ST. THOMAS COLLEGE OF ARTS AND SCIENCE

Lesson Plan for the Odd Semester 2022-2023

Name of the Assistant Professor: Dr. C. UMAMAHESWARI
Department : CS with DS
Class and Section: I B.Sc(Cs With Ds)
Shift : I

Subject: INTRODUCTION TO DATA SCIENCE
Sub Code :

Week	Date	Topics
1	18-Jul-22	
	19-Jul-22	
	20-Jul-22	
	21-Jul-22	
	22-Jul-22	
	23-Jul-22	
	24-Jul-22	Sunday
2	25-Jul-22	
	26-Jul-22	
	27-Jul-22	
	28-Jul-22	
	29-Jul-22	
	30-Jul-22	
	31-Jul-22	Sunday

Week	Date	Topics
1	1-Aug-22	
	2-Aug-22	
	3-Aug-22	
	4-Aug-22	
	5-Aug-22	
	6-Aug-22	
	7-Aug-22	Sunday
2	8-Aug-22	
	9-Aug-22	Muharam

	10-Aug-22	
	11-Aug-22	
	12-Aug-22	
	13-Aug-22	Introduction to Computer Science, Basic concepts of Computer
	14-Aug-22	Sunday
	15-Aug-22	Independence Day
3	16-Aug-22	Introduction to Computer Science, Basic concepts of Computer
	17-Aug-22	Introduction to Data Science
	18-Aug-22	Introduction to Big Data
	19-Aug-22	Krishna Jayanthi
	20-Aug-22	Holiday
	21-Aug-22	Sunday
4	22-Aug-22	Data Types: Understanding data
	23-Aug-22	Types of data, Data Evaluation
	24-Aug-22	Types of data, Data Evaluation
	25-Aug-22	Data Sources
	26-Aug-22	Preparing and Gathering data
	27-Aug-22	Preparing and Gathering data
	28-Aug-22	Sunday
5	29-Aug-22	Assessment Test - I
	30-Aug-22	Assessment Test - I
	31-Aug-22	Vinayakar Chaturthi

Week	Date	Topics
1	1-Sep-22	Assessment Test - I
	2-Sep-22	Assessment Test - I
	3-Sep-22	Assessment Test - I

	4-Sep-22	Sunday
2	5-Sep-22	Teacher's Day
	6-Sep-22	Introduction to Digital Data
	7-Sep-22	Digital Data
	8-Sep-22	Onam
	9-Sep-22	Introduction to Big Data
	10-Sep-22	Sources of Big Data
	11-Sep-22	Sunday
3	12-Sep-22	Characteristics of Big Data
	13-Sep-22	Python fundamentals
	14-Sep-22	Python program execution environment
	15-Sep-22	Python Statements
	16-Sep-22	Expressions, Flow of Control statements
	17-Sep-22	Holiday
	18-Sep-22	Sunday
5	19-Sep-22	Editing and executing Programs involving Flow Controls.
	20-Sep-22	Functions, Scope of Variables.
	21-Sep-22	Editing and executing Programs involving Functions.
	22-Sep-22	Special Data Formats - List - List Methods
	23-Sep-22	Tuples - Tuple Methods, Arrays - Dictionaries
	24-Sep-22	Holiday
	25-Sep-22	Sunday
6	26-Sep-22	Sets - Related Methods
	27-Sep-22	Assessment Test - II
	28-Sep-22	Assessment Test - II
	29-Sep-22	Assessment Test - II
	30-Sep-22	Assessment Test - II

Week	Date	Topics
1	1-Oct-22	Assessment Test - II
	2-Oct-22	Sunday- Gandhi Jayanthi
2	3-Oct-22	String - String Processing Methods
	4-Oct-22	Ayutha Pooja
	5-Oct-22	Vijaya Dasami
	6-Oct-22	Program in String Manipulations
	7-Oct-22	Program involving Creating and manipulating a Tuple.List,Dictionary
	8-Oct-22	Holiday
	9-Oct-22	Sunday-Milad-Un-Nabi
3	10-Oct-22	Program involving Object Creation and Usage
	11-Oct-22	Program involving Inheritance
	12-Oct-22	Program involving Creating and manipulating a List Program involving Creating and manipulating a Dictionary
	13-Oct-22	Numpy and Pandas - Features of Numpy
	14-Oct-22	Mathematical functions - Statistical functions
	15-Oct-22	nd-Arrays - Features of Pandas
	16-Oct-22	Sunday.
4	17-Oct-22	Series data structure
	18-Oct-22	Data frames - creation and manipulation of data frames
	19-Oct-22	Data frames - creation and manipulation of data frames
	20-Oct-22	Program involving Object Creation and Usage Program involving Inheritance
	21-Oct-22	Program involving Overloading
	22-Oct-22	Holiday
	23-Oct-22	Sunday.
5	24-Oct-22	Deepavali
	25-Oct-22	Reading and Writing with Text Files and Binary Files Combining and Merging Data Sets

	26-Oct-22	Program involving Regular Expressions Data Aggregation and GroupWise Operations
	27-Oct-22	Data Visualization
	28-Oct-22	Matplotlib package
	29-Oct-22	Plotting graphs, legends, colors ,labels
	30-Oct-22	Sunday
6	31-Oct-22	seaborn

Week	Date	Topics
1	1-Nov-22	Package: plotly
	2-Nov -22	Dash packages
	3-Nov-22	REVISION
	4-Nov-22	**REVISION**
	5-Nov-22	**REVISION**
	6-Nov-22	**Sunday**
2	7-Nov-22	**Model Examination**
	8-Nov-22	**Model Examination**
	9-Nov-22	**Model Examination**
	10-Nov-22	**Model Examination**
	11-Nov-22	**Model Examination**
	12-Nov-22	**Holiday**
	13-Nov-22	**Sunday**

Course Objectives:

1. Provide a strong foundation for data science and application areas related to it.
2. Understand the underlying core concepts and emerging technologies in data science.
3. Learn the process of working with data on large scale.
4. Explore the concepts of Data Processing.
5. Learn basic concepts of Machine Learning.
6. Prepare students for advanced courses in Data Science.

Course Outcomes:

Upon completion of this course students will have:

1. Understand the fundamental concepts of data science.
2. Evaluate the data analysis techniques for applications handling large data and demonstrate the data science process.
3. Understand the concept of machine learning used in the data science process.
4. Visualize and present the inference using various tools.
5. Learn to think through the ethics surrounding privacy, data sharing.

Modes of Content Delivery:

1.ClassRoom/Lab Teaching	✓
2. Online Resources	✓
3. Slides	✓
4. Expert Lecture	✓
5. Group Discussion	✓
6. Seminar	✓
7. Case Study	

01/08/22
Subject in charge

01/08/22
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