

**SRK INSTITUTE OF TECHNOLOGY**  
 Erikepadu, Vijayawada, 521108  
 Approved by AICTE, Affiliated to JNTUK, Kakinada  
 (ISO 9001:2015 Certified Institution)  
 Department of Computer Science and Engineering

## TENTATIVE LESSONPLAN: N5801 MACHINE LEARNING

<b>Course Title: MACHINE LEARNING</b>		
<b>Section : M TECH II SEM</b>	<b>Date : 17/06/21</b>	<b>Page No : 01 of 03</b>
<b>Revision No : 00</b>	<b>Prepared by: D.ANUSHA</b>	<b>Approved by : HOD</b>

**Tools: MS Teams, PPTs, Moodle**

No. of periods	TOPIC	Date	Mode of Delivery
<b>UNIT- I : Introduction</b>			
<b>CO1 : Develop an appreciation for what is involved in learning from data</b>			
<b>TB : "Applied Machine Learning", 1<sup>st</sup> edition, M.Gopal, McGraw Hill Education, 2018</b>			
1	Towards Intelligent Machines Well posed Problems	<b>From 21/06/21 To 03/07/21</b>	<b>Online class with MS Teams</b>
2	Example of Applications in diverse fields		
3	Data Representation		
4	Domain Knowledge for Productive use of Machine Learning		
5	Diversity of Data: Structured		
6	Diversity of Data: Unstructured		
7	Forms of Learning		
8	Machine Learning and Data Mining		
9	Basic Linear Algebra in Machine Learning Techniques		
10	Tutorial		
<b>UNIT – II : Supervised Learning</b>			
<b>CO 2 : Develop an appreciation for what is involved in learning from data</b>			
<b>TB : "Applied Machine Learning", 1<sup>st</sup> edition, M.Gopal, McGraw Hill Education, 2018</b>			
11	Rationale and Basics	<b>From 5/7/21 To 17/7/21</b>	<b>Online class with MS Teams</b>
12	Learning from Observations		
13	Bias and Why Learning Works		
14	Computational Learning Theory		
15	Occam's Razor Principle and Over fitting Avoidance Heuristic Search in inductive Learning		
16	Estimating Generalization Errors		
17	Metrics for assessing regression		



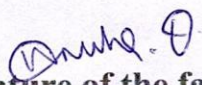
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No. of periods	TOPIC	Date	Mode of Delivery
18	Metrics for assessing classification	From 5/7/21 To 17/7/21	Online class with MS Teams
19	Tutorial		
<b>UNIT – III : Statistical Learning</b>			
<b>CO 3 : Demonstrate a wide variety of learning algorithms</b>			
<b>TB : "Applied Machine Learning", 1- edition, M.Gopal, McGraw Hill Education, 2018</b>			
20	Machine Learning and Inferential Statistical Analysis	From 19/07/21 To 31/7/21	Online class with MS Teams
21	Descriptive Statistics in learning techniques		
22	Bayesian Reasoning		
23	A probabilistic approach to inference		
24	K-Nearest Neighbor Classifier		
25	Discriminant functions and regression functions		
26	Linear Regression with Least Square Error Criterion		
27	Logistic Regression for Classification Tasks		
28	Fisher's Linear Discriminant and Thresholding for Classification		
29	Minimum Description Length Principle		
30	Tutorial		
<b>UNIT IV : Support Vector Machines (SVM)</b>			
<b>CO 4: Demonstrate how to apply a variety of learning algorithms to data.</b>			
<b>TB : "Applied Machine Learning", 1- edition, M.Gopal, McGraw Hill Education, 2018</b>			
31	Introduction	From 09/08/21 To 03/09/21	Online class with MS Teams
32	Linear Discriminant Functions for Binary Classification		
33	Perceptron Algorithm		
34	Large Margin Classifier for linearly separable data		
35	Linear Soft Margin Classifier for Overlapping Classes		
36	Kernel Induced Feature Spaces		
37	Nonlinear Classifier		
38	Regression by Support vector Machines		
40	<b>Learning with Neural Networks: Towards Cognitive Machine</b>		

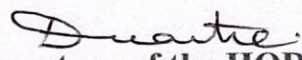


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No. of periods	TOPIC	Date	Mode of Delivery
41	Neuron Models	From 09/08/21 To 21/08/21	Online class with MS Teams
42	Network Architectures		
43	Perceptrons		
44	Linear neuron and the Widrow-Hoff Learning Rule		
45	The error correction delta rule		
46	Tutorial		
<b>UNIT V : Multilayer Perceptron Networks</b>			
<b>CO 5: Demonstrate how to perform evaluation of learning algorithms and model selection</b>			
<b>TB : "Applied Machine Learning", 1- edition, M.Gopal, McGraw Hill Education, 2018</b>			
47	Multilayer Perceptron Networks and error back propagation algorithm	From 23/08/21 To 20/09/21	Online class with MS Teams
48	Radial Basis Functions Networks		
49	<b>Decision Tree Learning: Introduction</b>		
50	Example of classification decision tree		
51	measures of impurity for evaluating splits in decision trees		
52	ID3, C4.5, and CART decision trees		
53	pruning the tree		
54	strengths and weakness of decision tree approach		
55	Tutorial		

  
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**TENTATIVE LESSON PLAN: N5802**

**MEAN STACK TECHNOLOGIES**

<b>Course Title: MEAN Stack Technologies</b>		
<b>Section:Sec1</b>	<b>Date:17/6/21</b>	<b>Page No: 01 of 04</b>
<b>Revision No: 00</b>	<b>Prepared By: Dr.A. RADHIKA</b>	<b>Approved By: HOD</b>


**Tools: MS Teams, PPTs, Moodle**

No. of Periods	Topic	Date	Mode of Delivery
<b>Unit-1: Introduction to Web</b>			
<b>CO1: Understand about www,protocols,HTML5,CSS3,XML</b>			
<b>TB:” Programming the World Wide Web, Robert W Sebesta, 7ed, Pearson. “</b>			
1	Introduction to Web:	<b>From 21/06/21 To 05/07/21</b>	<b>Online class with MS Teams</b>
2	Internet and World Wide Web		
3	Domain name service		
4	Protocols: HTTP,FTP,SMTP		
5	Html5 concepts		
6	CSS3		
7	Anatomy of a web page		
8	XML: Document type Definition		
9	XMLschemas, Document object model		
10	XSLT		
11	DOM and SAX Approaches.		
12	Tutorial		
<b>UNIT-II: JavaScript: The Basic of JavaScript</b>			
<b>CO2: Understand the concepts of Java Script</b>			
<b>TB:” Programming the World Wide Web, Robert W Sebesta, 7ed, Pearson. “</b>			
13	JavaScript: The Basic of JavaScript	<b>From 06/07/21 To 20/07/21</b>	<b>Online class with MS Teams</b>
14	Objects		
15	Primitives Operations and Expressions		
16	Control Statements.		
17	Arrays		
18	Functions		
19	Constructors		
20	Pattern Matching using Regular Expressions		
21	Angular Java Script		
22	Angular JS Expressions: ARRAY		
23	Objects, \$eval		
24	Strings, Angular JS Form Validation		
25	Form Submission		

26	Single Page Application development using Angular JS		
27	Tutorial		
<b>UNIT-III: Node.js</b> <b>CO3: Understand the mathematical tools that are needed to solve optimization problems for Assignment model</b> <b>TB:” P Pro Mean Stack Development, ELadElrom, Apress “</b>			
28	UNIT III: Node.js: Introduction	<b>From</b> <b>22/07/21</b> <b>To</b> <b>12/08/21</b>	<b>Online class</b> <b>with MS Teams</b>
29	Advantages, Node.js Process Model		
30	Node JS Modules. Express.js		
31	Introduction to Express Framework		
32	Introduction to Nodejs , What is Nodejs		
33	Getting Started with Express, Your first Express App		
34	Express Routing, Implementing MVC in Express		
35	, Middleware, Using Template Engines,		
36	Error Handling , API Handling		
37	Debugging, Developing Template Engines		
38	Using Process Managers		
39	Security & Deployment.		
40	TUTORIAL		
<b>UNIT-IV: RESTful Web Services</b> <b>CO4: Understand the Dynamic Programming problems and game theory Problems</b> <b>TB:” Restful Web Services Cookbook, Subbu Allamraja, O’Reilly-Hill, 2008 “</b>			
41	UNIT-IV:RESTful Web Services:	<b>From</b> <b>13/08/21</b> <b>To</b> <b>03/09/21</b>	<b>Online class</b> <b>with MS Teams</b>
42	Using the Uniform Interface, Designing URIs		
43	Web Linking, Conditional Requests		
44	React Js: Welcome to React, Obstacles and Roadblocks		
45	React’s Future, Keeping Up with the Changes		
46	Working with the Files, Pure React,		
47	Page Setup, The Virtual DOM, React Elements		
48	ReactDOM, Children, Constructing Elements with Data		
49	React Components, DOM Rendering		
50	Factories		
51	TUTORIAL		

<b>UNIT-V: Mongo DB</b>			
<b>CO5 : Understand the Replacement problems</b>			
<b>TB:” Pro Mean Stack Development, ELadElrom, Apress”</b>			
51	UNIT V: Mongo DB: Introduction	<b>From 06/09/21 To 18/09/21</b>	<b>Online class with MS Teams</b>
52	Architecture, Feature.		
53	Examples, Database Creation & Collection in Mongo DB		
54	Deploying Applications: Web hosting & Domains		
55	Deployment Using Cloud Platforms		
56	Tutorial		

*Radhika* 17/6/21  
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*Duante*  
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## TENTATIVE LESSON PLAN: N5803

### Advanced Databases and Mining

<b>Course Title: Advanced Databases and Mining</b>		
<b>Section:M.Tech</b>	<b>Date:17/6/21</b>	<b>Page No: 01 of 04</b>
<b>Revision No: 00</b>	<b>Prepared By: Dr.B. ASHALATHA</b>	<b>Approved By: HOD</b>

Tools: MS Teams, PPTs, Moodle

No. of Periods	Topic	Date	Mode of Delivery
<b>Unit-1: Introduction</b>			
<b>CO1: Analyze on normalization techniques.</b>			
<b>TB:” Fundamentals of Database Systems, RamezElmasri, Shamkant B. Navathe, Addison-Wesley,6th edition “</b>			
1	Concepts and Definitions	<b>From 21/06/21 To 05/07/21</b>	<b>Online class with MS Teams</b>
2	Relational models		
3	Data Modeling and Query Languages		
4	Database Objects		
5	Functional Dependency		
6	1NF, 2NF, 3NF		
7	BCNF		
8	Multi valued Dependency		
9	Loss-less Join		
10	Dependency Preservation		
11	Tutorial		
<b>UNIT-II: Transaction Processing:</b>			
<b>CO2: Elaborate on concurrency control techniques and query optimization.</b>			
<b>TB:” Fundamentals of Database Systems, RamezElmasri, Shamkant B. Navathe, Addison-Wesley,6th edition “</b>			
13	Consistency, Atomicity, Isolation and Durability	<b>From 06/07/21 To 20/07/21</b>	
14	Serializable Schedule		
15	Concurrency Control		
16	Recoverable Schedule		
17	Time-stamp based protocols		
18	Isolation Levels		

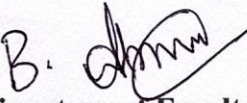
20	Query Tree, Cost of Query		<b>with MS Teams</b>
21	Join, Selection and Projection Implementation Algorithms		
22	Optimization Database Security		
23	Access Control		
24	MAC, RBAC		
25	Authorization		
26	SQL Injection Attacks		
27	Tutorial		
<b>UNIT-III: Data Mining</b>			
<b>CO3: Summarize the concepts of data mining, data warehousing and data pre-processing strategies.</b>			
<b>TB:” Data Mining: Concepts and Techniques, J. Han and M. Kamber, Morgan Kaufmann C.J. Date, Database Systems, Pearson, 3rd edition “</b>			
28	stages and techniques	<b>From 22/07/21 To 12/08/21</b>	<b>Online class with MS Teams</b>
29	knowledge representation methods		
30	data mining approaches (OLAP, DBMS, Statistics and ML)		
31	data warehouse		
32	DBMS, multidimensional data model		
33	DBMS, multidimensional data model		
34	OLAP operations		
35	<b>Data processing: cleaning</b>		
36	transformation		
37	reduction,		
38	filters		
39	discretization with weka		
40	Tutorial		
<b>UNIT-IV: Knowledge representation</b>			
<b>CO4: Apply data mining algorithms.</b>			
<b>TB:” Data Mining: Concepts and Techniques, J. Han and M. Kamber, Morgan Kaufmann C.J. Date, Database Systems, Pearson, 3rd edition “</b>			
41	background knowledge	<b>From 13/08/21 To 03/09/21</b>	<b>Online class with MS Teams</b>
42	representing input data and output knowledge		
43	representing input data and output knowledge		
44	visualization techniques		
45	experiments with weka		
46	Data mining algorithms		
47	association rules,		
48	mining weather data		
49	generating item sets and rules efficiently		
50	generating item sets and rules efficiently		
51	Tutorial		
<b>UNIT-V: Classification &amp; Clustering</b>			




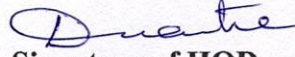
**CO 5 : Assess various classification & cluster techniques.**

**TB:” Data Mining: Concepts and Techniques, J. Han and M. Kamber, Morgan Kaufmann C.J. Date, Database Systems, Pearson, 3<sup>rd</sup> edition ”**

51	1R algorithm, decision trees, covering rules	<b>From 06/09/21 To 18/09/21</b>	<b>Online class with MS Teams</b>
52	task prediction, statistical classification, Bayesian network, instance based methods		
53	linear models, Cluster/2, Cobweb, k-means, Hierarchical methods. <b>Mining real data:</b> preprocessing data from a real medical domain		
54	data mining techniques to create a comprehensive and accurate model of data		
55	data mining techniques to create a comprehensive and accurate model of data		
56	Tutorial		

  
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**TENTATIVE LESSON PLAN: N5806**  
**CLOUD COMPUTING**

<b>Course Title: CLOUD COMPUTING (N5806)</b>		
<b>Section : M Tech</b>	<b>Date : 20/02/2021</b>	<b>Page No : 01 of 03</b>
<b>Revision No : 00</b>	<b>Prepared By : Dr N.Neelima Priyanka</b>	<b>Approved By : HOD</b>

**Tools: Black board, PPTs, Moodle**

No. of Periods	TOPIC	Date	Mode of Delivery
<b>Unit-1 Introduction</b> CO1: analyze various service delivery models of a cloud computing architecture. TB1:"Cloud Computing, Theory and Practice, Dan C Marinescu,MK Elsevier" TB2"Cloud Computing, A Practical Approach, Anthony T Velte, Toby Velte, Robert Elsenpeter, TMH"			
1	introduction	From 21/06/2021 To 05/07/2021	Lecture interspersed with discussions
2	Network centric computing,content		
3	Peer to peer systems		
4	Cloud computing devivery models,services		
5	Ethical Issues,vulnerabilities		
6	Major challenges for cloud computing		
7	Parallel and Ditributed systems		
8	Introduction,Architecture		
9	Distributed Systems		
10	Logical Clocks		
11	Message Delivery Rules		
12	concurrency		
13	Model concurrency with petri nets		
14	Tutorial class		
<b>UNIT-II: CLOUD INFRASTRUCTURE</b> CO2: analyze the Map-Reduce and how Map-Reduce works in analysis of data in parallel computing TB1:"Cloud Computing, Theory and Practice, Dan C Marinescu,MK Elsevier" TB2"Cloud Computing, A Practical Approach, Anthony T Velte, Toby Velte, Robert Elsenpeter, TMH"			
15	At Amazon,The Google Perspective		



17	Open source software platforms	From  06/07/2021  To  20/07/2021	Lecture interspersed with discussions
18	Cloud storage diversity		
19	Intercloud,energy use and ecological impact.		
20	Responsibility sharing,user experience		
21	Software licensing		
22	Cloud computing:Applications and Paradigms		
23	Challenges for cloud		
24	Existing cloud applications new oppurtunities		
25	Architectural styles,workflows		
26	The Zookeeper,The Map reduce program model		
27	HPC on cloud,biological research		
28	Tutorial class		
<b>UNIT-III: CLOUD RESOURSE VIRTUALIZATION</b> <b>CO3:</b> analyze various Cloud Technologies, web services and software involved in cloud computing to design enterprise applications. TB1:"Cloud Computing, Theory and Practice, Dan C Marinescu,MK Elsevier" TB2"Cloud Computing, A Practical Approach, Anthony T Velte, Toby Velte, Robert Elsenpeter, TMH"			
29	Virtualization	From  22/07/2021  To  12/08/2021	Lecture interspersed with discussions
30	Layering And Virtualization		
31	Vmm		
32	Virtual Machines		
33	Virtualization-Full And Para		
34	Performance And Security Isolation.		
35	Hardware Support For Virtualization		
36	Case Study:Xen,Vblades		
37	Cloud Resourse Management And Scheduling:Policies And Mechanisms		
38	Applications Of Control Theory To Task Scheduling		
39	Stability of a two level resource allocation architecture		
40	Feed Back Control Based On Dynamic Thresholds,		
41	Coordination, Resource Bundling, Scheduling Algorithms		
42	Fair Queuing, Start Time Fair Queuing		
43	Cloud Scheduling Subject To Deadlines,		



44	Scheduling Map Reduce Applications		
45	Resource Management And Dynamic Application Scaling		
46	Tutorial Class		
<b>UNIT-IV: Storage System:</b> CO4: Analyse and understand all storage facilities,S3,Megastore,GPFS TB1:"Cloud Computing, Theory and Practice, Dan C Marinescu,MK Elsevier" TB2"Cloud Computing, A Practical Approach, Anthony T Velte, Toby Velte, Robert Elsenpeter, TMH"			
33	Evolution of storage technology	From 13/08/2021  To  03/09/2021	Lecture interspersed with discussions
34	storage models		
35	file systems and database, distributed file systems, general parallel file systems.		
36	Google file system		
37	Apache Hadoop		
38	BigTable		
39	Megastore		
40	Amazon Simple Storage Service(S3		
41	Cloud Security: Cloud security risks,		
42	security — atop concern for cloud users,		
43	privacy and privacy impact assessment, trust,		
44	OS security		
45	Virtual machine security, Security risks		
46	Security risks		
<b>UNIT-V: Cloud Application Development</b> CO5: Understand the challenges involved in cloud computing security and how VMs can be			



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secured in Virtualization security management.			
TB1:"Cloud Computing, Theory and Practice, Dan C Marinescu,MK Elsevier"			
TB2"Cloud Computing, A Practical Approach, Anthony T Velte, Toby Velte, Robert Elsenpeter, TMH"			
47	Cloud Application Development: Amazon Web Services		
48	EC2 — instances, connecting clients, security rules, launching, usage of S3 in Java		
49	Installing Simple Notification Service on Ubuntu 10.04		
50	Installing Hadoop on Eclipse		
51	Cloud based simulation of a Distributed trust algorithm		
52	Cloud service for adaptive data	From	Lecture interspersed with discussions
53	Google: Google App Engine	To	
54	Google Web Toolkit	06/09/2021	
55	MicroSoft: Azure Services Platform	18/09/2021	
56	Windows live,		
57	Exchange Online		
58	Share Point Services		
59	Microsoft Dynamics CRM		
60	Tutorial class		

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