3:The student will be able to explain the process of risk management

T1: An Introduction of Disaster Management- Natural Disasters & Vulnerable Hazards–S.Vaidyanathan: CBS Punblishers& Distributors Pvt. Ltd

T2:Natural Hazards & Disaster Management, Vulnerability and Mitigation by RB Singh-Rawat Publications

31	Risk		
32	Vulnerability		
33	Building codes		
34	Land use planning		
35	Types of Vulnerability	From: 4-03-2023 To: 17-04-2023	Lecture interspersed with discussions ppt
36	Social Vulnerability		
37	Environmental vulnerability		
38	Risk-types		
39	Elements of risk		
40	Factors affecting vulnerability		
41	Elements of vulnerability Tutorial on types of vulnerability		

UNIT – IV   ROLE OF TECHNOLOGY IN DISASTER MANAGEMENTS

CO4:The student will be able to learn the role of technology in disaster management.

T1: An Introduction of Disaster Management- Natural Disasters & Vulnerable Hazards–S.Vaidyanathan: CBS Punblishers& Distributors Pvt. Ltd

T2:Natural Hazards & Disaster Management, Vulnerability and Mitigation by RB Singh-Rawat Publications

42	Disaster management for infra structures		
43	Taxonomy of infra structure		
44	Treatment plants and process facilities		
45	Electrical substations Roads and bridges		Lecture interspersed
46	Mitigation programme for earth quakes		

47	Flowchart, geospatial information in agriculture drought assessment	From: 20-04-2023	with discussions
48	Multimedia Technology in disaster risk management training	To: 2-05-2023	ppt
49	Training, Transformable Indigenous Knowledge		
50	Disaster risk reduction		
51	Role of RS , Role of GIS		
52	Tutorial on Role of RS& GIS		

UNIT –V MULTI-SECTIONAL ISSUES, EDUCATION AND COMMUNITY PREPAREDNESS

CO5:The student will be able to relate to risk transfer

T1: An Introduction of Disaster Management- Natural Disasters & Vulnerable Hazards– S.Vaidyanathan: CBS Publishers& Distributors Pvt. Ltd

T2:Natural Hazards & Disaster Management, Vulnerability and Mitigation by RB Singh- Rawat Publications

53	Multi-sectional Issues, Education and Community Preparedness- Impact of disaster on poverty and deprivation		
54	Climate change adaptation and human health		
55	Exposure Health hazards and environmental risk	From: 3-05-2023	Lecture interspersed
56	Forest management and disaster risk reduction		with discussions
57	Corporate sector and disaster risk reduction	To: 6-05-2023	ppt
58	Community capacity and disaster resilience		
59	social capital, Designing resilience		
60	Essentials of school disaster education		
61	Building community capacity for action Tutorial		

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TENTATIVE LESSON PLAN: R194205D

Course Title: BLOCKCHAIN TECHNOLOGIES(R194205D)				
Section : IV-II	Date : 05.12.2022		A.Y:2022-23	
Revision No : 00	Prepared By : G.SRILAKSHMI		Approved By : HOD	
No. of Periods	TOPIC		Date	Mode of Delivery

UNIT-I
CO1 : Demonstrate the foundation of the Block chain technology and understand the processes in payment and funding
Text Books:
1) Ambadas, Arshad Sarfarz Ariff, Sham "Blockchain for Enterprise Application Developers", Wiley
2) Andreas M. Antonpoulos, "Mastering Bitcoin: Programming the Open Blockchain" , O'Reilly

No. of Periods	TOPIC	Date	Mode of Delivery
1	Introduction, Scenarios		
2	Challenges Articulated		
3	Blockchain Characteristics		
4	Opportunities Using Blockchain		
5	History of Blockchain		
6	Evolution of Computer Applications	From:	
7	Centralized Applications	5-12-2022	On board and PPTs
8	Decentralized Applications		
9	Stages in Blockchain Evolution	To:	
10	Consortia	3-1-2023	
11	Forks		
12	Public Blockchain Environments		
13	Type of Players in Blockchain Ecosystem		
14	Players in Market		
15	Tutorial		

UNIT-II : Blockchain Concepts
CO2: Identify the risks involved in building Block chain applications
Text Books:
1) Ambadas, Arshad Sarfarz Ariff, Sham "Blockchain for Enterprise Application Developers",Wiley
2) Andreas M. Antonpoulos, "Mastering Bitcoin: Programming the Open Blockchain" , O'Reilly

No. of Periods	TOPIC	Date	Mode of Delivery
16	Introduction, Changing of Blocks		
17	Hashing, Merkle-Tree, Consensus		
18	Mining and Finalizing Blocks		
19	Currency aka tokens	From:	
20	Security on block chain	4-1-2023	On board and PPTs
21	Data storage on block chain, wallets		
22	coding on block chain: smart contracts	To:	
23	peer-to-peer network	19-1-2023	
24	types of block chain nodes		
25	risk associated with block chain solutions		
26	life cycle of blockchain transaction.		
27	Tutorial		

UNIT-III: Architecting Blockchain solutions

CO3: Review of legal implications using smart contracts

TEXT BOOK:

Ambadas, Arshad Sarfarz Ariff, Sham "Blockchain for Enterprise Application Developers", Wiley

2) Andreas M. Antonpoulos, "Mastering Bitcoin: Programming the Open Blockchain", O'Reilly

28	Introduction to Architecting Blockchain solutions		
29	Obstacles for Use of Blockchain		
30	Blockchain Relevance Evaluation Framework		
31	Blockchain Solutions Reference Architecture		
32	Types of Blockchain Applications	From:	
33	Cryptographic Tokens	21-1-2023	On board and PPTs
34	Typical Solution Architecture for Enterprise Use Cases		
35	Types of Blockchain Solutions	To:	
36	Architecture Considerations with Blockchain Platforms	13-2-2023	
37	Approach forDesigning Blockchain Applications		
38	Tutorial		

UNIT-IV Ethereum Blockchain Implementation

CO4: Choose the present landscape of Blockchain implementations and Understand Crypto currency markets

Text Books:

1) Ambadas, Arshad Sarfarz Ariff, Sham "Blockchain for Enterprise Application Developers", Wiley

2) Andreas M. Antonpoulos, "Mastering Bitcoin: Programming the Open Blockchain", O'Reilly

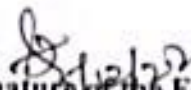|			
39	Introduction Ethereum Blockchain, Tuna Fish Tracking Use Case		
40	Ethereum Ecosystem, Development		
41	Ethereum Tool Stack, Virtual Machine		
42	Smart Contract Programming	From:	
43	Integrated Development Environment	14-2-2023	
44	Truffle Framework		
45	Ganache, Unit Testing	To:	
46	Ethereum Accounts, MyEtherWallet	13-3-2023	On board and PPTs
47	Ethereum Networks/Environments		
48	Infura, Etherscan		
49	Ethereum Clients, Decentralized Application		
50	Metamask, Tuna Fish Use Case Implementation		
51	OpenZeppelin Contracts		
52	Tutorial		

UNIT-V: Hyperledger Blockchain Implementation

CO 5: Examine how to profit from trading crypto currencies

Text Books:

1) Ambadas, Arshad Sarfarz Ariff, Sham "Blockchain for Enterprise Application Developers", Wiley

2) Andreas M. Antonpoulos, "Mastering Bitcoin: Programming the Open Blockchain" , O'Reilly

53	Introduction Hyper ledger Block chain		
54	Use Case – Car Ownership Tracking		
55	Hyper ledger Fabric Transaction Flow		
56	Invoking Chaincode Functions Using Client Application.		
57	Introduction Advanced Concepts in Block chain		On board and PPTs
58	Interplanetary File System		
59	Zero-Knowledge Proofs	From: 14-3-2023	
60	Oracles, Self-Sovereign Identity		
61	Block chain with IoT and AI/ML Quantum Computing		
62	Initial Coin Offering		
63	Block chain Cloud Offerings	To: 1-4-2023	
64	Blockchain and its Future Potential.		
65	Tutorial		

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TENTATIVE LESSON PLAN

Course/Code: Design Patterns / R2021052

Year / Semester : III/ II   **Section:** IT   **A.Y:** 2022-23

Mode of Delivery: Onboard

No. of Periods	TOPIC	Date	Remarks
UNIT –I INTRODUCTION			
CO1: Construct a design consisting of a collection of modules			
TB :"Design Patterns", Erich Gamma, Pearson Education			
1-2	Design Patterns, Design Patterns in Smalktalk MVC	From: 09/01/2023 To: 2/02/2023	Lecture interspersed with discussions
3-5	Describing Design patterns, The Catalog of Design Patterns		
6-8	Organizing the Catalog, How Design patterns solve Design Problems		
9	How to select a Design pattern		
10	How to Use a Design Pattern		
11,12	Designing a document Editor		
13	Design Problems		
14,15	Document Structures		
16,17	Formatting		
18	Embellishing the user		
19	Support Multiple Look-and-fell Standards		
20	Supporting Multiple Window Systems		
UNIT –II CREATIONAL PATTERN			
CO2: Examine well-known Design patterns (Such as Iterator, Observer, Factory and Visitor)			
TB :"Design Patterns", Erich Gamma, Pearson Education.			
21	Introduction	From: 02/02/2023	Lecture interspersed
22	Creational Patterns		
23,24	Abstract Factory		
25,26	Builder		
27,28	Factory Method		
29,30	Prototype		

29,30	Prototype	02/02/2023	interspersed
31	Singleton		with
32	Discussion of Creational Patterns	To: 12/02/2023	discussions

UNIT –III STRUCTURAL PATTERN

CO3: Distinguish between different categories of design patterns

TB :"Design Patterns", Erich Gamma, Pearson Education.

34	Adapter	From: 13/02/2023	Lecture interspersed with discussions
35	Bridge		
36	Composite		
37	Decorator	To: 24/02/2023	
38	Acade		
39	Flyweight		
40	Proxy		

UNIT –IV BEHAVIORAL PATTERN

CO4Ability to Understand and apply common design patterns to incremental/iterative development identify appropriate patterns for design of given problem
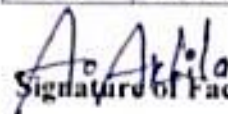
TB : "Design Patterns", Erich Gamma, Pearson Education.

41	Chain of Responsibility	From: 13/03/2023	Lecture interspersed with discussions
42	Command		
43	Interpreter		
44	Iterator		
45	Mediator	To: 11/04/2023	
46	Memento		
47	Observer		

UNIT –V BEHAVIORAL PATTERN

CO5: Design the Software using pattern oriented Architectures

TB : "Design Patterns", Erich Gamma, Pearson Education.

48	State	From: 18/04/2023	Lecture interspersed with discussions
49	Strategy		
50	Template Method		
51	Visitor	To: 07/05/2023	
52	Discussion of Behavioral Patterns		
53	What to Expect from Design Patterns		
54	A Brief History		
55	The Pattern Community an Invitation		
56	A Parting thought		

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TENTATIVE LESSON PLAN
MANAGERIAL ECONOMICS & FINANCIAL ACCOUNTANCY

Course Title: MANAGERIAL ECONOMICS & FINANCIAL ACCOUNTANCY		
Section: IT	Date: 30/01/2023	Page No: 01 of 03
Revision No: 00	Prepared By: SRINIVAS.V	Approved By: HOD

Tools: Black board, PPTs,

SL. NO.	TOPIC	Date	Mode of Delivery
UNIT –I	**INTRODUCTION TO MANAGERIAL ECONOMICS**		
	CO1: The Learning objectives of this paper are to understand the concept and nature of Managerial Economics and its relationship with other disciplines and to understand the Concept of Demand and Demand forecasting.		
	TB: A.R. Arya Sri, "Managerial Economics & Financial Analysis", 2005, TMH.		
1.	Introduction to Managerial Economics, Definitions	From 30-01-2023 to 21-02-2023	Lecture interspersed with discussions
2.	Scope of Managerial Economics and it's related to Other subjects		
3.	Introduction to Demand – Meaning & Definition, Features of Demand		
4.	Determinants of Demand		
5.	Law of Demand & Its exceptions, Demand Function		
6.	Elasticity of Demand, Types of Elasticity of Demand		
7.	Types of price Elasticity of Demand		
8.	Measurement of Price Elasticity of Demand		
9.	Introduction: Demand Forecasting		
10.	Importance of Demand Forecasting		
11.	Demand Forecasting Methods		
12.	Concept of Supply, Law of supply		
UNIT –II	**PRODUCTION & COST ANALYSIS**		
	CO2: To familiarize about the Production function, Input Output relationship, Cost-Output relationship and Cost-Volume-Profit Analysis		
	TB: A.R. Arya Sri, "Managerial Economics & Financial Analysis", 2005, TMH.		
13.	Introduction to Production: Meaning & Definition, Production Function	From 22-02-2023 to 10-03-2023	Lecture interspersed with discussions
14.	Factors of production, production function with one variable factor		
15.	Law of Variable Proportions		
16.	Factors of production, production function with two variable factors		
17.	Concept of Iso-costs, Isoquants		
18.	MRTS, Least Cost Combination		
19.	Cobb-Douglas Production Function		
20.	Economies of Scale& diseconomies of scale		
21.	Returns to Scale & returns to factors		
22.	Concept of cost & Various Cost Concepts		
23.	Introduction to Break Even Analysis		
24.	Determination of Break Even Point with Graph		
25.	Calculation of Break-Even Point (BEP) algebraic method		

UNIT - III INTRODUCTION TO MARKETS, THEORIES OF THE FIRM AND PRICING POLICIES

CO3: To understand the nature of markets, Methods of Pricing in the different market structures and to know the different forms of Business organization and the concept of Business Cycles

TB: A.R. Arya Sri, "Managerial Economics & Financial Analysis", 2005, TMH.

		DATE	Mode of Delivery
26.	Introduction to Markets: Meaning & Definition, Features		
27.	Types of markets, market structure		
28.	Price Determination under perfect competition		
29.	Equilibrium-point of firm and industry		
30.	Price Determination under Monopoly		
31.	Equilibrium-point of firm and industry in monopoly		
32.	Price Determination under Monopolistic Competition		
33.	Price Determination under Oligopoly		
34.	Managerial Theories of the Firm	From 13/03/2023 To 10/04/2023	Lecture interspersed with discussions
35.	Marries and Williamson theory of firm		
36.	Pricing, pricing objectives.		
37.	Various Methods of Pricing		
38.	Introduction to Business: Definition, Features		
39.	Sole Proprietorship: Features, Merits, Demerits		
40.	Partnership: Features, Merits, Demerits, kinds of partners		
41.	Joint Stock Company: Features, Merits, Demerits		
42.	Public limited and private limited companies, features		
43.	Public Enterprises: Features, Merits, Demerits		
44.	Phases of Business Cycles		

UNIT - IV INTRODUCTION TO ACCOUNTING & FINANCING ANALYSIS:

CO4: To learn different Accounting Systems, preparation of Financial Statement and uses of different tools for performance evaluation

TB: A.R. Arya Sri, "Managerial Economics & Financial Analysis", 2005, TMH.

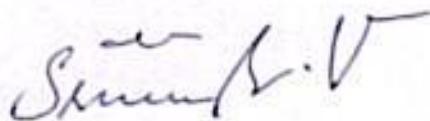| SL. NO.	TOPIC	DATE	Mode of Delivery
45.	Introduction to Accounting: Meaning & Definition, Classification of Accounts		
46.	Accounting Process		
47.	Principles of accounting (GAAP)		
48.	Accounting cycle		
49.	Preparation of Journal: Problems		
50.	Preparation of Ledger: Problems		
51.	Preparation of Trail Balance: Problems	From 11/04/2023 To 30/04/2023	Lecture interspersed with discussions
52.	Final Accounts (Trading, profit & loss A/C, Balance Sheet)		
53.	Final Accounts with Adjustments		
54.	Treatment of adjustments in preparation of final accounts.		
55.	Introduction to Financial Statement Analysis: Importance, Objectives.		
56.	Classification of Ratios: Liquidity Ratios		
57.	Classification of Ratios: Activity Ratios		

SL. NO.	TOPIC		
58.	Classification of Ratios: Solvency Ratios		
59.	Classification of Ratios: Profitability Ratios		
60.	Preparation of Changes in Working Capital		
61.	Preparation of Funds Flow Statement		
62.	Preparation of Cash Flow Statement		

UNIT – V   CAPITAL, CAPITAL BUDGETING

CO5: To understand the concept of Capital, Capital Budgeting and the techniques used to evaluate Capital Budgeting proposals

TB: A.R. Arya Sri, "Managerial Economics & Financial Analysis", 2005, TMH

SL. NO.	TOPIC	DATE	Mode of Delivery
63.	Introduction to Capital Budgeting: Meaning, Definition, and Need.	From 01/05/2023 To 13/05/2023	Lecture interspersed with discussions
64.	Methods of Capital Budgeting: Pay Back Period (PBP),		
65.	Calculation of Accounting Rate of Return (ARR)		
66.	Calculation of Net Present Value (NPV)		
67.	Calculation of Internal Rate of Return (IRR)		
68.	Calculation of Profitability Index		
69.	Merits and Demerits of Capital Budgeting Techniques.		

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ISO 9001:2015 Certified Institution
Accredited with NAAC 'A' grade
DEPARTMENT OF INFORMATION TECHNOLOGY

TENTATIVE LESSON PLAN

Course/Code: java programming/ R2022054
Year / Semester: II/II   **Section:** I   **A.Y:** 2022-23
Mode of Delivery: Onboard

S.No	TOPIC	Date	Mode of Delivery
UNIT 1: Program Structure in Java: CO 1:Discuss and understand java programming constructs, Control structures TB: JAVA one step ahead, Anitha Seth, B.L.Juneja, Oxford.			
1.	Program Structure in Java: Introduction, Writing Simple Java Programs	From: 30.01.2023 To: 17.02.2023	Lecture interspersed with discussions
2.	Elements or Tokens in Java Programs		
3.	Java Statements, Command Line Arguments, User Input to Programs, Escape Sequences Comments, Programming Style		
4.	Data Types, Variables, and Operators :Introduction, Data Types in Java, Declaration of Variables, Data Types		
5.	Type Casting, Scope of Variable Identifier, Literal Constants, Symbolic Constants Formatted Output with printf() Method, Static Variables and Methods, Attribute Final		
6	Introduction to Operators, Precedence and Associativity of Operators, Assignment Operator (=), Basic Arithmetic Operators, Increment (++) and Decrement (--) Operators		
7	TernaryOperator, Relational Operators,Boolean Logical Operators, Bitwise Logical Operators		
8	Control Statements: Introduction, if Expression, Nested if Expressions, if-else Expressions		
9	Ternary Operator?:, Switch Statement, Iteration Statements		
10	while Expression, do-while Loop, for Loop, Nested for Loop, For-Each for Loop		
11	Break Statement, Continue Statemen		
12	**TUTORIAL CLASS**		
UNIT 2: Classes and Objects: CO 2:Illustrate and experiment Object Oriented Concepts like classes, objects TB: JAVA one step ahead, Anitha Seth, B.L.Juneja, Oxford.			

13	Classes and Objects: Introduction, Class Declaration and Modifiers, Class Members, Declaration of Class Objects		
14	Assigning One Object to Another, Access Control for Class Members		
15	Accessing Private Members of Class		Lecture interspersed with discussions
16	Constructor Methods for Class, Overloaded Constructor Methods		
17	Nested Classes, Final Class and Methods,	**From: 20.02.2023**	
18	Passing Arguments by Value and byReference, Keyword this	**To: 10.03.2023**	
19	Methods: Introduction, Defining Methods, Overloaded Methods, Overloaded Constructor Methods		
20	Class Objects as Parameters in Methods, Access Control		
21	Recursive Methods, Nesting of Methods		
22	Overriding Methods, Attributes Final and Static		
23	**TUTORIAL CLASS**		

UNIT 3: Arrays,Inheritance,Interfaces:
CO 3 :Apply Object Oriented Constructs such as Inheritance, interfaces, and exception handling
TB: JAVA one step ahead, Anitha Seth, B.L.Juneja, Oxford.

24	Arrays: Introduction, Declaration and Initialization of Arrays, Storage of Array in Computer Memory		
25	Accessing Elements of Arrays, Operations on Array Elements		Lecture interspersed with discussions
26	Assigning Array to Another Array, Dynamic Change of Array Size		
27	Sorting of Arrays, Search for Values in Arrays		
28	Class Arrays, Two-dimensional Arrays, Arrays of Varying Lengths	**From: 13.03.2023**	
29	Three-dimensional Arrays, Arrays as Vectors	**To: 01.04.2023**	
30	Inheritance: Introduction, Process of Inheritance, Types of Inheritances		
31	Universal Super ClassObject Class, Inhibiting Inheritance of Class Using Final Access Control and Inheritance, Multilevel Inheritance, Application of Keyword Super		
32	Constructor Method and Inheritance, Method Overriding, Dynamic Method Dispatch		
33	Abstract Classes, Interfaces and Inheritance		
34	**TUTORIAL CLASS**		

UNIT 4: Packages and Java Library,Exception Handling:
CO 3 :Apply Object Oriented Constructs such as Inheritance, interfaces, and exception handling
TB: JAVA one step ahead, Anitha Seth, B.L.Juneja, Oxford.

		From: 01.04.2023	
35	Packages and Java Library: Introduction, Defining Package, Importing Packages and Classes into Programs		
36	Path and Class Path, Access Control, Packages in Java SE, Java.lang Package and its Classes, Class Object, Enumeration		
37	class Math, Wrapper Classes, Auto-boxing and Autounboxing		
38	Java util Classes and Interfaces, Formatter Class, Random Class	From: 01.04.2023	Lecture interspersed with discussions
39	Time Package, Class Instant (java.time.Instant), Formatting for Date/Time in Java	To: 15.04.2023	
40	Temporal Adjusters Class, Temporal Adjusters Class. Exception Handling: Introduction, Hierarchy of Standard Exception Classes		
41	Keywords throws and throw, try, catch, and finally Blocks		
42	Multiple Catch Clauses, Class Throwable, Unchecked Exceptions, Checked Exceptions		
43	try-with-resources, Catching Subclass Exception, Custom Exceptions		
44	Nested try and catch Blocks, Rethrowing Exception, Throws Clause		
45	**Tutorial class**		

UNIT 5: String Handling in Java, Multithreaded Programming,Java Database Connectivity:
CO 4:Construct applications using multithreading and I/O
TB: JAVA one step ahead, Anitha Seth, B.L.Juneja, Oxford.

46	String Handling in Java: Introduction, Interface Char Sequence, Class String		
47	Methods for Extracting Characters from Strings		
48	Methods for Comparison of Strings, Methods for Modifying Strings		
49	Methods for Searching Strings, Data Conversion and Miscellaneous Methods		
50	Class String Buffer, Class String Builder, Multithreaded Programming: Introduction, Need for Multiple Threads		
51	Multithreaded Programming for Multi-core Processor,Thread Class, Main Thread- Creation of New Threads, Thread States	From: 17.04.2023	Lecture interspersed with discussions
52	Thread Priority-Synchronization, Deadlock and Race Situations,Inter-thread Communication - Suspending. Resuming. and Stopping of Threads.	To: 13.05.2023	
53	Java Database Connectivity: Introduction		
54	JDBC Architecture, Installing MySQL and MySQL Connector/JDBC Environment Setup		
55	Establishing JDBC Database Connections		
56	ResultSet Interface, Creating JDBC Application,		
57	JDBC Batch Processing. JDBC Transaction Management		
58	**Tutorial class**		

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