



**LESSON PLAN**

**Course Code& Course Name:** Advanced Operating Systems

**SEM:** II

**Programme:** M.Tech

**Course Code& Course Name:** Data Mining  
**Programme:** M.Tech

**SEM:** I

S No.	Tentative Date	Topics to be covered	Actual Date	Content Delivery Methods
<b>UNIT-I</b>				
1	15/04/2015	Introduction to Threads		DM1,DM8
2	16/04/2015	Threads in Distributed Systems		DM1
3	16/04/2015	Clients: User Interfaces		DM1
4	17/04/2015	Client side software for Distribution Transperency		DM1
5	20/04/2015	SERVERS: General Design Issues		DM1
6	21/04/2015	Object Servers		DM1
7	21/04/2015	Object Servers		DM1
8	23/04/2015	CODE MIGRATION: Approaches to Code Migration		DM1
9	24/04/2015	Tutorial-1		DM1
10	28/04/2015	Migration and Local Resources		DM1
11	28/04/2015	Migration in Heterogeneous Systems		DM1
12	01/05/2015	D'Agents		DM1
13	02/05/2015	SOFTWARE AGENTS		DM1
14	04/05/2015	Software Agents in Distributed System		DM1
15	05/05/2015	Agent Technology		DM1
16	08/05/2015	Agent Technology		DM1
17	08/05/2015	Agent Technology		DM1
18	11/05/2015	Tutorial-2		DM2
<b>UNIT-II</b>				
19	12/05/2015	Naming Systems		DM1,DM8
20	15/05/2015	Names, Identifiers, and Addresses		DM1
21	16/05/2015	Name Resolution		DM1
22	01/06/2015	The Implementation of a Name Space		DM1
23	02/06/2015	DNS, X.500		DM1
24	04/06/2015	Naming versus Locating Entities, Simple Solutions		DM1
25	05/06/2015	Home-Based Approaches		DM1
26	08/06/2015	Hierarchical Approaches		DM2
27	09/06/2015	Tutorial-3		DM1
28	09/06/2015	The Problem of Unreferenced Objects		DM1
29	10/06/2015	Reference Counting		DM1
30	10/06/2015	Reference Listing		DM1
31	11/06/2015	Identifying Unreachable Entities		DM1
32	12/06/2015	Identifying Unreachable Entities		DM 1
33	13/06/2015	Tutorial-4		DM2
<b>UNIT-III</b>				
34	18/06/2015	Synchronization		DM1,DM8
35	19/06/2015	Clock synchronization		DM1
36	22/06/2015	Clock synchronization		DM1
37	23/06/2015	logical clocks		DM1
38	25/06/2015	logical clocks		DM1
39	26/06/2015	global state		DM1



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**Department:** CSE

40	29/06/2015	global state		DM1
41	30/06/2015	election algorithms		DM2
42	02/07/2015	election algorithms		DM1
43	03/07/2015	mutual exclusion		DM 1
44	06/07/2015	distributed transactions		DM 1
45	07/07/2015	distributed transactions		DM 1
46	09/07/2015	Tutorial		DM 2
		<b>UNIT-IV</b>		
47	10/07/2015	Consistency and Replication: Introduction		DM 1,DM8
48	13/07/2015	Data-Centric Consistency Models		DM 1
49	14/07/2015	Client-Centric Consistency Models		DM 1
50	16/07/2015	Client-Centric Consistency Models		DM 1
51	17/07/2015	Distribution Protocols		DM 1
52	20/07/2015	Consistency Protocols		DM 1
53	21/07/2015	Orca and Causally-Consistent Lazy Replication		DM 1
54	23/07/2015	Orca and Causally-Consistent Lazy Replication		DM 1
55	24/07/2015	Tutorial		DM 2
		<b>UNIT-V</b>		
56	27/07/2015	Fault Tolerance: Introduction		DM 1,DM8
57	28/07/2015	Introduction to Fault Tolerance		DM 1
58	30/07/2015	Process Resilience		DM 1
59	31/07/2015	Reliable Client-Server Communication		DM 1
60	03/08/2015	Process Resilience		DM 1
61	04/08/2015	Reliable Client-Server Communication		DM 1
62	06/08/2015	Reliable Client-Server Communication		DM 1
63	07/08/2015	Reliable Group Communication		DM 1
64	10/08/2015	Reliable Group Communication		DM 1
65	11/08/2015	Distributed Commit, Recovery		DM 1
66	13/08/2015	Distributed Commit, Recovery		DM 1
67	14/08/2015	Distributed Commit, Recovery		DM 1
68	17/08/2015	Tutorial		DM 2
69	18/08/2015	Rivision & Previous papers discusion		DM 3 & DM 4

**NOTE: DELIVERY METHODS :** DM1: Lecture interspersed with discussions/BB, DM2: Tutorial, DM3: Lecture with a quiz, DM4: Assignment/Test, DM5: Demonstration ( laboratory, field visit ), DM6: Group Discussion, DM7: Group Assignment/ Project, DM8: Presentations/PPT, DM9:Asynchronous Discussion..

<b>Signature</b>			
	<b>Name of the Faculty</b>	<b>Name of Course Co-ordinator</b>	<b>HOD</b>
	B SIVARAMAKRISHNA	B SIVARAMAKRISHNA	Dr.N.Ravi Sankar

	<b>LESSON PLAN</b>		<b>Date: 08.03.16</b> <b>To 18.07.16</b>
	<b>Sub Name : BIG DATA</b> <b>Branch: M.Tech(CSE)</b>	<b>Semester: II</b>	

### MTCS201 – BIG DATA

<b>Lecture</b>	: 4 Periods/week	<b>Internal Marks</b>	: 40
<b>Tutorial</b>	: 1 Periods/week	<b>External Marks</b>	: 60
<b>Credits</b>	: 4	<b>External Examination</b>	: 3 Hrs

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#### UNIT - I

**INTRODUCTION:** OVERVIEW OF Big Data Characteristics, Cloud Vs Big Data, issues and challenges of Big Data, stages of analytical evolution, State of the Practice in Analytics, the Data Scientist, Big data Technological approaches and Potential use cases for Big Data. **Big Data Analytics-** Big data Analytics in Industry Verticals, Data Analytics Lifecycle, Discovery, Data preparation, Model Planning and building, communicating Results, Operational zing Unstructured Data Analytics – Test Analytics Essentials; Big Data Visualization Techniques; Advanced system Approaches for Analytics – In Database Analytics, In-memory Databases.

#### UNIT - II

**Technologies and Tools for Big Data Analytics:** Basic Data Analytics Methods using R, and spreadsheet- like analytics, Stream Computing, Machine learning with Mahout.

#### UNIT - III

**The Hadoop Ecosystem-**, advantages of Hadoop, Query languages for Hadoop, Hadoop Distributed file System, HDFS, Overview of HBase, Hive and PIG, MapReduce Framework and MapReduce Programming.

#### UNIT - IV

**NoSQL Databases-** Review of traditional Databases, Columnar Databases, Failover and reliability principles, working mechanisms of NoSQL Databases- HBase, Cassandra, Couch DB, Mango DB.

#### UNIT - V

**Challenges for Big Data :** Data models for managing big data, Real – time streaming data analytics, Scalable analytics on larger data sets, Systems architecture for big data management , Main memory data management techniques, energy- efficient data processing , Benchmarking big data systems, Security and Privacy of Big Data , Failover and reliability for big data systems, importance of Cloud in Big Data Analytics.

#### TEXT BOOK

1. Big Data Now: 2012 Edition by O'Reilly Media
2. Big Data: A Revolution That Will Transform How We Live, Work, and Think (Hardcover) by Viktor Mayer-Schönberger
3. Hadoop: The Definitive Guide (Paperback) by Tom White

#### REFERENCES

1. Map Reduce Design Patterns: Building Effective Algorithms and Analytics for Hadoop and Other Systems (Paperback) by Donald Miner.
2. Big Data Analytics: Turning Big Data into Big Money (English) By Frank J. Ohlhorst

**Course Objectives**

- To explore the fundamental concepts of big data analytics
- To learn to analyze the big data using intelligent techniques.
- To understand the various search methods and visualization techniques.
- To learn to use various techniques for mining data stream.
- To understand the applications using Map Reduce Concepts

**Course Outcomes**

At the end of this course the students will be able to:

- Work with big data platform and its analysis techniques.
- Analyze the big data for useful business applications.
- Select visualization techniques and tools to analyze big data
- Implement search methods and visualization techniques
- Design efficient algorithms for mining the data from large volumes.
- Explore the technologies associated with big data analytics such as NoSQL, Hadoop and Map-Reduce

Session No	Topics to be covered	Date	Teaching Method	Remarks
<b>UNIT-I</b>				
1	Overview Of Big Data Characteristics	08/03/16	BB	
2	Cloud Vs Big Data	9/3/2016	BB	
3	Issues and challenges of Big Data	10/3/2016	BB	
4	Stages of analytical evolution	11/3/2016	BB	
5	State of the Practice in Analytics	14/3/2016	BB	
6	The Data Scientist	15/3/2016	BB	
7	Big data Technological approaches and Potential use cases for Big Data	16/3/2016	BB	
8	Big data Analytics in Industry Verticals	17/3/2016	BB	
9	Data Analytics Lifecycle	18/3/2016	BB	
10	Discovery, Data preparation, Model Planning and building, communicating Results	21/3/2016	BB	
11	Operational zing Unstructured Data Analytics	22/3/2016	BB	
12	Test Analytics Essentials	23/3/2016	BB/LCD	
13	Big Data Visualization Techniques	24/3/2016	BB/LCD	
14	Advanced system Approaches for Analytics	28/3/2016	BB/LCD	
15	In Database Analytics, In-memory Databases.	29/3/2016	BB/LCD	
<b>UNIT-II</b>				
1	Basic Data Analytics Methods using R, and spreadsheet	30/3/2016 31/3/2016 1/4/2016 4/4/2016	BB/LCD	
2	Stream Computing	5/4/2016 6/4/2016	BB/LCD	

		07/4/2016 11/4/2016 12/4/2016 13/4/2016		
3	Machine learning with Mahout	14/4/2016 18/4/2016 19/4/2016 20/4/2016 21/4/2016	BB/LCD	
<b>UNIT-III</b>				
1	Advantages of Hadoop	21/4/2016 22/4/2016 22/4/2016	BB/LCD	
2	Query languages for Hadoop	2/5/2016 3/5/2016 4/5/2016	BB/LCD	
4	Hadoop Distributed file System	5/5/2016 6/5/2016	BB/LCD	
5	HDFS	9/5/2016 10/5/2016	BB/LCD	
6	Overview of HBase	11/5/2016 12/5/2016	BB/LCD	
7	Hive and PIG	13/5/2016 14/5/2016	BB/LCD	
8	MapReduce Framework	6/6/2016 7/6/2016	BB/LCD	
9	MapReduce Programming	8/6/2016 9/6/2016	BB/LCD	
<b>UNIT-IV</b>				
1	Review of traditional Databases	13/6/2016 14/6/2016	BB/LCD	
2	Columnar Databases	15/6/2016	BB/LCD	
3	Failover and reliability principles	16/6/2016	BB/LCD	
4	Working mechanisms of NoSQL Databases	17/6/2016 20/6/2016	BB/LCD	
5	HBase	21/6/2016 22/6/2016	BB/LCD	
6	Cassandra	23/6/2016 24/6/2016	BB/LCD	
7	Couch DB	27/6/2016 28/6/2016	BB/LCD	
8	Mango DB	29/6/2016	BB/LCD	
<b>UNIT-V</b>				
1	Data models for managing big data	30/6/2016 1/7/2016	BB/LCD	
2	Real – time streaming data analytics	4/7/2016 5/7/2016	BB/LCD	
3	Scalable analytics on larger data sets	6/7/2016 7/7/2016	BB/LCD	
4	Systems architecture for big data management	8/7/2016 11/7/2016	BB/LCD	
5	Main memory data management techniques,	12/7/2016	BB/LCD	

6	Energy- efficient data processing	13/7/2016	BB/LCD	
7	Benchmarking big data systems, Security and Privacy of Big Data	14/7/2016	BB/LCD	
8	Failover and reliability for big data systems	15/7/2016	BB/LCD	
9	Importance of Cloud in Big Data Analytics	18/7/2016	BB/LCD	

	<b>Prepared by</b>	<b>Approved by</b>
<b>Signature</b>		
<b>Name</b>	<b>G.V.Suresh</b>	<b>HOD/CSE</b>
<b>Designation</b>	<b>Associate Professor/CSE</b>	<b>Professor</b>
<b>Date</b>		

## COURSE HANDOUT

**PROGRAM** : M. Tech., II-Sem., CSE  
**ACADEMIC YEAR** : 2015-16  
**COURSE NAME & CODE** : COMPUTER VISION & MTCS202  
**L-T-P STRUCTURE** : 4-1-0  
**COURSE CREDITS** : 4  
**COURSE INSTRUCTOR** : Mr. Lella Kranthi Kumar  
**COURSE COORDINATOR** : Dr. CH Venkata Narayana.  
**PRE-REQUISITE:** Knowledge on computer graphics, Digital Image Processing.

### **COURSE OBJECTIVE:**

- 1 To introduce basic principles of digital image processing.
- 2 To provide knowledge on Image data structures
- 3 To demonstrate different image encoding techniques.
- 4 To explain segmentation and restoration techniques.

### **COURSE OUTCOMES (CO)**

- CO1: Summarize the fundamentals of digital image processing  
CO2: Apply image enhancement techniques in spatial domain  
CO3: Apply restoration and color image processing techniques to improve the fidelity of images.  
CO4: Analyze image compression, morphological image processing techniques for various applications.  
CO5: Evaluate the methodologies for image segmentation

### **COURSE ARTICULATION MATRIX (Correlation between COs&POs,PSOs):**

COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	3	-	-	-	-	-	-	-	-	-	-	-	3	-	-
CO2	3	2	-	-	-	-	-	-	-	-	-	-	3	2	-
CO3	3	2	-	-	-	-	-	-	-	-	-	-	3	2	-
CO4	3	3	-	-	-	-	-	-	-	-	-	-	3	3	-
CO5	3	2	-	3	-	-	-	-	-	-	-	-	3	1	-

**Note:** Enter Correlation Levels **1** or **2** or **3**. If there is no correlation, put '-'  
**1-** Slight(Low), **2** - Moderate(Medium), **3** - Substantial (High).

### **BOS APPROVED TEXT BOOKS:**

**T1** Rafael C.Gonzalez, Richard E. Woods: "Digital Image Processing" Addison Wesley Pubs(Second Edition).

### **BOS APPROVED REFERENCE :**

**R1** Nptel videos on digital image processing and computer vision

**COURSE DELIVERY PLAN (LESSON PLAN):****UNIT-I : Introduction & Digital Image Fundamentals**

S.No.	Topics to be covered	No. of Classes Required	Tentative Date of Completion	Actual Date of Completion	Teaching Learning Methods	Learning Outcome COs	Text Book followed	HOD Sign Weekly
1.	<b>Introduction:</b> Digital Image Processing	1	28/12/15		<b>TLM1</b>	CO1	T1	
2.	Introduction to Digital Image Processing	1	29/12/15		<b>TLM1</b>	CO1	T1	
3.	Fundamental steps in Digital Image Processing	1	30/12/15		<b>TLM1</b>	CO1	T1	
4.	Fundamental steps in Digital Image Processing	1	31/01/16		<b>TLM1</b>	CO1	T1	
5.	Components of an Image Processing system.	1	03/01/16		<b>TLM1</b>	CO1	T1	
6.	Components of an Image Processing system.	1	04/01/16		<b>TLM1,TLM2</b>	CO1	T1	
7.	<b>Digital Image Fundamentals</b>	1	05/01/16		<b>TLM1,TLM2</b>	CO1	T1	
8.	Visual Perception		06/01/16		<b>TLM1,TLM2</b>	CO1	T1	
9.	Visual Perception	1	07/01/16		<b>TLM1,TLM1</b>	CO1	T1	
10.	Image Sensing & Quantization	1	18/01/16		<b>TLM1,TLM2</b>	CO1	T1	
11.	Image Sensing & Quantization	1	19/01/16		<b>TLM1,TLM2</b>	CO1	T1	
12.	Image Sensing & Quantization	1	20/01/16		<b>TLM1,TLM2</b>	CO1	T1	
13.	Some Basic Relationship between Pixels.	1	21/01/16		<b>TLM1,TLM2</b>	CO1	T1	
14.	Some Basic Relationship between Pixels.	1	22/01/16		<b>TLM1,TLM2</b>	CO1	T1	
15.	<b>Tutorial-1</b>	1	25/01/16		<b>TLM3</b>	CO1	T1	
No. of classes required to complete UNIT-I		15			No. of classes taken:			

**UNIT-II : Image Enhancement in the Spatial Domain**

S.No.	Topics to be covered	No. of Classes Required	Tentative Date of Completion	Actual Date of Completion	Teaching Learning Methods	Learning Outcome COs	Text Book followed	HOD Sign Weekly
16.	<b>Image Enhancement in the Spatial Domain</b>	1	26/01/16		<b>TLM1</b>	CO2	T1	
17.	Some Basic Gray level	1	27/01/16		<b>TLM1</b>	CO2	T1	



	Transformations							
18.	Histogram Processing	1	28/01/16		TLM1,TLM2	CO2	T1	
19.	Histogram Processing	1	29/01/16		TLM1,TLM2	CO2	T1	
20.	Enhancement using Arithmetic/Logical Operations	1	01/02/16		TLM1,TLM2	CO2	T1	
21.	Enhancement using Arithmetic/Logical Operations	1	02/02/16		TLM1,TLM2	CO2	T1	
22.	Spatial filtering		03/02/16		TLM1,TLM2	CO2	T1	
23.	Spatial filtering	1	04/02/16		TLM1,TLM2	CO2	T1	
24.	Smoothing Spatial Filters	1	05/02/16		TLM1,TLM2	CO2	T1	
25.	Sharpening Spatial Filters	1	08/02/16		TLM1,TLM2	CO2	T1	
26.	Combining Spatial Enhancement methods	1	09/02/16		TLM1,TLM2	CO2	T1	
27.	Combining Spatial Enhancement methods	1	10/02/16		TLM1,TLM2	CO2	T1	
28.	<b>Tutorial - II</b>	1	11/02/16		TLM3	CO2	T1	
No. of classes required to complete UNIT-II		13			No. of classes taken:			

### UNIT-III: Image Enhancement in the Frequency Domain

S.No.	Topics to be covered	No. of Classes Required	Tentative Date of Completion	Actual Date of Completion	Teaching Learning Methods	Learning Outcome COs	Text Book followed	HOD Sign Weekly
29.	<b>Image Enhancement in the Frequency Domain</b>	1	12-02-16		TLM1	CO3	T1	
30.	Fourier Transform and the Frequency Domain	1	15-02-16		TLM1,TLM2	CO3	T1	
31.	Fourier Transform and the Frequency Domain	1	16-02-16		TLM1,TLM2	CO3	T1	
32.	Smoothing Frequency-Domain Filters	1	17-02-16		TLM1,TLM2	CO3	T1	
33.	Smoothing Frequency-Domain Filters	1	18-02-16		TLM1,TLM2	CO3	T1	
34.	Sharpening Frequency Domain Filters	1	19-02-16		TLM1,TLM2	CO3	T1	
35.	Sharpening Frequency Domain Filters	1	29-02-16		TLM1,TLM2	CO3	T1	
36.	Homomorphism filtering	1	01-03-16		TLM1,TLM2	CO3	T1	

37.	Homomorphism filtering	1	02-03-16		TLM1,TLM2	CO3	T1	
38.	Implementation	1	03-03-16		TLM1,TLM2	CO3	T1	
39.	TUTORIAL III	1	04-03-16		TLM3	CO3	T1	
No. of classes required to complete UNIT-III		11			No. of classes taken:			

#### UNIT-IV: Image Restoration&Wavelets and Multi-Resolution Processing

S.No.	Topics to be covered	No. of Classes Required	Tentative Date of Completion	Actual Date of Completion	Teaching Learning Methods	Learning Outcome COs	Text Book followed	HOD Sign Weekly
40.	<b>Image Restoration</b>	1	07/03/16		TLM1	CO4	T1	
41.	Image Degradation/Restoration Process	1	08/03/16		TLM1,TLM2	CO4	T1	
42.	Image Degradation/Restoration Process	1	09/03/16		TLM1,TLM2	CO4	T1	
43.	Linear Degradations	1	10/03/16		TLM1,TLM2	CO4	T1	
44.	Position-Invariant Degradations	1	11/03/16		TLM1,TLM2	CO4	T1	
45.	Inverse filtering	1	14/03/16		TLM3	CO4	T1	
46.	Minimum Mean Square Error (Wiener) Filtering	1	15/03/16		TLM1,TLM2	CO4	T1	
47.	Constrained Least Squares Filtering	1	16/03/16		TLM1,TLM2	CO4	T1	
48.	Constrained Least Squares Filtering	1	17/03/16		TLM1,TLM2	CO4	T1	
49.	<b>Wavelets and Multi-Resolution Processing</b>	1	18/03/16		TLM1,TLM2	CO4	T1	
50.	Multi-Resolution Expansions	1	21/03/16		TLM1,TLM2	CO4	T1	
51.	Wavelet Transforms in One Dimension	1	22/03/16		TLM1,TLM2	CO4	T1	
52.	Wavelet Transforms in One Dimension	1	23/03/16		TLM1,TLM2	CO4	T1	
53.	The Fast Wavelet Transform	1	24/03/16		TLM1,TLM2	CO4	T1	
54.	Wavelet Transforms in Two Dimension	1	25/03/16		TLM1,TLM2	CO4	T1	
55.	Wavelet Transforms in Two Dimension	1	28/03/16		TLM1,TLM2	CO4	T1	
56.	<b>Tutorial - 4</b>	1	29/03/16		TLM3	CO4	T1	

No. of classes required to complete UNIT-IV	12			No. of classes taken:
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**UNIT-V: Image Compression&Image Segmentation**

S.No.	Topics to be covered	No. of Classes Required	Tentative Date of Completion	Actual Date of Completion	Teaching Learning Methods	Learning Outcome COs	Text Book followed	HOD Sign Weekly
57.	<b>Image Compression</b>	1	30/03/16		TLM1	CO5	T1	
58.	Image Compression Models	1	31/03/16		TLM1,TLM2	CO5	T1	
59.	Image Compression Models	1	01/04/16		TLM1,TLM2	CO5	T1	
60.	Error-Free Compression	1	04/04/16		TLM1,TLM2	CO5	T1	
61.	Lossy Compression	1	05/04/16		TLM1,TLM2	CO5	T1	
62.	Lossy Compression	1	06/04/16		TLM1,TLM2	CO5	T1	
63.	Image Compression Standards	1	07/04/16		TLM1,TLM2	CO5	T1	
64.	<b>Image Segmentation</b>	1	08/04/16		TLM1,TLM2	CO5	T1	
65.	Detection of Discontinuities	1	11/04/16		TLM1,TLM2	CO5	T1	
66.	Detection of Discontinuities	1	12/04/16		TLM1,TLM2	CO5	T1	
67.	Edge Linking and Boundary Detection	1	13/04/16		TLM1,TLM2	CO5	T1	
68.	Thresholding	1	14/04/16		TLM1,TLM2	CO5	T1	
69.	Region-Based Segmentation	1	15/04/16		TLM1,TLM2	CO5	T1	
70.	Region-Based Segmentation	1	18/04/16		TLM1,TLM2	CO5	T1	
71.	Region-Based Segmentation	1	19/04/16		TLM1,TLM2	CO5	T1	
72.	<b>Tutorial – 5</b>	1	20/04/16		TLM3	CO5	T1	
No. of classes required to complete UNIT-V	12			No. of classes taken:				

**Contents beyond the Syllabus**

S.No.	Topics to be covered	No. of Classes Required	Tentative Date of Completion	Actual Date of Completion	Teaching Learning Methods	Learning Outcome COs	Text Book followed	HOD Sign Weekly
73.	Computer Graphics	1	18-03-17		TLM1			
74.	Digital Image Processing	1	19-03-17		TLM1			

**Teaching Learning Methods**

<b>TLM1</b>	Chalk and Talk	<b>TLM4</b>	Problem Solving	<b>TLM7</b>	Seminars or GD
<b>TLM2</b>	PPT	<b>TLM5</b>	Programming	<b>TLM8</b>	Lab Demo
<b>TLM3</b>	Tutorial	<b>TLM6</b>	Assignment or Quiz	<b>TLM9</b>	Case Study

**ACADEMIC CALENDAR:**

Description	From	To	Weeks
I Phase of Instructions-1	28-12-2015	09-01-2016	2W
Sankranthi Holidays	11-01-2016	16-01-2016	1W
I Phase of Instructions-II	18-01-2016	20-02-2016	5W
I Mid Examinations	22-02-2016	27-02-2016	1W
II Phase of Instructions	29-02-2016	30-04-2016	9W
II Mid Examinations	02-05-2016	07-05-2016	1W
Practicals	09-05-2016	14-05-2016	1W
Preparation and Summer Preparation and vacation	16-05-2016	04-06-2016	3W
Semester End Examinations	06-06-2016	18-06-2016	2W

**EVALUATION PROCESS:**

Evaluation Task	COs	Marks
Assignment/Quiz – 1	1	A1=5
Assignment/Quiz – 2	2	A2=5
I-Mid Examination	1,2	B1=20
Assignment/Quiz – 3	3	A3=5
Assignment/Quiz – 4	4	A4=5
Assignment/Quiz – 5	5	A5=5
II-Mid Examination	3,4,5	B2=20
Evaluation of Assignment/Quiz Marks: $A=(A1+A2+A3+A4+A5)/5$	1,2,3,4,5	A=5
Evaluation of Mid Marks: $B=75\% \text{ of Max}(B1,B2)+25\% \text{ of Min}(B1,B2)$	1,2,3,4,5	B=20
<b>Cumulative Internal Examination : A+B</b>	<b>1,2,3,4,5</b>	<b>A+B=25</b>
<b>Semester End Examinations</b>	<b>1,2,3,4,5</b>	<b>C=75</b>
<b>Total Marks: A+B+C</b>	<b>1,2,3,4,5</b>	<b>100</b>

Course Instructor

Course Coordinator

Module Coordinator

HOD

**LESSON PLAN****Course Code& Course Name:** E-COMMERCE**CODE:** MTCS2063**Programme:** M.TECH**Department:** CSE**Instructor Name:** K.Rangachary**Pre-requisites:** Knowledge of security concepts and also networking.**1. Course Educational Objectives (CEOs):****CEO1:** Understanding of a broad range of Internet tools.**CEO2:** Business models and applications and Benefits and risks**2. Course Outcomes (COs):** At the end of the course, the student will be able to :**CO1:** Evaluate electronic commerce frame work, features and functions of E-commerce**CO2:** Analyze Business model for e-commerce, Intra organizational commerce and supply chain management**CO3:** Analyze modes of electronic commerce and Identify approaches for secure electronic commerce**CO4:** Categorize electronic payment systems and evaluate security of e-commerce**CO5:** Explore various approaches and technologies used in business over the internet**3. Course Articulation Matrix:**

Course Code	COs	Programme Outcomes												PSOs			
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
<b>S205</b>	CO1		1				1										
	CO2						1									3	
	CO3						3										
	CO4						3										1
	CO5						2										2
		<b>1 = Slight (Low)</b>				<b>2 = Moderate (Medium)</b>				<b>3-Substantial(High)</b>							

**4. Course Delivery Plan:**

No.	Tentative Date	Topics to be covered	Actual Date	Num. of classes	Content Delivery Methods
<b>UNIT-I:Introduction to E-Commerce</b>					
1.	8-3-16	Introduction to E-commerce		1	DM1
2.	8-3-16	Advantages of E-commerce		1	DM1
3.	9-3-16	E-commerce frame work		1	DM1



**LESSON PLAN**

**Course Code& Course Name:** E-COMMERCE

**CODE:** MTCS2063

**Programme:** M.TECH

**Department:** CSE

**Instructor Name:** K.Rangachary

4.	11-3-16	Elements in E-commerce frame work		1	DM1
5.	11-3-16	Anatomy of E-commerce		1	DM1
6.	15-3-16	Applications of e-commerce		1	DM1
7.	15-3-16	Features and functions of E-commerce		1	DM1
8.	18-3-16	E-commerce practices		1	DM1
9.	18-3-16	Traditional commerce vs E-commerce		1	DM1,DM6
10.	23-3-16	Scope and limitations of E-commerce		1	DM1
11.	29-3-16	Case study on functions on e-com		1	DM1
12.	29-3-16	Test/Assignment/Quiz-1		1	DM2,DM3
<b>UNIT-II Business models and EDI</b>					
13.	30-3-16	Unit – II : Business model for E-commerce		1	DM1
14.	1-4-16	Business to Consumer, Business to consumer models		1	DM1
15.	1-4-16	Consumer to consumer, consumer to business models		1	DM1
16.	5-4-16	Meaning of inter organisational commerce		1	DM1
17.	5-4-16	Electronic Data Interchange		1	DM1,DM6
18.	6-4-16	Implementation of EDI		1	DM1,DM6
19.	12-4-16	Implementation of EDI		1	DM1
20.	12-4-16	Definition of value added networks		1	DM1
21.	13-4-16	Parameters in VAN		1	DM1
22.	19-4-16	Intra organisational commerce		1	DM1
23.	19-4-16	Work flow model of Intra oraganisational commerce		1	DM1
24.	22-4-16	Automation and customization of internal commerce		1	DM1
25.	22-4-16	Supply chain management		1	DM1
26.	22-4-16	Test/Assignment/Quiz-2		1	DM2,DM3
<b>I mid examinations 25/04/16 to 30/04/16</b>					



**LESSON PLAN**

**Course Code& Course Name:** E-COMMERCE

**CODE:** MTCS2063

**Programme:** M.TECH

**Department:** CSE

**Instructor Name:** K.Rangachary

**UNIT-III Modes of E-Commerce**

27.	3-5-16	Introduction to modes for E-commerce		1	DM1
28.	3-5-16	EDI models		1	DM1
29.	4-5-16	E-commerce with WWW/Internet		1	DM1
30.	10-5-16	E-commerce with Internet		1	DM1
31.	10-5-16	Commerce net advocacy		1	DM1
32.	11-5-16	Web commerce structure		1	DM1
33.	13-5-16	Approaches to safe commerce: STP protocol		1	DM1,DM6
34.	13-5-16	Secure transaction using STP protocol		1	DM1
35.	8-6-16	Secure electronic payment protocol		1	DM1
36.	10-6-16	Transaction of SET		1	DM1
37.	10-6-16	Security authentication certificates		1	DM2
38.	14-6-16	Security on web server		1	DM1
39.	14-6-16	Enterprise network models		1	DM2
40.	15-6-16	Test/Assignment/Quiz-2		1	DM2,DM3

**UNIT-IV Electronic payment System**

41.	17-6-16	Unit IV: Introduction to electronic payment systems		1	DM1
42.	17-6-16	Digital token based system		1	DM1
43.	21-6-16	Smart cards and credit cards design		1	DM1,DM6
44.	21-6-16	Usage of magnetic cards		1	DM1
45.	22-6-16	Risks in electronic payment system		1	DM1
46.	24-6-16	Security in E-commerce, models		1	DM1,DM6
47.	24-6-16	Internet security setup		1	DM1
48.	28-6-16	Maintaining information with secure mode		1	DM1
49.	28-6-16	Encryption methods in security		1	DM1

**LESSON PLAN****Course Code& Course Name:** E-COMMERCE**CODE:** MTCS2063**Programme:** M.TECH**Department:** CSE**Instructor Name:** K.Rangachary

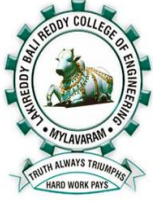
50.	1-7-16	Digital signature methods in security		1	DM1,DM6
51.	1-7-16	Other security measures		1	DM1
52.	8-7-16	Test/Assignment/Quiz-4		1	DM2,DM3
<b>UNIT-V Internet resources for Commerce</b>					
53.	8-7-16	Unit -V:Introduction to internet resources		1	DM1
54.	12-7-16	Technologies for webservers		1	DM1,DM6
55.	12-7-16	Internet tools relevant to E-commerce		1	DM1
56.	15-7-16	Internet applications and charges		1	DM1,DM6
57.	19-7-16	Searching and advertising methods		1	DM1
58.	20-7-16	Creating and marketing web site		1	DM1
59.	22-7-16	Various electronic publishing issues		1	DM1
60.	22-7-16	Test/Assignment/Quiz-5		1	DM2,DM3
<b>Total</b>				60	
<b>Total number of classes required to complete the syllabus</b>					<b>60</b>
<b>Total number of classes available as per Schedule</b>					<b>60</b>

**NOTE: DELIVERY METHODS:** DM1: Lecture interspersed with discussions/BB, **DM2:** Tutorial, **DM3:** Lecture with a quiz, **DM4:** Assignment/Test, **DM5:** Demonstration (laboratory, field visit), **DM6:** Presentations/PPT

At the End of the course, students attained the **Course Outcomes: CO1, CO2, CO3, CO4, CO5**& sample proofs are enclosed in Course file.

<b>Signature</b>			
	<b>Name of the Faculty</b>	<b>Name of Course Co-ordinator</b>	<b>HOD</b>
	K.Rangachary		Dr.N.Ravi Sankar





# Lakireddy Balireddy College of Engineering College

L.B.Reddy Nagar, Mylavaram , Krishna District, A.P

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

## LESSON PLAN

Subject : **HADOOP LAB - MTCS251**

Academic Year :	<b>2016-17</b>	Semester :	<b>II</b>	Date:	<b>03.08.2016</b>
Year :	<b>II(2016-18)</b>	Section :	<b>-</b>	To:	<b>30.12.2016</b>

### MTCS251-HADOOP LAB

Lab : 3 Periods/week

Internal Marks : 25

Tutorial :

External Marks : 50

Credits : 2

External Examination : 3 Hrs

#### Pre-requisites:

- Students should have a good knowledge in Java ,Big Data

#### Course Educational Objectives (CEOs):

Introducing Java concepts required for developing map reduce programs

Imparting the architectural concepts of Hadoop and introducing map reduce paradigm

To introduce programming tools PIG & HIVE in Hadoop echo system

Preparing for data summarization, query, and analysis

#### Course Outcomes(COs):

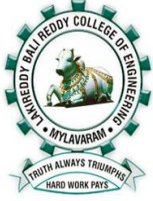
*By the completion of the course, the students are able to:*

**CO1:** Set up single and multi node Hadoop Clusters

**CO2:** Apply Map Reduce algorithms for various algorithms

**CO3:** Design new algorithms that uses Map Reduce to apply on Unstructured and structured data.

Session No	Program to be executed	Date	Remarks
1	<b>Week: 1</b> 1. Downloading and installing Hadoop 2. Understanding different Hadoop modes 3. Start up scripts 4. Configuration files		<b>Cycle-1</b>
2	<b>Week: 2</b> 1.Setting up Hadoop on a single node cluster Starting a Single node cluster Stopping a Single node cluster 2.Setting up Hadoop on a large node cluster Starting up a larger cluster Stopping the cluster		
3	<b>Week:3</b> • Standard word count example implemented in Java		
4	<b>Week4:</b> First we write a program to fetch titles from one or more web pages in java Using Hadoop Streaming.		
5	<b>Week 5:</b> Practice Importing and Exporting Data from Various DBs.		



# Lakireddy Balireddy College of Engineering College

L.B.Reddy Nagar, Mylavaram , Krishna District, A.P

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

## LESSON PLAN

Subject : **HADOOP LAB - MTCS251**

Academic Year : **2016-17** Semester : **II** Date: **03.08.2016**  
 Year : **II(2016-18)** Section : **-** To: **30.12.2016**

6	<b>Week 6:</b> Practice Big Data Analysis with Machine Learning • Supervised machine-learning algorithms • Linear regression • Logistic regression		
7	<b>Week 7:</b> Practice Big Data Analysis with Machine Learning • Unsupervised machine learning algorithm		<b>Cycle-2</b>
8	<b>Week 8:</b> Understanding Hive 1) Installing Hive 2) Setting up Hive configurations 3) Practice Hive with example		
9	<b>Week 9:</b> 1) Installing HBase 2) Installing thrift 3) Practice HBase with example		
10	<b>Week 10:</b> Practice data logistic regression with example		

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	G.V.Suresh			Dr. N. Ravi Shankar
Sign with Date				

# **LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING**

**(AUTONOMOUS)**

L.B Reddy Nagar , Mylavaram-521230

Department of Computer Science & Engineering

## **NETWORK SECURITY**

Lesson Plan

**Course : M.TECH II SEMESTER**

**Subject Code: MTCS2052**

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### **Course Educational Objectives**

- Various types of algorithms for Encryption & Decryption, Message Authentication, Digital Signature.
- Different ways to protect the data over a network using Email & IP security and during the financial transactions.
- Network security, virus, worms and firewall.

### **Course Outcomes:**

- Acquire knowledge in security services, mechanism and Encryption and decryption of messages using block ciphers.
- Sign and verify messages using well-known signature generation, verification & analyzing the existing authentication protocols for two party communications.
- Acquire the knowledge of providing Email security & IP security
- Acquire the knowledge of providing the security to data during the web transactions
- Knowledge of Prevention from Malware and restricting the unwanted data in a network using firewalls.

**Pre requisite:** Knowledge of Networks and basic mathematical foundation.

S.NO	Tentative Date	Topics to be covered	Actual Date	Num. of classes	Content Delivery Methods
<b>UNIT-1</b>					
1	13.04.2015	Introduction		1	DM1
2	15.04.2015	Introduction to Networks		1	DM1/DM6
3	16.04.2015	Introduction to Security		1	DM1/DM6
4	17.04.2015	Attacks & Threats		1	DM1/ DM6
5	20.04.2015	Active & Passive Attacks		1	DM1/ DM6
6	21.04.2015	Services		1	DM1/ DM6
7	22.04.2015	Model of Inter network security		1	DM2
8	23.04.2015	Principles of Symmetric encryption		1	DM1/DM6
9	24.04.2015	Principles of Asymmetric encryption		1	DM1/DM6
10	27.04.2015	Public and Private Keys		1	DM1/ DM6
11	28.04.2015	Steganography & One Time Pads			
12	29.04.2015	TUTORIAL -1		1	DM2
<b>UNIT-II</b>					
13	30.04.2015	Block Cipher & Stream Cipher		1	DM1
14	04.05.2015	Introduction to Block cipher algorithms		1	DM1
15	05.05.2015	RC2		1	DM1
16	06.05.2015	GOST		1	DM1/DM6
17	07.05.2015	GOST		1	DM1/DM6
18	08.05.2015	CAST		1	DM1/DM6
19	11.05.2015	TUTORIAL - 2		1	DM1/DM6
20	12.05.2015	BLOW FISH		1	DM1/DM6
21	13.05.2015	BLOW FISH		1	DM1/DM6
22	14.05.2015	SAFER		1	DM1/DM6
23	15.05.2015	RC5		1	DM1/DM6
24	16.05.2015	CRAB		1	DM1/DM6
25	01.06.2015	TUTORIAL - 3		1	DM1/DM6
26	02.06.2015	DES		1	DM1/DM6
27	03.06.2015	DES		1	DM1/DM6
28	04.06.2015	NEW DES		1	DM1/DM6
29	05.06.2015	Theory of Block Cipher Design		1	
30	08.06.2015	Theory of Block Cipher Design		1	
<b>UNIT - III</b>					
31	09.06.2015	Key Lengths		1	DM1
32	10.06.2015	Generating Keys		1	DM1
33	11.06.2015	Transferring		1	DM1
34	12.06.2015	Verification		1	DM2
35	18.06.2015	Updating		1	DM1
36	19.06.2015	Storing , Backup		1	DM1
37	22.06.2015	TUTORIAL – 4		1	DM1
38	23.06.2015	Compromised		1	DM1
39	24.06.2015	Lifetime		1	DM1
40	25.06.2015	Destroying Keys		1	DM1

41	26.06.2015	Key Exchange Protocols		1	DM1
42	29.06.2015	Secure Multiparty Communication		1	DM1
43	30.06.2015	Public Key Management		1	DM2
44	01.07.2015	Authentication		1	DM2
45	02.07.2015	Formal Analysis of Authentication		1	DM2
46	03.07.2015	Digital Signature, DSA		1	DM2
47	06.07.2015	TUTORIAL - 5		1	DM2
48	07.07.2015	DSA Variants		1	DM2
49	08.07.2015	One Schnorr Shamir DS		1	DM2
50	09.07.2015	Esign		1	DM2
<b>UNIT – IV</b>					
51	10.07.2015	IP Security Architecture		1	DM1
52	13.07.2015	Authentication Header		1	DM1
53	14.07.2015	Encapsulating Security Payload		1	DM1
54	15.07.2015	Encapsulating Security Payload		1	DM1
55	16.07.2015	Key Management Issues		1	DM1
56	17.07.2015	Key Management Issues		1	DM2
57	20.07.2015	Web Security, Web Security Requirements		1	DM1
58	21.07.2015	TUTORIAL - 6		1	DM1/DM6
59	22.07.2015	Secure Socket Layer		1	DM1/DM6
60	23.07.2015	Secure Socket Layer		1	DM1/DM6
61	24.07.2015	Transport Layer Security		1	DM1/DM6
62	27.07.2015	Secure Electronic Transaction		1	DM1/DM6
63	28.07.2015	Secure Electronic Transaction		1	DM1/DM6
<b>UNIT – V</b>					
64	29.07.2015	Introduction to Email Security		1	DM1/DM6
65	30.07.2015	PGP		1	DM1/DM6
66	31.07.2015	PGP		1	DM1/DM6
67	03.08.2015	SNMP		1	DM1
68	04.08.2015	SMIME		1	DM1
69	05.08.2015	SMIME		1	DM1
70	06.08.2015	TUTORIAL - 7		1	DM1
71	07.08.2015	Intruders		1	DM1
72	10.08.2015	Intruders		1	DM1
73	11.08.2015	Viruses		1	DM1
74	12.08.2015	Related Threats		1	DM1
75	13.08.2015	Firewalls		1	DM1
76	14.08.2015	Firewalls Design Principles		1	DM2
77	17.08.2015	PREVIOUS PAPERS DISCUSSION		1	DM1
78	18.08.2015	REVISION		1	DM2
79	19.08.2015	REVISION		1	DM1
<b>TOTAL</b>					
Total number of classes required to complete the syllabus				76	
Total number of classes available as per Schedule				79	

**NOTE: DELIVERY METHODS :DM1:** Lecture interspersed with discussions/BB, **DM2:** Tutorial, **DM3:** Lecture with a quiz, **DM4:** Assignment/Test, **DM5:** Demonstration ( laboratory, field visit ), **DM6:** Presentations/PPT

At the End of the course, students attained the **Course Outcomes:CO1,CO2,CO3,CO4,CO5**& sample proofs are enclosed in Course file.

<b>Signature</b>			
	<b>Name of the Faculty</b>	<b>Name of Course Co-ordinator</b>	<b>HOD</b>
	K SUNDEEP SARADHI		Dr. B.VIJAYA BABU



## LESSON PLAN

**Course Code& Course Name:** MTCS203 & SOFT SOMPUTING  
**Programme:** M.TECH

**SEM:** II  
**Department:**CSE

**Faculty Name** : M.SRI BALA, ASSIST. PROFESSOR

**Subject Name** : SOFT COMPUTING **Code** : MTCS203

**Year** : 2015-2016 **Semester** : II

**Degree** : M.Tech **Programme** : C.S.E

### COURSE EDUCATIONAL OBJECTIVES

1. This course is used to provide better understanding of uncertainty and evidence and techniques to resolve uncertainty, fuzzy logic, fuzzy operations and Bayesian networks and how dempster rule how it works etc.
2. This gives a clear view of learning types like automated learning, supervised and unsupervised learning and how they are implemented.
3. This course gives better understanding of artificial neural networks how supervised learning and fuzzy logic is implemented on it.
4. It gives a clear view of neuro fuzzy systems, back propagation networks and various applications of genetic algorithms.
5. It provides a clear view of various features of genetic algorithms, how fuzzy is implemented in genetic algorithms and different application domains of GAs.

### COURSE OUTCOMES:

After the completion of the course, students should be able to,

**CO1:** Ability to understand uncertainty and techniques to solve it using fuzzy logic, dempster rule and Bayesian networks.

**CO2:** Ability to understand learning and types of learning and how they can be implemented.

**CO3:** Students able to know about artificial neural networks and how supervised learning and fuzzy logic can be implemented using it.

**CO4:** Student can understand neuro fuzzy systems and back propagation neural networks.

**CO5:** 5. He can able to know features of genetic algorithms and various application domains of them.



**LESSON PLAN**

**Course Code& Course Name: MTCS203 & SOFT SOMPUTING**  
**Programme: M.TECH**

**SEM: II**  
**Department:CSE**

S No.	Tentative Date	Topics to be covered	Actual Date	Num. of classes	Content Delivery Methods
<b>UNIT-I:Introduction</b>					
1.	8/3/2016	Uncertainty and evidence		1	DM1,DM1
2.	9/3/2016	Shafer and dempster theory		1	DM1
3.	10/3/2016	Possibility theory		1	DM1
4.	11/3/2016	Dempster rule		1	DM1
5.	14/3/2016	Random sets		1	DM1
6.	15/3/2016	Mass assignments		1	DM1
7.	16/3/2016	Fuzzy logic implementation		1	DM1
8.	17/3/2016	<b>TUTORIAL-1</b>		1	DM2
9.	18/3/2016	Fuzzy measures		1	DM1,DM1
10.	21/3/2016	Fuzzy aggregation operators		1	DM1
11.	22/3/2016	Fuzzy aggregation operators		1	DM1
12.	23/3/2016	Fuzzy logic implementation		1	DM1
13.	24/3/2016	<b>TUTORIAL-2</b>		1	DM2
14.	28/3/2016	Bayesian networks		1	DM1
15.	29/3/2016	Bayesian networks		1	DM1
16.	30/3/2016	Graphical methods		1	DM1
17.	31/3/2016	<b>Test-1</b>		1	DM4
<b>UNIT-II:AUTOMATED LEARNING 1 AND 2</b>					
18	1/4/2016	Introduction to automated Learning		1	DM1
19	4/4/2016	Supervised learning and methods examples		1	DM1
20	5/4/2016	UnSupervised learning and methods examples		1	DM1
21	6/4/2016	<b>TUTORIAL-3</b>		1	DM2
22	7/4/2016	Supervised learning		1	DM1
23	11/4/2016	Unsupervised learning		1	DM1
24	12/4/2016	Decision tree induction in supervised learning		1	DM1
25	13/4/2016	Decision tree induction		1	DM1
26	14/4/2016	Rule induction algorithms		1	DM1
27	18/4/2016	Rule induction algorithms		1	DM1
28	19/4/2016	Bayesian networking learning algorithms		1	DM1





## LESSON PLAN

**Course Code& Course Name: MTCS203 & SOFT SOMPUTING**

**SEM: II**

**Programme: M.TECH**

**Department:CSE**

29	20/4/2016	Bayesian networking learning algorithms examples and methods		1	DM2
30	21/4/2016	Evolutionary algorithms		1	DM1
31	21/4/2016	Evolutionary algorithms methods and examples		1	DM1
32	22/4/2016	<b>TUTORIAL-4</b>		1	DM1
33	22/4/2016	<b>Test&amp; Quiz</b>		1	DM3,DM4
<b>25-04-2016 TO 30-04-2016 IST MID EXAMINATIONS</b>					
<b>UNIT-III:NEURAL NETWORKS AND FUZZY METHODS</b>					
34	2/5/2016	Introduction to neural networks		1	DM1
35	3/5/2016	Adaptive networks		1	DM1
36	4/5/2016	Supervised learning NN		1	DM1
37	5/5/2016	Reinforcement learning		1	DM1
38	6/5/2016	Unsupervised learning		1	DM1
39	9/5/2016	<b>TUTORIAL-5</b>		1	DM2
40	10/5/2016	Unsupervised learning		1	DM1
41	11/5/2016	Fuzzy set theory		1	DM1
42	12/5/2016	Fuzzy set theory		1	DM1
43	13/5/2016	Fuzzy control		1	DM1
44	14/5/2016	<b>TUTORIAL-6</b>		1	DM2
45	6/6/2016	Fuzzy decision trees		1	DM1
46	7/6/2016	<b>Assignment</b>		1	DM4
<b>UNIT-IV: HYBRID SYSTEMS</b>					
47	8/6/2016	Introduction to hybrid systems		1	DM1
48	9/6/2016	Neuro fuzzy systems		1	DM1
49	10/6/2016	Neuro fuzzy systems		1	DM1
50	13/6/2016	Bach propagation networks		1	DM1
51	14/6/2016	Bach propagation networks supported by fuzzy		1	DM1
52	15/6/2016	Bach propagation networks supported by fuzzy		1	DM1
53	16/6/2016	<b>TUTORIAL-7</b>		1	DM2
54	17/6/2016	Genetic algorithms		1	DM1
55	20/6/2016	GA based weight determination applications		1	DM1
56	21/6/2016	GA based weight determination		1	DM1



**LESSON PLAN**

**Course Code& Course Name: MTCS203 & SOFT SOMPUTING**

**SEM: II**

**Programme: M.TECH**

**Department:CSE**

		applications			
57	22/6/2016	<b>Assignment &amp; Quiz</b>		1	DM1
<b>UNIT-V: GENETIC ALGORITHMS AND APPLICATIONS</b>					
58	23/6/2016	Encoding ,fitness functions		1	DM1
59	24/6/2016	Reproduction, fuzzy genetic algorithms		1	DM1
60	27/6/2016	Reproduction, fuzzy genetic algorithms		1	DM1
61	28/6/2016	Encoding ,fitness functions		1	DM1
62	29/6/2016	<b>TUTORIAL-8</b>		1	DM2
63	30/6/2016	GA applications and domains		1	DM1
64	1/7/2016	GA applications and practical examples		1	DM1
65	4/7/2016	Applications in medical area		1	DM1
66	5/7/2016	Applications in control systems			
67	6/7/2016	Applications in fuzzy logic control design			
68	7/7/2016	<b>SLIP TEST</b>		1	DM4
69	8/7/2016	<b>Beyond the syllabus:</b> Advanced swarm intelligence systems		1	DM1
70	11/7/2016	Particle swarm optimization algorithm		1	DM1
71	12/7/2016	PSO development		1	DM1
72	13/7/2016	PSO applications		1	DM1
73	14/7/2016	REVISION		1	DM1
74	15/7/2016	REVISION		1	DM1
75	18/7/2016	REVISION		1	DM1
76	19/7/2016	REVISION		1	DM1
77	20/7/2016	REVISION		1	DM1
78	21/7/2016	REVISION		1	DM1
79	22/7/2016	REVISION		1	DM1
80	25/7/2016	II MID EXAM		1	DM4
				<b>Total</b>	80
				<b>Total number of classes required to complete the syllabus</b>	<b>68</b>
				<b>Total number of classes available as per Schedule</b>	<b>80</b>

**NOTE: DELIVERY METHODS :**DM1: Lecture interspersed with discussions/BB, **DM2:** Tutorial, **DM3:** Lecture with a quiz, **DM4:** Assignment/Test, **DM5:** Demonstration ( laboratory, field visit ), **DM6:** Presentations/PPTAt the End of the course, students attained the **Course Outcomes:CO1,CO2,CO3,CO4,CO5**& sample proofs are enclosed in Course file.

<b>Signature</b>			
	<b>Name of the Faculty</b>	<b>Name of Course Co-ordinator</b>	<b>HOD</b>
	M.Sri Bala	M.Sri Bala	Dr.N.Ravi shankar



## LESSON PLAN

**Course Code& Course Name:** MTCS203 & SOFT SOMPUTING  
**Programme:** M.TECH

**SEM:** II  
**Department:**CSE