Course Code	Course Name	Abbr.	CO	Course Outcomes
311302	BASIC MATHEMATICS	BMS	CO1	Apply the concepts of algebra to solve engineering (discipline) related problems.
311302	BASIC MATHEMATICS	BMS	CO2	Utilize trigonometry to solve branch specific engineering problems.
311302	BASIC MATHEMATICS	BMS	CO3	Solve area specific engineering problems under given conditions of straight lines.
311302	BASIC MATHEMATICS	BMS	CO4	Apply differential calculus to solve discipline specific problems.
311302	BASIC MATHEMATICS	BMS	CO5	Use techniques and methods of statistics to crack discipline specific problems.
311303	COMMUNICATION SKILLS (ENGLISH)	ENG	CO1	Construct grammatically correct sentences in English
311303	COMMUNICATION SKILLS (ENGLISH)	ENG	CO2	Compose paragraphs and dialogues on given situations
311303	COMMUNICATION SKILLS (ENGLISH)	ENG	CO3	Comprehend passages correctly.
311303	COMMUNICATION SKILLS (ENGLISH)	ENG	CO4	Use contextual words in English appropriately
311303	COMMUNICATION SKILLS (ENGLISH)	ENG	CO5	Deliver effective presentations in English using appropriate body language
311305	BASIC SCIENCE	BSC	CO1	Use basic instruments to measure the physical quantities in various engineering situations.
311305	BASIC SCIENCE	BSC	CO2	Apply the basic principles of electromagnetics to solve given engineering problems.
311305	BASIC SCIENCE	BSC	CO3	Apply basic principles of thermometry and fibre optics to solve engineering problems.
311305	BASIC SCIENCE	BSC	CO4	Predict the structure, properties and behaviour of molecules and compounds based on the types of chemical bond.
311305	BASIC SCIENCE	BSC	CO5	Apply the concepts of electrochemistry and corrosion preventive measures in industry.
311305	BASIC SCIENCE	BSC	CO6	Use the appropriate engineering material and catalyst appropriately.
311001	FUNDAMENTALS OF ICT	ICT	CO1	Use computer system and its peripherals for given purpose
311001	FUNDAMENTALS OF ICT	ICT	CO2	Prepare Business document using Word Processing Tool

311001	FUNDAMENTALS OF ICT	ICT	CO3	Analyze Data and represent it graphically using Spreadsheet
311001	FUNDAMENTALS OF ICT	ICT	CO4	Prepare professional Slide Show presentations
311001	FUNDAMENTALS OF ICT	ICT	CO5	Use different types of Web Browsers and Apps
311001	FUNDAMENTALS OF ICT	ICT	CO6	Explain concept and applications of Emerging Technologies
311002	ENGINEERING WORKSHOP PRACTICE	WPC	CO1	Carry-out elementary level maintenance of a PC.
311002	ENGINEERING WORKSHOP PRACTICE	WPC	CO2	Create partitions and format hard disk drive.
311002	ENGINEERING WORKSHOP PRACTICE	WPC	CO3	Install and configure Operating system.
311002	ENGINEERING WORKSHOP PRACTICE	WPC	CO4	Configure different types of peripheral devices.
311002	ENGINEERING WORKSHOP PRACTICE	WPC	CO5	Setup small Local Area Network.
311002	ENGINEERING WORKSHOP PRACTICE	WPC	CO6	Use diagnostic software for fault finding in Computer system.
311003	YOGA AND MEDITATION	YAM	CO1	Practice basic Yoga and Pranayama in daily life to maintain physical and mental fitness.
311003	YOGA AND MEDITATION	YAM	CO2	Practice meditation regularly for improving concentration and better handling of stress and anxiety.
311003	YOGA AND MEDITATION	YAM	CO3	Follow healthy diet and hygienic practices for maintaining good health.
311008	ENGINEERING GRAPHICS	EGP	CO1	Draw geometrical figures and engineering curves.
311008	ENGINEERING GRAPHICS	EGP	CO2	Apply principles of orthographic projections for drawing given pictorial views.
311008	ENGINEERING GRAPHICS	EGP	CO3	Apply basic CAD commands for drawing different entities.
311008	ENGINEERING GRAPHICS	EGP	CO4	Use various drawing codes, conventions and symbols as per IS SP-46 in engineering drawing.
311008	ENGINEERING GRAPHICS	EGP	CO5	Draw free hand sketches of given engineering elements.
312301	APPLIED MATHEMATICS	AMS	CO1	Solve the broad-based engineering problems of integration using suitable methods.
312301	APPLIED MATHEMATICS	AMS	CO2	Use definite integration to solve given engineering related problems.

312301	APPLIED MATHEMATICS	AMS	CO3	Apply the concept of differential equation to find the solutions of given engineering problems.
312301	APPLIED MATHEMATICS	AMS	CO4	Employ numerical methods to solve programme specific problems.
312301	APPLIED MATHEMATICS	AMS	CO5	Use probability distributions to solve elementary engineering problems.
312302	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING	BEE	CO1	Calculate and measure basic electrical quantities and parameters.
312302	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING	BEE	CO2	Use different electrical machines by making connections.
312302	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING	BEE	CO3	Use electrical safety devices in electrical circuit
312302	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING	BEE	CO4	Use relevant diode in different electronic circuits.
312302	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING	BEE	CO5	Use BJT and FET in various electronic circuits.
312302	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING	BEE	CO6	Use various types of sensors and transducers.
312303	PROGRAMMING IN C	PIC	CO1	Develop C program using input - output functions and arithmetic expressions
312303	PROGRAMMING IN C	PIC	CO2	Develop C program involving branching and looping statements
312303	PROGRAMMING IN C	PIC	CO3	Implement Arrays and structures using C programs
312303	PROGRAMMING IN C	PIC	CO4	Develop C program using user-defined functions
312303	PROGRAMMING IN C	PIC	CO5	Write C program using pointer
312001	LINUX BASICS	BLP	CO1	Install Linux operating system.
312001	LINUX BASICS	BLP	CO2	Execute general purpose commands of the Linux operating system.
312001	LINUX BASICS	BLP	CO3	Manage files and directories in Linux operating system.
312001	LINUX BASICS	BLP	CO4	Use vi editor in Linux operating system.
312001	LINUX BASICS	BLP	CO5	Write programs using shell script.
312002	PROFESSIONAL COMMUNICATION	PCO	CO1	Communicate effectively (oral / spoken and Written) in various formal and informal situations minimizing the barriers.

312002	PROFESSIONAL COMMUNICATION	PCO	CO2	Develop listening skills through active listening and note taking.
312002	PROFESSIONAL COMMUNICATION	PCO	CO3	Write circulars, notices and minutes of the meeting.
312002	PROFESSIONAL COMMUNICATION	PCO	CO4	Draft inquiry letter, complaint letter , Job application with resume / CV, Compose effective E - mails .
312002	PROFESSIONAL COMMUNICATION	PCO	CO5	Write Industrial reports.
312003	SOCIAL AND LIFE SKILLS	SFS	CO1	Enhance the ability to be fully self-aware and take challenges by overcoming all fears and insecurities and grow fully.
312003	SOCIAL AND LIFE SKILLS	SFS	CO2	Increase self-knowledge and awareness of emotional skills and emotional intelligence at the place of study/work.
312003	SOCIAL AND LIFE SKILLS	SFS	CO3	Provide the opportunity to realizing self-potential through practical experience while working individually or in group.
312003	SOCIAL AND LIFE SKILLS	SFS	CO4	Develop interpersonal skills and adopt good leadership behaviour for self-empowerment and empowerment of others.
312003	SOCIAL AND LIFE SKILLS	SFS	CO5	Set appropriate life goals with managing stress and time effectively.
312004	WEB PAGE DESIGNING	WPD	CO1	Use HTML formatting tags to present content on web page.
312004	WEB PAGE DESIGNING	WPD	CO2	Develop web page using list and hyperlinks.
312004	WEB PAGE DESIGNING	WPD	CO3	Develop web pages using images, colors and backgrounds.
312004	WEB PAGE DESIGNING	WPD	CO4	Design HTML forms using table and frames.
312004	WEB PAGE DESIGNING	WPD	CO5	Apply presentation schemes on content using CSS.
312004	WEB PAGE DESIGNING	WPD	CO6	Publish websites on internet or intranet.
311011	EXIT-INTERNSHIP01	EI1	CO1	Acquire essential employable skills at exit level.
311011	EXIT-INTERNSHIP01	EI1	CO2	Establish effective communication in working environment.
313301	DATA STRUCTURE USING C	DSU	CO1	Perform basic operations on Arrays.
313301	DATA STRUCTURE USING C	DSU	CO2	Apply different Searching and Sorting methods.
313301	DATA STRUCTURE USING C	DSU	CO3	Implement basic operations on Linked List.
313301	DATA STRUCTURE USING C	DSU	CO4	Perform operations on Stack using Array and Linked List Implementations.
313301	DATA STRUCTURE USING C	DSU	CO5	Perform operations on Queue using Array and Linked List Implementations.

313301	DATA STRUCTURE USING C	DSU	CO6	Create and Traverse Tree to solve problems.
313302	DATABASE MANAGEMENT SYSTEM	DMS	CO1	Explain concept of database management system.
313302	DATABASE MANAGEMENT SYSTEM	DMS	CO2	Design the database for given problem.
313302	DATABASE MANAGEMENT SYSTEM	DMS	CO3	Manage database using SQL.
313302	DATABASE MANAGEMENT SYSTEM	DMS	CO4	Implement PL/SQL codes for given application.
313302	DATABASE MANAGEMENT SYSTEM	DMS	CO5	Apply security and backup methods on database.
313304	OBJECT ORIENTED PROGRAMMING USING C++	OOP	CO1	Write C++ programs using classes and objects.
313304	OBJECT ORIENTED PROGRAMMING USING C++	OOP	CO2	Develop C++ programs using constructors.
313304	OBJECT ORIENTED PROGRAMMING USING C++	OOP	CO3	Implement Inheritance in C++.
313304	OBJECT ORIENTED PROGRAMMING USING C++	OOP	CO4	Implement Polymorphism in C++.
313304	OBJECT ORIENTED PROGRAMMING USING C++	OOP	CO5	Develop C++ programs to perform file operations.
313305	DIGITAL TECHNIQUES AND MICROPROCESSORS	DTM	CO1	Test logic gates and digital systems.
313305	DIGITAL TECHNIQUES AND MICROPROCESSORS	DTM	CO2	Use basic combinational and sequential logic circuits employing digital ICs.
313305	DIGITAL TECHNIQUES AND MICROPROCESSORS	DTM	CO3	Perform operations on registers using 8086 instructions.
313305	DIGITAL TECHNIQUES AND MICROPROCESSORS	DTM	CO4	Use 8086 microprocessor environment to build and execute assembly language programs.
313305	DIGITAL TECHNIQUES AND MICROPROCESSORS	DTM	CO5	Develop assembly language programming in 8086 to implement loops and branching instructions.
313002	ESSENCE OF INDIAN CONSTITUTION	EIC	CO1	List salient features and characteristics of the constitution of India.

313002	ESSENCE OF INDIAN CONSTITUTION	EIC	CO2	Follow fundamental rights and duties as responsible citizen of the country.
313002	ESSENCE OF INDIAN CONSTITUTION	EIC	CO3	Analyze major constitutional amendments in the constitution.
313002	ESSENCE OF INDIAN CONSTITUTION	EIC	CO4	Follow procedure to cast vote using voter-id.
313003	APPLIED MULTIMEDIA TECHNIQUES	AMT	CO1	Manipulate color models of image.
313003	APPLIED MULTIMEDIA TECHNIQUES	AMT	CO2	Perform edit operation on text and images using graphics processing tools.
313003	APPLIED MULTIMEDIA TECHNIQUES	AMT	CO3	Perform basic audio editing operations.
313003	APPLIED MULTIMEDIA TECHNIQUES	AMT	CO4	Perform basic video editing operations.
313003	APPLIED MULTIMEDIA TECHNIQUES	AMT	CO5	Create simple 2D Animation.
313003	APPLIED MULTIMEDIA TECHNIQUES	AMT	CO6	Design Web Pages with Multimedia components.
314301	ENVIRONMENTAL EDUCATION AND SUSTAINABILITY	EES	CO1	Identify the relevant Environmental issues in specified locality.
314301	ENVIRONMENTAL EDUCATION AND SUSTAINABILITY	EES	CO2	Provide the green solution to the relevant environmental problems.
314301	ENVIRONMENTAL EDUCATION AND SUSTAINABILITY	EES	CO3	Conduct SWOT analysis of biodiversity hotspot
314301	ENVIRONMENTAL EDUCATION AND SUSTAINABILITY	EES	CO4	Apply the relevant measures to mitigate the environmental pollution.
314301	ENVIRONMENTAL EDUCATION AND SUSTAINABILITY	EES	CO5	Implement the environmental policies under the relevant legal framework.
314317	JAVA PROGRAMMING	JPR	CO1	Develop java program using classes and objects.
314317	JAVA PROGRAMMING	JPR	CO2	Develop java program for implementing code reusability concept.
314317	JAVA PROGRAMMING	JPR	CO3	Develop program to implement multithreading and exception handling.
314317	JAVA PROGRAMMING	JPR	CO4	Develop java program for implementing event handling using window-based application components.
314317	JAVA PROGRAMMING	JPR	CO5	Implements network programming in java.
314317	JAVA PROGRAMMING	JPR	CO6	Develop java program for managing database.

314317	DATA COMMUNICATION AND COMPUTER NETWORK	DCN	CO1	Analyze the functioning of Data Communication and Computer Network.
314317	DATA COMMUNICATION AND COMPUTER NETWORK	DCN	CO2	Select relevant Transmission Media and Switching Techniques as per need.
314317	DATA COMMUNICATION AND COMPUTER NETWORK	DCN	CO3	Analyze the Transmission Errors with respect to IEEE standards.
314317	DATA COMMUNICATION AND COMPUTER NETWORK	DCN	CO4	Configure different TCP/IP services.
314317	DATA COMMUNICATION AND COMPUTER NETWORK	DCN	CO5	Implement relevant Network Topology using Networking Devices.
314319	INFORMATION SECURITY	INS	CO1	Identify types of attacks which causes threat to Information Security.
314319	INFORMATION SECURITY	INS	CO2	Apply multi-factor user authentication and access control mechanisms on file, folder, device and applications.
314319	INFORMATION SECURITY	INS	CO3	Apply basic encryption / decryption techniques for a given text.
314319	INFORMATION SECURITY	INS	CO4	Apply various encryption algorithms used for information security.
314319	INFORMATION SECURITY	INS	CO5	Implement security techniques to prevent internet threats.
314004	PYTHON PROGRAMMING	PWP	CO1	Develop python programs using control flow statements.
314004	PYTHON PROGRAMMING	PWP	CO2	Perform operations on various data structures in Python.
314004	PYTHON PROGRAMMING	PWP	CO3	Develop packages to solve given problem using python.
314004	PYTHON PROGRAMMING	PWP	CO4	Apply object-oriented approach to solve given problem using python.
314004	PYTHON PROGRAMMING	PWP	CO5	Use relevant built-in python package to develop application.
314006	INTERNET OF THINGS	IOT	CO1	Integrate hardware and software for simple IoT applications.
314006	INTERNET OF THINGS	IOT	CO2	Create IoT applications by interfacing various sensors and embedded boards.
314006	INTERNET OF THINGS	IOT	CO3	Create IoT applications by interfacing various actuators and embedded boards.
314006	INTERNET OF THINGS	IOT	CO4	Develop IoT applications using IoT networking devices.

314006	INTERNET OF THINGS	IOT	CO5	Develop database based IoT application by integrating sensors with single board computer.
312021	EXIT INDUSTRIAL TRAINING (Full Time)	EXIT	CO1	Gain hands-on experience in applying theoretical concepts to real-world tasks, improving their understanding and problem-solving abilities and readiness for the workforce.
312021	EXIT INDUSTRIAL TRAINING (Full Time)	EXIT	CO2	Boosts students' self-confidence and encourages them to pursue ambitious career goals. to earn a livelihood for a better status in society
312021	EXIT INDUSTRIAL TRAINING (Full Time)	EXIT	CO3	Interact with industry professionals during training to build valuable connections for job opportunities
312022	SECOND YEAR EXIT COURSE (Online)	SYEC	CO1	Demonstrate required skills and readiness relevant to their discipline (e.g., mechanical, civil, electrical, software engineering, hotel management textiles etc.) to join the workforce.
312022	SECOND YEAR EXIT COURSE (Online)	SYEC	CO2	Practice the skills of using industry specific software, tools, machines, methodologies etc. required at the work place of an employer and earn livelihood
312022	SECOND YEAR EXIT COURSE (Online)	SYEC	CO3	Work collaboratively as professional in group as member and leader to complete the tasks of employers
315319	OPERATING SYSTEM	OSY	CO1	Explain the services and components of an Operating System.
315319	OPERATING SYSTEM	OSY	CO2	Describe the different aspects of Process Management in an Operating System.
315319	OPERATING SYSTEM	OSY	CO3	Implement various CPU Scheduling algorithms and evaluate their effectiveness.
315319	OPERATING SYSTEM	OSY	CO4	Analyze the Memory Management techniques used by an Operating System.
315319	OPERATING SYSTEM	OSY	CO5	Apply techniques for effective File Management in an Operating System.
315332	SOFTWARE ENGINEERING AND TESTING	SET	CO1	Identify relevant software process model for software development.
315332	SOFTWARE ENGINEERING AND TESTING	SET	CO2	Use appropriate principles of software modeling to create data design.
315332	SOFTWARE ENGINEERING AND TESTING	SET	CO3	Apply project management techniques in software development.

315332	SOFTWARE ENGINEERING AND TESTING	SET	CO4	Apply different software testing types to ensure the quality of software product.
315332	SOFTWARE ENGINEERING AND TESTING	SET	CO5	Identify defect to improve the overall quality of the software using automated testing tools.
315002	ENTREPRENEURSHIP DEVELOPMENT AND STARTUPS	ENDS	CO1	Identify one's entrepreneurial traits.
315002	ENTREPRENEURSHIP DEVELOPMENT AND STARTUPS	ENDS	CO2	Use information collected from stakeholder for establishing/setting up/founding starts up
315002	ENTREPRENEURSHIP DEVELOPMENT AND STARTUPS	ENDS	CO3	Use support systems available for Starts up
315002	ENTREPRENEURSHIP DEVELOPMENT AND STARTUPS	ENDS	CO4	Prepare project plans to manage the enterprise effectively
315003	SEMINAR AND PROJECT INITIATION COURSE	SPI	CO1	Identify topics of seminar presenting to the large gathering at the institute/conference.
315003	SEMINAR AND PROJECT INITIATION COURSE	SPI	CO2	Collect relevant and updated research-based data and information to prepare a paper of seminar presentation.
315003	SEMINAR AND PROJECT INITIATION COURSE	SPI	CO3	Apply presentation skills.
315003	SEMINAR AND PROJECT INITIATION COURSE	SPI	CO4	Create conducive environment for learning and discussion through seminar presentation.
315003	SEMINAR AND PROJECT INITIATION COURSE	SPI	CO5	Identify a problem statement and establish the action plan for the successful completion of the project.
315004	INTERNSHIP(12 WEEKS)	ITR	CO1	Observe time/resource management and industrial safety aspects.
315004	INTERNSHIP(12 WEEKS)	ITR	CO2	Acquire professional experience of industry environment .
315004	INTERNSHIP(12 WEEKS)	ITR	CO3	Establish effective communication in working environment.
315004	INTERNSHIP(12 WEEKS)	ITR	CO4	Prepare report of assigned activities and accomplishments
315321	ADVANCE COMPUTER NETWORK	ACN	CO1	Analyze the packet structure of IPv4 and IPv6.
315321	ADVANCE COMPUTER NETWORK	ACN	CO2	Configure Static and Dynamic Routing Protocols Using Simulators.
315321	ADVANCE COMPUTER NETWORK	ACN	CO3	Illustrate functions of Transport layer protocols.

315321	ADVANCE COMPUTER NETWORK	ACN	CO4	Implement Application layer protocols on a network.
315321	ADVANCE COMPUTER NETWORK	ACN	CO5	Work with various Wireless Networking Technologies.
315324	ADVANCE DATABASE MANAGEMENT	ADM	CO1	Apply the concept of concurrency control.
315324	ADVANCE DATABASE MANAGEMENT	ADM	CO2	Analyse various database architectures
315324	ADVANCE DATABASE MANAGEMENT	ADM	CO3	Use Object Oriented and XML queries on Database.
315324	ADVANCE DATABASE MANAGEMENT	ADM	CO4	Manipulate data using NoSQL commands.
315324	ADVANCE DATABASE MANAGEMENT	ADM	CO5	Use data mining and warehousing concepts.
315326	DATA ANALYTICS	DAN	CO1	Elaborate the fundamental concepts of Data Analytics.
315326	DATA ANALYTICS	DAN	CO2	Apply appropriate statistical techniques to analyze and interpret complex Datasets
315326	DATA ANALYTICS	DAN	CO3	Analyze numerical data by creating pivot table.
315326	DATA ANALYTICS	DAN	CO4	Represent data in terms of various types of charts
315326	DATA ANALYTICS	DAN	CO5	Visualize the data using a Python library.
315301	MANAGEMENT	MAN	CO1	Use relevant management skills to handle work situation
315301	MANAGEMENT	MAN	CO2	Apply appropriate techniques of product, operations and project management
315301	MANAGEMENT	MAN	CO3	Use comprehensive tools of recent management practices
315301	MANAGEMENT	MAN	CO4	Plan suitable marketing strategy for a product / service
315301	MANAGEMENT	MAN	CO5	Utilize supply chain and human resource management techniques for effective management
316313	EMERGING TRENDS IN COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY	ETI	CO1	Elaborate the role of Artificial Intelligence ,Machine Learning and Deep Learning in various domains.
316313	EMERGING TRENDS IN COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY	ETI	CO2	Compare the architecture of IoT in Local environment vs Cloud Environment.
316313	EMERGING TRENDS IN COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY	ETI	CO3	Explain the functioning of Blockchain Technology in various applications considering different challenges.

316313	EMERGING TRENDS IN COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY	ETI	CO4	Explain characteristics of different Immersive Technologies.
316313	EMERGING TRENDS IN COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY	ETI	CO5	Identify the appropriate Model of Digital Forensic Investigation for given situation.
316325	WIRELESS AND MOBILE NETWORK	WMN	CO1	Identify various terminologies used in GSM network systems.
316325	WIRELESS AND MOBILE NETWORK	WMN	CO2	Establish wireless network with the given technology.
316325	WIRELESS AND MOBILE NETWORK	WMN	CO3	Differentiate between various generations of mobile network .
316325	WIRELESS AND MOBILE NETWORK	WMN	CO4	Expalin 5G network system architecture.
316325	WIRELESS AND MOBILE NETWORK	WMN	CO5	Establish wireless sensor networks for the given application.
316005	CLIENT SIDE SCRIPTING	CSS	CO1	Develop web page using client side scripting technology.
316005	CLIENT SIDE SCRIPTING	CSS	CO2	Design dynamic web pages using AngularJS.
316005	CLIENT SIDE SCRIPTING	CSS	CO3	Implement the built-in functions and objects in AngularJS.
316005	CLIENT SIDE SCRIPTING	CSS	CO4	Develop web application using React.
316005	CLIENT SIDE SCRIPTING	CSS	CO5	Apply event handling in React Framework.
316006	MOBILE APPLICATION DEVELOPMENT	MAD	CO1	Interpret the features of android operating system.
316006	MOBILE APPLICATION DEVELOPMENT	MAD	CO2	Use after configuring Android development environment.
316006	MOBILE APPLICATION DEVELOPMENT	MAD	CO3	- Develop android applications using UI components and layouts.
316006	MOBILE APPLICATION DEVELOPMENT	MAD	CO4	Create database driven Android applications.
316006	MOBILE APPLICATION DEVELOPMENT	MAD	CO5	Develop advanced Android applications that requires relevant permissions for security.
316004	CAPSTONE PROJECT	CPE	CO1	Elaborate the identified field problem from the perspective of project work at institute.
316004	CAPSTONE PROJECT	CPE	CO2	Conduct feasibility & viability analysis (using data collection, experiments, Simulation , Coding) to validate required resources, cost, support of the project work.
316004	CAPSTONE PROJECT	CPE	CO3	Apply the acquired knowledge and skills in providing solutions to the real field/industrial problems.

316004	CAPSTONE PROJECT	CPE	CO4	Present Project and its output/ findings / achievements alongwith its exhibits.
316315	DIGITAL FORENSIC AND HACKING TECHNIQUES	DFH	CO1	Explain digital forensics investigation process.
316315	DIGITAL FORENSIC AND HACKING TECHNIQUES	DFH	CO2	Apply various Digital Forensic Investigation Models.
316315	DIGITAL FORENSIC AND HACKING TECHNIQUES	DFH	CO3	Apply digital Evidence collecting and handling techniques.
316315	DIGITAL FORENSIC AND HACKING TECHNIQUES	DFH	CO4	Identify various types of cyber attacks.
316315	DIGITAL FORENSIC AND HACKING TECHNIQUES	DFH	CO5	Apply Tools and Techniques for Ethical Hacking.
316316	MACHINE LEARNING	MAL	CO1	Explain the role of machine learning in AI and data science.
316316	MACHINE LEARNING	MAL	CO2	Implement data preprocessing.
316316	MACHINE LEARNING	MAL	CO3	Implement feature engineering techniques to prepare data for machine learning models.
316316	MACHINE LEARNING	MAL	CO4	Apply supervised learning models to train and evaluate.
316316	MACHINE LEARNING	MAL	CO5	Apply unsupervised learning models to train and evaluate.
316321	DATA WAREHOUSING WITH MINING TECHNIQUES	DWM	CO1	Explain the architecture, models, and processes involved in data warehousing and its distinction from operational databases.
316321	DATA WAREHOUSING WITH MINING TECHNIQUES	DWM	CO2	Apply OLAP operations for data analysis by designing multidimensional data models.
316321	DATA WAREHOUSING WITH MINING TECHNIQUES	DWM	CO3	Apply data mining algorithms to discover frequent item-sets and association rules.
316321	DATA WAREHOUSING WITH MINING TECHNIQUES	DWM	CO4	Apply various classification algorithms on a data set.
316321	DATA WAREHOUSING WITH MINING TECHNIQUES	DWM	CO5	Apply various clustering algorithms on a data set.