	BCA Sem : I , III , V													
	PO's		PO's Statement											
	PO1		BCA offers the pre-qualification for professionals heading for a smart career in the IT field, which measures up to international standards.											
	PO2		This program provides the ability to analyze, design and code the software systems.											
	PO3		An ability to understand the concepts of logic development, best software practices used in industry.											
	PO4		An ability to understand and apply knowledge of content management system mobile computing, computer game designing and cloud in the field of software development											

Sem	T Code	Course Code	Course Name	Credit	Core/Speci	Faculty Name	CO's	CO Statement	CO Target	CO	PO1	PO2	PO3	PO4
Sem I	T3586	301240101	Web Technologies	4		Dr.Priti Kulkarni	CO1	To explain the concepts of Web technologies	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M
							CO2	To create web pages using HTML	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H
							CO3	To make use of CSS in designing Web Pages	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M
							CO4	To make use of JavaScript	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	To understand various event handling using HTML, CSS and JavaScript	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO6	To validate user input using JavaScript	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M
							CO7	To apply knowledge of HTML, CSS and JavaScript in web applications	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M
Sem I	T3593	301240102	Computational Thinki	4		Dr. Rajeshree Jain	CO1	to explain the components of a computer	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO2	To understand the significance of Instruction cycle	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO3	to explain the characteristics of low level and high level programming	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M
							CO4	to explain computer codes and represent data in different number	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	to implement algorithms and flowcharts	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M
							CO6	to describe the concept of logical and computational thinking	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M
							CO7	to explain file reading and writing	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M
Sem I	T6547	301240103	Communication Skills	3		Ms.Surashree Joshi	CO1	To be able to communicate effectively and eloquently in English in	60	Global	Strong-H	Moderate-M	Weak-L	Weak-L
							CO2	To be able to make organised and impressive presentations.	60	Global	Moderate-M	Weak-L	Weak-L	Weak-L
							CO3	To have excellent reading comprehension skills with the use of strategies	60	Global	Moderate-M	Weak-L	Weak-L	Weak-L
							CO4	To enhance writing skills by using socially appropriate discourse	60	Global	Moderate-M	Moderate-M	Weak-L	Weak-L
							CO5	To be able to apply active listening and note taking in a variety of social	60	Global	Strong-H	Weak-L	Weak-L	Weak-L
Sem I	TE7556	301240104	Introduction to Python	3		Dr.Sachin Naik	CO1	To understand basics of Python and basic programming features	60	Global	Strong-H	Weak-L	Moderate-M	Weak-L
							CO2	To understand Control Structured	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
							CO3	To make use of functions and modules	60	Global	Moderate-M	Weak-L	Strong-H	Weak-L
							CO4	To understand and analyse the lists, strings and dictionary in Python	60	Global	Weak-L	Weak-L	Weak-L	Strong-H
							CO5	To implement the control constructs and lists in various applications	60	Global	Weak-L	Moderate-M	Weak-L	Weak-L
Sem I	TH4521	301240105	Yoga and Mental Heal	3		Ms.Ramandeep Kaur / N	CO1	Understand the concept of holistic health and mental wellbeing	60	Global	Moderate-M	Weak-L	Weak-L	Weak-L
							CO2	To identify measures to improve and incorporate wellness	60	Global	Moderate-M	Weak-L	Weak-L	Weak-L
							CO3	To apply basic mindfulness and yogic practices for enhancing inner	60	Global	Moderate-M	Weak-L	Weak-L	Weak-L
							CO4	To develop an understanding of the meaning and concept of mental	60	Global	Weak-L	Weak-L	Weak-L	Weak-L
							CO5	To identify the role of yoga in stress management and life management.	60	Global	Moderate-M	Weak-L	Weak-L	Weak-L
							CO6	To implement the yogic practices for physical and mental health	60	Global	Moderate-M	Weak-L	Weak-L	Weak-L
Sem I	T4005	301240106	Integrated Disaster Ma	0		SCHC	CO1	To enable student understand various types of disasters, its preparedness	60	Global	Strong-H	Moderate-M	Weak-L	Weak-L
							CO2	To instill knowledge on reducing disasters and capacity building through	60	Global	Weak-L	Weak-L	Moderate-M	Moderate-M
							CO3	To train students to perform First aid and CPR in an emergency..	60	Global	Moderate-M	Weak-L	Weak-L	Moderate-M
Sem III	T3202	301210301	Object Oriented Progr	4	Specialisation	Dr. Shrikant Mapari	CO1	To describe the fundamental concepts of object oriented programming	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M
							CO2	To implement the object oriented concepts in java	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M
							CO3	To explain the concept of exception handling in java	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO4	To understand how to read and write files in java	60	Global	Moderate-M	Moderate-M	Strong-H	Weak-L
							CO5	To learn how to design Graphical User Interface (GUI) with Java swing	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
							CO6	To understand the multithreading concept in Java	60	Global	Weak-L	Moderate-M	Moderate-M	Weak-L
							CO7	To learn the database connectivity	60	Global	Weak-L	Moderate-M	Moderate-M	Weak-L
Sem III	T3688	301210302	Advance Data Structu	4	Specialisation	Ms.Pooja Nawani	CO1	Students will be able to understand various tree data structures such as	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
							CO2	Students will be able to understand basics of graph theory	60	Global	Strong-H	Moderate-M	Moderate-M	Strong-H
							CO3	Students will be able to understand searching and sorting methods	60	Global	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO4	Students will be able to understand performance of algorithms with	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO5	Students will be able to understand different algorithm strategies	60	Global	Strong-H	Moderate-M	Moderate-M	Strong-H
							CO6	Students will be able to develop algorithms as per the requirement	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M
							CO7	Students will be able perform the algorithm in python	60	Global	Strong-H	Strong-H	Moderate-M	Strong-H
Sem III	T3608	301210303	Software Testing	4	Specialisation	Mr.Satyajit Wale	CO1	Students will be able to write software qulity assurance plan	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
							CO2	Student will able to perform unit, integration, and system testing on the project developed in SEP course	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
							CO3	Students will be able to use testing tools on developed project	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
							CO4	Students will be adopt ISO 9126 standard for asessing the quality of developed product	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
							CO5	Students will able to identify and manage the defects in software.	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
							CO6	Student will able to understand Defect life cycle and its phases.	60	Global	Moderate-M	Strong-H	Moderate-M	Weak-L
							CO7	Student will able to understand Defect Priority, Defect Severity and the	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
Sem III	T3693	301210304	Web Development usi	4	Specialisation	Ms.Vrushali Kulkarni	CO1	To install and configure the framework	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
							CO2	To use templates, filters and tags	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M
							CO3	To create models and connect with templates and views in a database	60	Global	Moderate-M	Weak-L	Strong-H	Moderate-M
							CO4	To customize the django administration	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H
							CO5	To implement user permissions with sessions and cookies	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
							CO6	To deal with security issues	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M
							CO7	To design and validate forms in Flask	60	Global	Weak-L	Strong-H	Weak-L	Moderate-M

Sem	Code	Course Code	Course Name	Cr	Type	Faculty	CO	CO Description	Hrs	Scope	M1	M2	M3	M4
Sem III	T3487	301210305	Network Security Ess	4	Specialisation	Dr. Amol Vibhute	CO1	The students will be able to explain the basics of Network Security	60	Global	Moderate-M	Strong-H	Weak-L	Moderate-M
							CO2	The students will understand various types of cryptographic algorithms	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H
							CO3	The students will learn about various Internet Protocols and security	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
							CO4	The students will understand various network defence tools like	60	Global	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO5	The students will learn about encryption based network security	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
							CO6	The students will learn about wireless communication and WLAN	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO7	The students will understand network security applications including	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO8	Students will learn about mobile communication, security of mobile	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H
Sem III	T3016	301210306	PHP	2	Specialisation	Ms. Janhavi Pednekar	CO1	Students will be able to understand execution process of a server-side	60	Global	Moderate-M	Moderate-M	Weak-L	Weak-L
							CO2	Students will be able to use operators, conditional and loop statements in	60	Global	Moderate-M	Moderate-M	Strong-H	Weak-L
							CO3	Students will be able to define and use user-defined functions	60	Global	Moderate-M	Strong-H	Moderate-M	Weak-L
							CO4	Students will be able to understand concept of arrays and array types	60	Global	Moderate-M	Strong-H	Moderate-M	Weak-L
							CO5	Students will be able to use array functions, date/time functions and	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M
							CO6	Students will be able to establish PHP-database connectivity and	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M
							CO7	Students will be able to use sessions and cookies	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M
Sem III	T2883	301210307	Core Environmental S	Letter Gr	Specialisation	Mr. Shashikant Nehul	CO1	Natural Resources and its importance	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
							CO2	Resource Depletion and probable steps to recover	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO3	Funadamental concept of ecology and ecosystem	60	Global	Moderate-M	Strong-H	Weak-L	Moderate-M
							CO4	Biodiversity and its importance	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	Threats to biodiversity and protection mesuares	60	Global	Moderate-M	Weak-L	Moderate-M	Moderate-M
Sem III	TE7265	301210308	Introduction to Data S	3	Specialisation	Ms.Hema Gaikwad	CO1	Students will be able to understand the importance of data	60	Global	Strong-H	Moderate-M	Moderate-M	Weak-L
							CO2	Students will be able to understand the applications of EDA for any	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO3	Students will be able to understand and apply data visualization,NLP	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO4	Students will be able to understand the data science process and ethics	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M
							CO5	Students will be able to understand the Machine Learning algorithms.	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M
Sem III	TE7538	301210309	Statistics for Data Sci	3	Specialisation	Dr. Shilpa Mujumdar	CO1	Students will be able to describe a set of data using appropriate	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
							CO2	Students will be able to understand Calculate measures of dispersion and	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
							CO3	Students will be able to understand and Calculate coefficient of	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
							CO4	Students will be able to figure out the linear regression equation for	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
							CO5	Students will be able to define the sampling distribution , its types and,	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
							CO6	Students will be able to apply a hypothesis tests , the z-test and t-test and	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
Sem III	T7473	301210310	Artificial Intelligence	3	Specialisation	Mr.Aniruddha Kshirsag	CO1	Students will be able to describe Introduction to Artificial Intelligence	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M
							CO2	Problem soving techniques in AI	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO3	Knowledge Representation using Predicate Logic	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H
							CO4	Knowledge Representation using Non-monotonic Logic	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M
							CO5	Planning used in AI	60	Global	Strong-H	Strong-H	Moderate-M	Strong-H
							CO6	Neural Networks	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO7	Natural Language Processing	60	Global	Strong-H	Strong-H	Moderate-M	Strong-H
							CO8	Expert system	60	Global	Strong-H	Moderate-M	Moderate-M	Strong-H
Sem III	T7529	301210311	Machine Learning	3	Specialisation	Ms.Rasila Walhekar	CO1	Understand what Machine Learning, Goals, Importance, Associations	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M
							CO2	Supervised, Unsupervised, SemiSupervised machine learning	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M
							CO3	Concept Learning, Dimensionality,	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M
							CO4	Classifications ,Inductive Classification	60	Global	Strong-H	Strong-H	Moderate-M	Weak-L
							CO5	Decision Trees , Evaluation of Learning Algorithms	60	Global	Strong-H	Strong-H	Weak-L	Weak-L
							CO6	Linear Models, Artificial Neural Netwroks	60	Global	Strong-H	Strong-H	Weak-L	Weak-L
							CO7	Bayesian Theory, support Vector Machines	60	Global	Strong-H	Strong-H	Weak-L	Weak-L
Sem III	TE7249	301210312	Cloud Computing Plat	3	Specialisation	Mr.Amod Gokhale	CO1	Overview of Microsoft Azure	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
							CO2	Azure Management Tools	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
							CO3	Virtual Machines in Azure	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
							CO4	Web Apps and cloud Services	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
							CO5	Creating and configuring virtual networks	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
							CO6	Cloud Storage	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
							CO7	Microsoft Azure Databases	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
Sem III	T3730	301210313	Fog Computing	3	Specialisation	Dr. Shrikant Mapari	CO1	To understand the concepts of Fog	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M
							CO2	To Understand the architecture working of components and its	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M
							CO3	To study the protocols in Fog computing.	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO4	To understand the security Aspects.	60	Global	Moderate-M	Moderate-M	Weak-L	Moderate-M
							CO5	To understand Data management with respect to fog computing.	60	Global	Weak-L	Strong-H	Moderate-M	Moderate-M
							CO6	To understand role of fog computing in the various applications.	60	Global	Weak-L	Weak-L	Moderate-M	Weak-L
Sem III	TE7020	301210314	Wireless Sensor Netw	4		Mr.Satyajit Wale	CO1	Analyze the Design Principles of Wireless Sensor Networks (WSN).	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
							CO2	Examine various routing protocols in WSN.	60	Global	Moderate-M	Weak-L	Strong-H	Weak-L
							CO3	Evaluate IEEE 802.15.4 and ZigBee technologies.	60	Global	Moderate-M	Weak-L	Moderate-M	Weak-L
							CO4	Analyze Clustering in WSN.	60	Global	Moderate-M	Weak-L	Weak-L	Weak-L
							CO5	Investigate Localization techniques in WSN.	60	Global	Moderate-M	Weak-L	Moderate-M	Weak-L
							CO6	Evaluate Coverage Strategies and Energy Harvesting in WSN.	60	Global	Moderate-M	Moderate-M	Weak-L	Weak-L
							CO7	Examine the security challenges and solutions in WSN.	60	Global	Moderate-M	Moderate-M	Weak-L	Weak-L
Sem III	T3220	301210315	Information Security	2		Dr. Parag Kaveri	CO1	To understand the basics needs Security along with Information Security	60	Global	Strong-H	Moderate-M	Weak-L	Weak-L
							CO2	To know the legal, ethical and professional issues in Information	60	Global	Moderate-M	Moderate-M	Weak-L	Weak-L
							CO3	To know the importance of risk management and assessment	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M
							CO4	To study various standards in this area of Information Security	60	Global	Moderate-M	Strong-H	Strong-H	Weak-L
							CO5	To understand the technological aspects of Information Security	60	Global	Strong-H	Strong-H	Moderate-M	Weak-L
5	T3608	0301210501	Software Testing	4	Core	Ms. Kirti Pimpale	CO1	Students will be able to understand fundamantal of Software Testing and	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H
5							CO2	Students will be able to understand different levels of testing, various	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H
5							CO3	Students will be able to apply various testing techniques on different	60	Global	Moderate-M	Strong-H	Moderate-M	Strong-H
5							CO4	Students will be able to understand detail of levels of testing and various	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M
5							CO5	Students will be able to understand different testing tools and	60	Global	Strong-H	Strong-H	Moderate-M	Strong-H
5	T1234	0301210502	Information Technolog	2	Core	Ms.KanchanGauri Joshi	CO1	Students will be able to understand legal terms, hierarchy of courts,	60	Global	Strong-H	Moderate-M	Moderate-M	Strong-H
5							CO2	Students will be able to understand cyber crimes, PKI, digital certificate,	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M
5							CO3	Students will be able to understand and apply applicable sections of the	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
5							CO4	Students will be able to understand the legal and policy problems that	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M

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5							CO5	Students will be able to assess the legal and policy requirements of	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M
5	T3739	0301210503	Agile Methodologies	2	Core	Mr.Satyajit Wale	CO1	Student should be able to demonstrate an understanding of the Agile	60	Global	Moderate-M	Weak-L	Strong-H	Weak-L
5							CO2	Student should be able to compare traditional software development	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
5							CO3	Student should be able to apply various Agile methodologies to plan,	60	Global	Moderate-M	Strong-H	Weak-L	Weak-L
5							CO4	Student should be able to evaluate the effectiveness of Agile practices	60	Global	Moderate-M	Weak-L	Strong-H	Weak-L
5							CO5	Student should be able to identify and employ relevant metrics and	60	Global	Moderate-M	Weak-L	Strong-H	Weak-L
5							CO6	Student should be able to evaluate the challenges and considerations	60	Global	Moderate-M	Weak-L	Weak-L	Weak-L
5	T3588	0301210504	Game Design	4	Specialisation	Mr.Gaurav Pant	CO1	Understand the concept Game Design	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
5							CO2	Concepts of Game Market and Game Distribution sources	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
5							CO3	To understand of 2D and 3D Graphics used in Game Development	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
5							CO4	Understand the process of creating and handling 3D graphics	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L
5							CO5	Understand basic 3D modeling and Animation	60	Global	Moderate-M	Moderate-M	Strong-H	Weak-L
5							CO6	Understanding the working behind Game engines to develop games	60	Global	Moderate-M	Moderate-M	Strong-H	Weak-L
5							CO7	Design and Develop 3D games using the Game Engine	60	Global	Moderate-M	Moderate-M	Strong-H	Weak-L
5	T3612	0301210505	Data Visualization	4	Specialisation	Mr.Nandkumar Khachan	CO1	To understand the concepts of Data Visualization , Goals, Importance	60	Global	Strong-H	Moderate-M	Moderate-M	Strong-H
5							CO2	To learn the importance of Data analysis, Data Analytics through	60	Global	Moderate-M	Weak-L	Strong-H	Strong-H
5							CO3	To handle the and compute the probabilistic facts through statistics and	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5							CO4	To study and implement theDashboard, charts , Graphs, Pivot Table,	60	Global	Moderate-M	Strong-H	Weak-L	Moderate-M
5							CO5	To formulate the case study of one of the algorithm of Data Mining	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M
5							CO6	To explore the concepts of Jav Script, HTML and CSS	60	Global	Weak-L	Strong-H	Moderate-M	Moderate-M
5							CO7	To develop the one of the case study w.r.t. time series analysis, logistic	60	Global	Strong-H	Moderate-M	Weak-L	Moderate-M
5	T3600	0301210506	Cloud Architectures an	4	Specialisation	Mr.Amod Gokhale	CO1	Overview of Cloud Architecture	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
5							CO2	Overview of Server Architecture	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H
5							CO3	Overview of Data Center Architecture	60	Global	Strong-H	Weak-L	Strong-H	Strong-H
5							CO4	Overview of Virtualized Data Center Architecture	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
5							CO5	Overview of Storage Network Design	60	Global	Strong-H	Weak-L	Weak-L	Strong-H
5							CO6	Overview of Security Concepts	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
5							CO7	Overview of Cloud Computing Security	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
5	T3684	301210507	Advanced Big Data A	3	Specialisation	Ms.Farhana Desai	CO1	Understand Big Data and data modelling	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5							CO2	Big Data Processing using Splunk	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5							CO3	Implementation of Scala in Apache Spark	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5							CO4	Implementation of spark rdd and spark sql operations	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5							CO5	Apply machine learning techniques using MLib	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5							CO6	Understanding streaming and graphs	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5	T3720	301210508	Web Performance Ana	3	Specialisation	Ms. Vaishali Joshi	CO1	Understand Framework Architecture	60	Global	Moderate-M	Weak-L	Weak-L	Moderate-M
5							CO2	Understand the use of web2py and its deployment	60	Global	Moderate-M	Weak-L	Weak-L	Strong-H
5							CO3	How to insert update delete in Django	60	Global	Moderate-M	Weak-L	Weak-L	Moderate-M
5							CO4	How to send emails and upload or download file on server	60	Global	Moderate-M	Weak-L	Moderate-M	Strong-H
5							CO5	Writing a XML file	60	Global	Moderate-M	Weak-L	Weak-L	Moderate-M
5	TE7487	301210509	Deep Learning	3	Specialisation	Aniruddha Ketkar	CO1	Students will be able to identify and define key concepts in Deep	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5							CO2	Students will be able to apply their knowledge to analyze and identify	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5							CO3	Students will be able to Apply intermediate-level knowledge to design	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5							CO4	Students will be able to Analyze and evaluate the impact of optimization	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5							CO5	Students will be able to Evaluate and optimize CNN models using	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M
5	T7573	301210510	Image Processing & P	3	Specialisation	Ms.Monica Apte	CO1	Students should understand the basic fundamental of Image processing ,	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M
5							CO2	Students will be able to understand the Recognition and classification in	60	Global	Strong-H	Strong-H	Strong-H	Strong-H
5							CO3	Students will be able to understand Segmentation, frequency approach,	60	Regional/Nati	Strong-H	Moderate-M	Moderate-M	Moderate-M
5							CO4	Students will be able to understand Segmentation, frequency approach,	60	Global	Strong-H	Moderate-M	Weak-L	Weak-L
5							CO5	Students will be able to understand concept of Grey level features edges	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H
5	T3543	301210511	Virtualization and Sec	3	Specialisation	Mr.Chaitanya Kulkarni	CO1	Students will be able to understand the virtualization technology and its	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M
5							CO2	Students will be able to understand the concepts of information security	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M
5							CO3	Students will be able to understand and identify various types of	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H
5							CO4	Students will be able to understand various technologies used for	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M
5							CO5	Students will be able to understand and use the concepts of automated	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H
5							CO6	Students will be able to assess the legal and policy requirements for	60	Global	Weak-L	Weak-L	Moderate-M	Moderate-M
5	TE7250	301210512	Cloud Environment in	3	Specialisation	Mr.Shashank Gaikwad	CO1	Students will be able to understand the fundamental ideas behind Cloud	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M
5							CO2	Students will be able to understand the basic ideas and principles in data	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M
5							CO3	Students will be able to understand the key concepts of virtualization	60	Global	Strong-H			Strong-H
5							CO4	Students will be able to understand cloud storage technologies and	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M
5							CO5	Students will be able to gain insights on Amazon Web Service platform	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M
5	TE7457	301210513	Cyber Security	3	Specialisation	Mr.Siddharth Subraman	CO1	Understand Key Concepts in Cybersecurity:	60	Global	Strong-H	Strong-H	Moderate-M	Strong-H
5							CO2	Explore Practical Applications of Security Tools:	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M
5							CO3	Analyze and Mitigate Security Risks:	60	Global	Strong-H	Strong-H	Weak-L	Strong-H
5							CO4	Implement Secure Communication Protocols:	60	Global	Strong-H	Moderate-M	Strong-H	Moderate-M
5							CO5	Explore Cryptographic Techniques:	60	Global	Strong-H	Moderate-M	Weak-L	Weak-L
5	T3022	301210514	Cryptography	3	Specialisation	Mr.Kunal Chandak	CO1	To understand the basics of cryptography	60	Global	Weak	Weak	Moderate	Weak
5							CO2	To understand cryptography and its applications in security	60	Global	Weak	Weak	Strong	Weak
5							CO3	To build to understand and analyze the different algorithms and	60	Global	Weak	Moderate	Weak	Weak
5							CO4	to understand the need of cryptography	60	Global	Weak	Weak	Moderate	Weak
5							CO5	to understand the types of cryptography	60	Global	Weak	Weak	Strong	Weak

	PO's	PO's Statement
	PO1	1. To prepare students for a smart career in the IT field, which measures up to international standards.
	PO2	2. To analyze, design and code the software systems for real world problems.
	PO3	3. To understand the concepts of logic development, best software practices used in industry and to follow professional practices in an ethical way.
	PO4	4. To understand and apply knowledge of content management system, mobile computing, computer game designing, data science, machine learning and cloud in the field of software development.
	PO5	5. To identify societal, environmental issues and responsibilities applicable to professional computing practices.
	PO6	6. To work in a team, manage multidisciplinary projects, and build leadership qualities.

Sem	T Code	Course Code	Course Name	Cre	Core/Spe	Faculty Name	CO	CO Statement	CO	CO	PO1	PO2	PO3	PO4	PO5	PO6
Sem II	T3239	301240201	Relational Database Management Syst	4	Major	Dr. Prafulla	CO1	Students will be able to understand the requirements for	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H
							CO2	Data Model is required to design the structure of databas	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H
							CO3	Students will be able to understand the term "Relation",	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
							CO4	The focus of this objective is to enable students to write	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H
							CO5	The students will be able to understand the need of a tra	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H
							CO6	Students must be able to visualize the security layer prov	60	Global	Moderate-M	Strong-H	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO7	This objective focuses on various trends for designing th	60	Global	Moderate-M	Strong-H	Moderate-M	Strong-H	Moderate-M	Strong-H
Sem II	T7549	301240202	Data Structures and Algorithms	4	Mnor	Dr. Priti Pankaj	CO1	Students will be able to understand the need and require	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H
							CO2	Student will be able to understand different types of data	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H
							CO3	Students will be able to analyse performance of algorith	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M	Moderate-M	Weak-L
							CO4	Students will be able to understand searching and sortin	60	Global	Moderate-M	Weak-L	Moderate-M	Moderate-M	Moderate-M	Weak-L
							CO5	Students will be able to understand Linear Data Structur	60	Global	Moderate-M	Weak-L	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO6	Students will be able to implement stack, Queue	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO7	To explain basic terminology of tree and graph and its tr	60	Global	Moderate-M	Weak-L	Weak-L	Moderate-M	Weak-L	Moderate-M
Sem II	T6483	301240203	Creative Writing	2	Ability	Ms.	CO1	To learn key elements which are necessary in in the proc	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Moderate-M	Strong-H
							CO2	To develop more critical and appreciate mind set	60	Global	Moderate-M	Weak-L	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO3	To develop an individual style in cerating and submittin	60	Global	Strong-H	Moderate-M	Moderate-M	Strong-H	Strong-H	Moderate-M
							CO4	To learn the basic techniques the field of creative expres	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Weak-L
							CO5	To appreciate the works of good writers.	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M	Weak-L	Moderate-M
Sem II	T3204	301240204	Server Side Web Technology	4	Skill	Ms.Walhekar	CO1	To understand execution process of a server-side	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO2	Write PHP script using Basic statements and operators	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
							CO3	To utilize numeric and Associative Array in PHP	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO4	Undersatnd Pre Define Functions of Arrays and Apply th	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	Able to write script with user define functions	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO6	Utilize Session and Cookies to store web Application Data		Global	Moderate-M	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO7	Undersatnd Files and database connectivity in PHP		Global	Moderate-M	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
Sem II	T4780	301240205	Yoga Therapy Principles and Practices	3	Common	Ms.Vaishali	CO1	Knowledge of classical and theoretical foundations of th	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO2	Knowledge of biomedical systems from an integrative a	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO3	Ability to effectively use yoga as a therapeutic modality	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Strong-H
							CO4	Understanding of the disease through different ancient t	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	Understanding the yog therapy through different yogic te	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO6	Principles of Yoga Therapy, use of panchkosha practices	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO7		60							
Sem II	TH4095	301240206	Fitness for Life	0	Mandaotr	Mr. Vivek Koli	CO1	Acquire knowledge and skills for life long participation	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO2	Improve quality of life through physical literacy	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO3	Achieve optimum health benefits through Physical Activ	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
Sem IV	T6850	301210421	Python for Data Science	4	Specializ	Ms. Hema	CO1	Students will be able to understand and revise Python fu	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L	Moderate-M	Weak-L
							CO2	Students will be able to understand the data science acti	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Moderate-M	Moderate-M
							CO3	Students will be able to understand and apply data visua	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO4	Students will be able to understand the data science proc	60	Global	Strong-H	Moderate-M	Weak-L	Moderate-M	Weak-L	Moderate-M
							CO5	Students will be able to understand the Machine Learnin	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO6	Students will be able to understand and use the Pandas a	60	Global	Strong-H	Weak-L	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO7	Student will be able to learn the real application of ML a	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
Sem IV	T3443	301210422	Data preparation and Data managemen	2	Specializ	Dr. Shilpa	CO1	To know Raw, Processed and Tidy Data and its explorat	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO2	To Extract Data from MySQL, HDF5, Web, APIs and O	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO3	To be able to do data preparation for Organising data	60	Global	Strong-H	Strong-H	Weak-L	Strong-H	Weak-L	Strong-H
							CO4	To learn Merging and Managing of Data	60	Global	Strong-H	Strong-H	Weak-L	Strong-H	Weak-L	Strong-H
							CO5	Text and Date Manipulation	60	Global	Strong-H	Strong-H	Weak-L	Strong-H	Weak-L	Strong-H
							CO6		60							
Sem IV	TE7097	301210423	Neural Network	3	Specializ	Mr.Sulaxan	CO1	Outline the basic concepts of Neural Networks (NN).	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO2	Apply various NN learning processes and rules. Design a	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO3	Sketch and use various Perceptron Models & Networks.	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO4	Apply multilayer perceptron models in real life concepts	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	Implement and use NN theorems, models and learning t	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
Sem IV	TE7103	301210424	Natural Language Processing	3	Specializ	Dr. Anuja	CO1	To understand What is NLP ,Its applications and phases	60	Global	Strong-H	Moderate-M	Moderate-M	Weak-L	Moderate-M	Strong-H
							CO2	To understand the Basic Text processing and Language	60	Global	Moderate-M	Strong-H	Moderate-M	Weak-L	Moderate-M	Moderate-M
							CO3	TO understand what is Parsing and Classification	60	Global	Moderate-M	Moderate-M	Strong-H	Weak-L	Weak-L	Moderate-M

Sem	Code	Code2	Course Name	Cr	Category	Faculty	CO	CO Description	Hrs	Scope	M1	M2	M3	M4	M5	M6
							CO4	To understad Evaluation of performance measures	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H
							CO5	To understand applications of Machine learning for NLP	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H
							CO6	To solve Case Study on Natural Language Processing A	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H
Sem IV	T3727	301210425	Cloud Programming and Application	3	Specializ	Mr.Parag Joshi	CO1	To Understand the evolution of cloud tprogramming & a	60	Global	Strong-H	Moderate	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO2	To Analyze the economic advantages offered by cloud s	60	Global	Strong-H	Moderate	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO3	To Establish governance frameworks, policies, and billi	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO4	To design and implement cloud tprogramming & appli	60	Global	Moderate-M	Moderate	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	To Implement cloud tprogramming & application Deve	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO6	To Apply case studies to critically assess challenges and	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H
Sem IV	T3725	301210426	Cloud Administration	3	Specializ	Mr.Anirudha	CO1	To Understand the evolution of cloud technology, its div	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
							CO2	To Analyze the economic advantages offered by cloud s	60	Global	Moderate-M	Strong-H	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO3	To Establish governance frameworks, policies, and billi	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO4	To Execute instance deployment, create and deploy virt	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO5	To Implement Virtual Private Clouds (VPC), configure	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
							CO6	To Apply case studies to critically assess challenges and	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
Sem IV	TE7296	301210427	Software Security	3	Specializ	Mr.Siddharth	CO1	Discover software bugs that pose cyber security threats,	60	Global	Strong-H	Moderate	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO2	Defending against low-level exploits	60	Global	Strong-H	Moderate	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO3	Discover cyber-attack scenarios to web browsers, and w	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO4	Articulate the urgent need for software security in critica	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	Discover and explain mobile software bugs posing cyber	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO6	Articulate the cyber threats	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
Sem IV	T3540	301210428	Identity and Access Management	3	Specializ	Mr.Kunal Rahul	CO1	Identity and Access Management (IAM) Concepts	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
							CO2	IAM architecture and practices	60	Global	Moderate-M	Strong-H	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO3	IAM in Cloud	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO4	SSO and Federated identity	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO5	Authentication and accss control	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	T3912	0301210601	Industry Internship	12	Core	Dr. Priti	CO	To provide industrial exposure to students	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
							CO	Tp provide plateform to the students to use knowledge a	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
							CO	To solve complex industrial problems	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO	Demonstrate the ability to use resources by analysing ch	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO	To learn hands on during knowledge form industrial exp	60	Global	Strong-H	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	F0004	0301210602	Information Technology for Managem	4	Core	Mr. Rohan	CO1	1. To understand the importance of IT in the overall	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO2	2.To understand how to analyse and plan the IT needs	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO3	3.To Relate to how IT can be deployed as a tool for	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO4	4.To Interpret the laws pertaining to the use of IT	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO5	5.To understand the concept of business model with	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO6	6.To discover the new trends (e.g. big data,Cloud) with	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO7	7.To interpret the concept of innovation in Technology	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO8	8.To understand the broad concept of data-driven	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	T3636	301210605	Quantum Machine Learning	3	Specializ	Dr. Anuja	CO1	To understand key concepts in Linear Algebra including	60	Global	Strong-H	Moderate	Moderate-M	Weak-L	Weak-L	Weak-L
							CO2	To analyze and evaluate core quantum mechanics princi	60	Global	Strong-H	Moderate	Moderate-M	Weak-L	Weak-L	Weak-L
							CO3	To understand proficiency in using QISKit and gaining	60	Global	Moderate-M	Strong-H	Moderate-M	Weak-L	Weak-L	Weak-L
							CO4	To understand quantum states' evolution, apply measure	60	Global	Moderate-M	Moderate	Strong-H	Strong-H	Strong-H	Strong-H
							CO5	To apply varied quantum methods in unsupervised learn	60	Global	Moderate-M	Moderate	Strong-H	Strong-H	Strong-H	Strong-H
							CO6	To apply coherent quantum machine learning, use quant	60	Global	Moderate-M	Moderate	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	T3364	301210606	Data Management	3	Specializ	Dr. Farhana	CO1	Understand the basics of Data andData Management	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO2	Understand the Data Processing Pipelines	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO3	Understand the concept of Data Mining	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO4	Implement Data Mining Algorithms like Association Mi	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO5	Understanding Data Modelling and OLAP	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO6	Hands on with NoSQL Data Store using MongoDB	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
Sem VI	TE7497	301210607	Responsible AI	3	Specializ	Mr.Aniruddha	CO1	To understand Responsible AI	60	Global	Strong-H	Moderate	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO2	To understand the Principal of Responsible AI	60	Global	Strong-H	Moderate	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO3	To understand the Benefits	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO4	To understand difference between Ethical AI and Respo	60	Global	Moderate-M	Moderate	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	To understand that AI is Benefits to socitey	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO6	To understand Responsible AI in NLP	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	T3699	301210608	AI applications in social media	3	Specializ	Mr.Satyajit	CO1	Explain the basic concepts & principles of data mining a	60	Global	Strong-H	Moderate-M	Moderate-M	Weak-L	Moderate-M	Weak-L
							CO2	Analyze & Apply text mining techniques to extract & co	60	Global	Moderate-M	Strong-H	Moderate-M	Weak-L	Moderate-M	Weak-L
							CO3	Analyze the multifaceted nature of social media with foc	60	Global	Moderate-M	Moderate-M	Strong-H	Weak-L	Moderate-M	Weak-L
							CO4	Analyze information needs & queries, explore personali	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	Employ various data mining techniques to specific socia	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO6	Apply various document operations technique to manag	60	Global	Moderate-M	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
Sem VI	T3726	301210609	Cloud and AI	3	Specializ	Mr.Shashank	CO1	An Introduction to AI and explain the Applications of A	45	Global	Moderate-M	Weak-L	Strong-H	Strong-H	Strong-H	Strong-H
							CO2	Introduce Machine Learning and AI tools and basics of	45	Global	Moderate-M	Moderate	Strong-H	Strong-H	Strong-H	Strong-H
							CO3	Could AI tools like Auto ML, Vertex AI from Google an	45	Global	Moderate-M	Moderate	Strong-H	Strong-H	Strong-H	Strong-H
							CO4	Image Processing and Pattern recognition application fo	45	Global	Moderate-M	Moderate	Strong-H	Strong-H	Strong-H	Strong-H

Sem	Code	Code2	Course	Cr	Type	Faculty	CO	Description	Num	Scope	C1	C2	C3	C4	C5	C6
							CO5	Application development like Chat Bot, Speech to Text	45	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	T3412	301210610	Cloud Security	3	Specializ	Mr.Nandkumar	CO1	To understand Cloud Security	60	Global	Strong-H	Moderate-M	Moderate-M	Weak-L	Moderate-M	Weak-L
							CO2	To understand types of Cloud secuirty	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L	Moderate-M	Weak-L
							CO3	To understand Mehtods of Cloud Security	60	Global	Moderate-M	Moderate-M	Strong-H	Weak-L	Strong-H	Weak-L
							CO4	To understand ehy cloud security is important	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO5	To understand Benefits of Cloud Security	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	T3690	301210611	Computer Forensics - Detection and P	4	Specializ	Mr.Sulaxan	CO1	This course is designed to introduce basic forensic conc	60	Global	Moderate-M	Weak-L	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO2	To develop an understanding of various types of fraud	60	Global	Strong-H	Weak-L	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO3	To interpret and investigate specific IT controls that mus	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO4	To introduce various computer Forensic tools	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO5	To examine various types of digital evidence from comp	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO6		60							
Sem VI	T3381	301210612	Information System Security Audit	2	Specializ	Mr.Chaitanya	CO1	To Understand Information System Security Audit	60	Global	Strong-H	Moderate-M	Moderate-M	Weak-L	Moderate-M	Weak-L
							CO2	To implement Information System Security Audit	60	Global	Moderate-M	Moderate-M	Moderate-M	Weak-L	Moderate-M	Weak-L
							CO3	To unbderstand how to Protect Information System Secu	60	Global	Moderate-M	Moderate-M	Strong-H	Weak-L	Strong-H	Weak-L
							CO4	To understand the policies Information System Security	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO5	To understand the standard Procedures Information Syst	60	Global	Moderate-M	Moderate-M	Strong-H	Moderate-M	Strong-H	Moderate-M
Sem VI	T8000	301210401	Service Learning	4	Generic	Dr. Anuja	CO1	Understanding societal issues of the under-privileged	60	National/I	Moderate-M	Moderate	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO2	To analyze the social issues	60	National/I	Moderate-M	Moderate	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO3	Designing a project to address NGO requirement by	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO4	Applying technical or non-technical skills in order to	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO5	Demonstrate different ways to contribute to help NGOs	60	National/I	Moderate-M	Moderate	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO6	To realize that community service as one of the	60	National/I	Weak-L	Weak-L	Moderate-M	Strong-H	Moderate-M	Strong-H
Sem VI	T3237	301210402	ations of Data Warehousing and Data M	4	Generic	Ms. Kumari	CO1	To know the steps in data warehousing	60	Global	Strong-H	Strong-H	Strong-H	Weak-L	Strong-H	Weak-L
							CO2	To recognize the ETL process of Data warehousing	60	Global	Strong-H	Strong-H	Strong-H	Weak-L	Strong-H	Weak-L
							CO3	To introduce the data mining concepts and algorithms	60	Global	Strong-H	Strong-H	Strong-H	Weak-L	Strong-H	Weak-L
							CO4	To understand various data mining methods: classsificat	60	Global	Strong-H	Strong-H	Strong-H	Weak-L	Strong-H	Weak-L
							CO5	To introduce ETL tools	60	Global	Strong-H	Strong-H	Strong-H	Weak-L	Strong-H	Weak-L
							CO6	To introduce Data Mining Tools	60	Global	Strong-H	Strong-H	Strong-H	Weak-L	Strong-H	Weak-L
Sem VI	T3371	301210403	Introduction to Java Enterprise Frame	2	Generic	Ms.Farhana	CO1	Understand Mutli tier architecture of Java EE	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO2	Understand JDBC API	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO3	Web Development envionment in Java EE	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO4	Hands on experience of writing Servlets and JSP	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO5	Understand the enterprise architeture development	60	Global	Weak-L	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
Sem VI	T3649	301210404	to Blockchain Technologies (Flexi-Cre	2	Generic	Mr.Shashank	CO1	Introduction to Blockchain Technologies	60	Global	Moderate-M	Weak-L	Strong-H	Strong-H	Strong-H	Strong-H
							CO2	Concepts introduction to blockchain	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
							CO3	To know how blockchain works	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
							CO4	To understad the advantages of Blockchain	60	Global	Moderate-M	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H
							CO5	To understand the benefits & disadvantages	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO6	To know types of Blockchain	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	T3258	301210405	Current Trends and Practices in IT	3	Generic	Dr. Rajeshree	CO1	o explain how general Internet and Internet of Things wo	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Moderate-M	Weak-L
							CO2	To understand IOT components and their functions	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Moderate-M	Weak-L
							CO3	now the requried sensors and actautors and Technology	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M
							CO4	pplications based on basic IOT target boards and other c	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO5	unities from Wireless and Mobile communication under	60	Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO6	To get deeper insight into Middleware part of IoT.		Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO7	To get hands-on project based experience on real-time p		Global	Strong-H	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M
Sem VI	T3803	301210406	Project	3	Generic	Dr. Priti	CO1	To design a system	60	Global	Strong-H	Moderat	Moderate-M	Moderate-M	Strong-H	Weak-L
							CO2	To develop the system	60	Global	Strong-H	Moderat	Moderate-M	Moderate-M	Strong-H	Weak-L
							CO3	To test the system	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Strong-H	Weak-L
							CO4	To implement project management knowledge,	60	Global	Strong-H	Moderat	Moderate-M	Moderate-M	Strong-H	Weak-L
							CO5	To apply project management practices to the launch of	60	Global	Strong-H	Moderat	Moderate-M	Moderate-M	Strong-H	Weak-L
							CO6	Studetns are able to write software test cases	60	Global	Strong-H	Strong-				
Sem VI	T6096	301210407	Creative Writing	2	Generic	Ms. Munirah	CO1	Students get an introduction to the art of writing.	60	Global	Strong-H	Moderate	Weak-L	Strong-H	Weak-L	Strong-H
							CO2	Students learn ways to make their writing appealing.	60	Global	Strong-H	Moderate	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO3	Students learn techniques involved in story-writing, feat	60	Global	Strong-H	Moderate	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO4	Students get a grasp of the methods taught through samp	60	Global	Strong-H	Moderate	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO5	Students are encouraged to introspect and express their	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	T6181	301210408	Understanding Cinema	2	Generic	Ms.Madhuri	CO1	To understand the processes involved in film making	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO2	To use appropriate filmic terminology to discuss	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO3	To explore the the landmarks in regional cinema in	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO4	To make conclusions about the current realities of	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO5	To explore landmarks in world cinema	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H
							CO6	To make conclusions about the current realities of	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H

Sem	Code	Course Code	Course Name	Cr	Type	Faculty	CO	Description								
							CO7	To explore new age content	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Strong-H	Strong-H
Sem VI	T6274	301210412	Foundations of Ethics	2	Generic	Mr. Kshitij	CO1	To impart the students with the tenets of ethics which	60	Global	Weak-L	Weak-L	Weak-L	Weak-L	Strong-H	Moderate-M
							CO2	To inculcate the ethical behaviour in the students	60	Global	Weak-L	Weak-L	Weak-L	Weak-L	Strong-H	Moderate-M
							CO3	To study what is right and wrong in human endeavors	60	Global	Weak-L	Weak-L	Weak-L	Weak-L	Strong-H	Moderate-M
							CO4	To gain knowledge about the method by which we	60	Global	Weak-L	Weak-L	Weak-L	Weak-L	Strong-H	Moderate-M
							CO5	To inculcate such ethics in the budding lawyers to face	60	Global	Weak-L	Weak-L	Weak-L	Weak-L	Strong-H	Moderate-M
	T6307	301210414	Basic Psychology	2	Generic	Ms. Munirah	CO1	Students get an introduction to psychology and are able	60	Global	Strong-H	Moderate-M	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO2	Students will be able to reflect and analyse various dime	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO3	Students will get a basic understanding of the working o	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO4	Students will learn to deal with various issues such as fe	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO5	Students will learn what it takes to reach one's full poten	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	T3663	301210415	Introduction to Mobile Concepts	4	Generic	Dr. Shrikant	CO1	To understand the concepts of Mobile Computing	60	Global	Moderate-M	Weak-L	Weak-L	Strong-H	Weak-L	Strong-H
							CO2	To understand the concepts of mobile Communication t	60	Global	Moderate-M	Moderate-M	Weak-L	Moderate-M	Weak-L	Moderate-M
							CO3	To learn Applications of Mobile APPs	60	Global	Strong-H	Weak-L	Weak-L	Strong-H	Weak-L	Strong-H
							CO4	to learn the application of Mobiles in the Media and Gar	60	Global	Moderate-M	Moderate-M	Weak-L	Moderate-M	Weak-L	Moderate-M
							CO5	To learn the uses of AI and Machine Learning for Mobil	60	Global	Weak-L	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO6	To Understand the verious API used for Mobile APPs	60	Global	Moderate-M	Weak-L	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO7	To learn the Mobile Analytics Concepts	60	Global	Moderate-M	Moderate-M	Weak-L	Moderate-M	Weak-L	Moderate-M
Sem VI	T3696	301210416	Advance Web Scripting	4	Generic	Mr. Gaurav	CO1	Review the Basics of HTML, CSS and JavaScript other	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Strong-H
							CO2	Understanding the importance of JavaScript Libraries lik	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO3	Create the dynamic Web pages using jQuery	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO4	Understand architecture of Angular js	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO5	Understand the concepts of MVC architecture and advar	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO6	Design web pages using Angular js	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO7	Understand and apply the Node js framework	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO8	Understanding and using JSON	60	Global	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	T3221	301210417	Introduction to Cloud Computing	4	Generic	Mr.Shashank	CO1	To understand the concept of Cloud Computing	60	Global	Strong-H	Moderate-M	Weak-L	Strong-H	Weak-L	Strong-H
							CO2	To understand various models of Cloud Computing, Sea	60	Global	Strong-H	Moderate-M	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO3	To understand AWS, API and Authentication Protocols	60	Global	Strong-H	Moderate-M	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO4	Understanding customisation usingSalesforce	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
							CO5	Types of Introduction to Cloud Computing	60	Global	Strong-H	Moderate-M	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO6	To Understand Basic terms of Introduction to Cloud Co	60	Global	Moderate-M	Strong-H	Strong-H	Strong-H	Strong-H	Strong-H
Sem VI	TE7019	301210418	Big Data Analytics	4	Generic	Ms.Vrushali	CO1	Understanding Big Data	60	Global	Strong-H	Moderate-M	Moderate-M	Weak-L	Weak-L	Weak-L
							CO2	Installation and working of Hadoop	60	Global	Strong-H	Moderate-M	Moderate-M	Weak-L	Weak-L	Weak-L
							CO3	Understanding basics of HDFS, MapReduce and YARN	60	Global	Strong-H	Moderate-M	Moderate-M	Weak-L	Weak-L	Weak-L
							CO4	Understanding the architecture of Hive and its Query La	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Weak-L	Weak-L
							CO5	Understanding the architecture of Apache PIG	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Weak-L	Weak-L
							CO6	Understanding RDDs in Apache Spark and PySpark Pro	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Weak-L	Weak-L
							CO7	Explore different case studies of companies using Big D	60	Global	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Weak-L	Weak-L
Sem VI	T3601	301210419	Network Administration	4	Generic	Ms.Gauri	CO1	To Understans what Network Administration	60	Global	Strong-H	Moderate-M	Moderate-M	Weak-L	Moderate-M	Weak-L
							CO2	The understand various types network Administration	60	Global	Moderate-M	Moderate-M	Moderate-M	Strong-H	Moderate-M	Strong-H
							CO3	To learn about various Internet Protocols and security is	60	Global	Moderate-M	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO4	The students will understand various network defence te	60	Global	Strong-H	Moderate-M	Weak-L	Moderate-M	Weak-L	Moderate-M
							CO5	The students will learn about encryption based network	60	Global	Strong-H	Moderate-M	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO6	To know the Computer networking & admins	60	Global	Strong-H	Weak-L	Moderate-M	Moderate-M	Moderate-M	Moderate-M
Sem VI	T3690	301210420	Forensics - Detection and Prevention o	4	Generic	Mr. Sulaxan	CO1	This course is designed to introduce basic forensic conc	60	Global	Moderate-M	Weak-L	Moderate-M	Moderate-M	Moderate-M	Moderate-M
							CO2	To develop an understanding of various types of fraud	60	Global	Strong-H	Weak-L	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO3	To interpret and investigate specific IT controls that mus	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO4	To introduce various computer Forensic tools	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M
							CO5	To examine various types of digital evidence from comp	60	Global	Strong-H	Strong-H	Strong-H	Moderate-M	Strong-H	Moderate-M