SWARNANDHRA
COLLEGE OF ENGINEEERIN G AND TECHNOLGY
(AUTONOMOUS)

SEETHARAMPURAM, NARSAPUR-534280, WG- DT, AP

DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

TEACHING PLAN

02/01/2024

Course Code	Course Title	Year / Sem	Branch	Contact Hr/ week	Academic Year	Date of Commencement of Semester
20MC4TE6	Big Data Analytics	II/II	MCA	6	2023-24	02-01-2024

COURSE OUTCOMES: Upon the successful completion of this course the student will be able to

1. Implement Data Structures using JAVA (K4)
2. Analyzing GFS and HDFS Architecture (K3)
3. Develop Map Reduce Programs (K4)
4. Understand Writables (K2)
5. Develop PIG and HIVE Data Models (K4)

Week. NO	OUTOCME	Blooms Level	TOPIC/ACTIVITY		Text Books	Contact HOURS	Delivery Method
1 2 3	Implement Data Structures using Java	K4	**UNIT-I**				Chalk & Board, PPT Programming Demonstration
			1.1	Linked Lists	T1	2	
			1.2	Stacks, Queues	T1	2	
			1.3	Sets, Maps	T1	2	
			1.4	Generic Classes	T1	2	
			1.5	Type Parameters	T1	1	
			1.6	Implementing Generic Types	T1	1	
			1.7	Generic Methods	T1	2	
			1.8	Wrapper Classes	T1	1	
			1.9	Concept of Serialization	T1	2	

			UNIT – II				Chalk & Board PPT, Video Demonstration
4 5 6	Analyzing GFS and HDFS Architecture	K2	2.1	Google File System	T2	2	
			2.2	Hadoop Distributed File System	T2	2	
			2.3	Building Blocks of Hadoop	T2	2	
			2.4	Introducing and Configuring Hadoop Cluster	T2	2	
			2.5	Configuring XML files	T2	2	
			UNIT – III				Chalk & Board Programming Examples
7 8 9	Develop Map Reduce Programs	K4	3.1	Weather Dataset	T2	1	
			3.2	Understanding Hadoop API for Map Reduce Framework	T2	2	
			3.3	Driver Code	T2,T3	1	
			Mid I Exam				
			3.4	Mapper Code	T2,T3	2	
			3.5	Reducer Code	T2,T3	2	
			3.6	Record Reader	T2,T3	1	
			3.7	Combiner	T2,T3	1	
			3.8	Partitioner	T2,T3	2	
			UNIT – IV				Chalk & Board PPT, Programming Examples
10 11 12	Understand Writables	K3	4.1	The Writable Interface	T2	1	
			4.2	Writable Comparable and comparators Unions	T2	1	
			4.3	Writable Classes	T2	1	
			4.4	Writable wrappers for Java primitives	T2	1	
			4.5	Text, Bytes Writable	T2	1	
			4.6	Null Writable	T2	1	
			4.7	Object Writable and Generic Writable	T2	1	
			4.8	Writable Collections	T2	1	
			4.9	Implementing a custom Writable	T2	1	
			4.10	Implementing Raw Comparator	T2	1	
			4.11	Custom Comparators	T2	1	
			UNIT – V				Chalk &
13	Develop PIG and HIVE	K5	5.1	Pig Architecture	T3	1	

14	Data Models		5.2	Pig Latin Application flow	T3	1	Board PPT Programming Demonstration
			5.3	ABCs of Pig Latin	T3	1	
			5.4	Evaluating Local mode of running Pig Scripts	T3	1	
			5.5	Evaluating Distributed mode of running Pig Scripts	T3	1	
			5.6	Checking out the Pig Scripts Interface	T3	1	
			5.7	Scripting with Pig Latin	T3	1	
			5.8	Applying Structures to Hadoop Data	T2	1	
			5.9	Saying Hello to Hive	T2	1	
			5.10	Seeing how the Hive is put together	T2	1	
			5.11	Getting started with Apache Hive	T2	1	
			5.12	Examining the Hive Clients	T2	1	
			5.13	Working with Hive Data types	T2	1	
			5.14	Creating and Managing Databases and tables	T2	1	
			5.15	Seeing how the Hive Data manipulation language works	T2	1	
			5.16	Querying and analyzing data	T2	1	
18			**MID EXAM 2**				
			TOTAL CLASSES			65	

Recommended Text Books for Reading:

1. Cay Horstmann, Big Java 4th Edition Wiley John Wiley & Sons, INC, 2017
2. White, 3rdHadoop: The Definitive Guide by Tom Edition, O'reilly, 2017
3. Chuck Lam, Hadoop in Action MANNING Publ, 2016
4. Dirk deRoos, Paul C.Zikopoulos, Roman B.Melnyk,Bruce Brown, Hadoop for Dummies Rafael Coss, 2016

Reference Text Books:

1. Alex Holmes, Hadoop in Practice MANNING Publ, 2012
2. SrinathPerera, ThilinaGunarathne Hadoop MapReduce Cookbook, 2013

Software Links

1. Hadoop:http://hadoop.apache.org/
2. Hive: https://cwiki.apache.org/confluence/display/Hive/Home
3. Piglatin: http://pig.apache.org/docs/r0.7.0/tutorial.html

Faculty | Head of the Department | Principal