Subject Name	Description
Artificial Intelligence	To Understand different planning problems and have the basic knowledge how to design and implement AI planning systems. To know how to use AI planning technology for projects in different application domains. Ability to make use of AI planning literature. Learn the basics of the theory and practice of Artificial Intelligence as a discipline about intelligent agents capable of deciding what to do, and do it.
Computer Graphics	To understand the need of developing graphics applications and the hardware involved in building graphics applications and the representation and transformation of graphical images and the concept of Color Generation. To learn the different types of clipping algorithms and two dimensional transformations. Explain the Computer Graphics display technologies.
Multimedia Technology	Describe the ways in which multimedia information is captured, processed and rendered. Introduce multimedia quality of service (QoS) and to compare subjective and objective methods of assessing user satisfaction. Analyze the utility of QoS management schemes and the ability of unicast and multicast protocols to provide QoS guarantees. Discuss privacy and copyright issues in the context of multimedia. State the properties of different media streams; compare and contrast different multicast protocols.
ADHOC Networks	To have an overview of the physical, networking and architectural issues of mobile adhoc network To familiarize with sensor networks and the unique set of design challenges that they introduce To have an understanding of state of wireless and mobile ad hoc networking. And identify the major issues associated with ad-hoc/sensor networks. To explore current ad-hoc/sensor technologies by researching key areas such as algorithms, protocols, hardware, and applications.
Bioinformatics	Implement and test acceptable computational solutions. It Describe which data structures would be appropriate to use and explain why, given a problem and algorithms would be appropriate to use and explain why, given a problem. Utilize and understand statistical methods for the analysis of large datasets where appropriate.
Digital Signal Processing	To understand the key theoretical principles underpinning DSP. To learn how to use a powerful general -purpose mathematical package such as MATLAB to design and simulate a DSP systems.To know how to sample and reconstruct analog signals.
Mobile Computing	To introduce the basic concepts and principles in mobile computing. To discuss the major techniques involved, and networks & systems issues for the design and implementation of mobile computing systems and applications. To understand the key components and technologies involved. To acquire the knowledge to administrate and to maintain a Wireless LAN.
Reliable Computing	To understand the concepts of reliability and study various reliability models .To gain a know-how of various testing techniques .To study various concepts related to fault tolerance. To familiarize students about real-time systems and protocols for real-time communication.

Object Oriented Software Engineering	To investigate principles of object-oriented software engineering, from analysis through testing. To learn techniques at each stage of development, including use cases, UML, Java and the JDK. To practice the principles and techniques by developing a "real world" software system prototype. To study and experiment with alternative models of the software development process from the classical waterfall model to Extreme programming. To discuss and explore recent innovations in OOSE, such as template s& STL, J2EE&JavaBeans, C#&.NET, Design patterns, Aspect-oriented programming, etc.
Modeling and Simulation	To provide an understanding of methods, techniques and tools for modeling, simulation and performance analysis of complex systems such as communication and computer networks. Discuss the fundamental elements of discrete-event simulation including statistical models, random processes, random variants , and inputs to simulation. Analyze a real world problem and apply modeling methodologies to develop a discrete-event simulation model .Interpret and contrast discrete-event techniques for implementing a solution to a simulation problem.
Management Information System	Explain to students why information systems are so important today for business and management. To Evaluate the role of the major types of information systems in a business environment and their relationship to each other. Assess the impact of the Internet and Internet technology on business-electronic commerce and electronic business .Define an IT infrastructure and describe its components. Learn the core activities in the systems development process. Cultivate skills and experience in the development and implementation of information systems projects.
E-Commerce and ERP	Realize the potential for doing business on the web and identify a proper e-commerce model. Understand the impact of technology, particularly the telecommunication and Internet technology, on business.
Parallel Computing	To teach fundamental concepts of concurrency: non-determinism, race conditions, atomicity, synchronization, safety, liveness, fairness, deadlock. To teach multithreaded programming using Java threads, Java concurrency constructs, Intel Threading Blocks, OpenMP. To teach message passing model and programming with MPI. To teach basic parallel algorithm design. To teach performance analysis of parallel programs.
Data Warehousing & Data Mining	Define the concept, structure and major issues of data warehousing and data mining. To analyze multi-dimensional modelling techniques in designing data warehouses To differentiate OnLine Transaction Processing and OnLine Analytical processing for decision support To know various multidimensional schemas suitable for data warehousing it inculcate knowledge on data mining query languages and use knowledge discovery in data warehouses. Discover and measure interesting patterns from different kinds of databases
Software Testing	Describe with examples the way in which a defect in software can cause harm to a person, to the environment or to a company. Distinguish between the root cause of a defect and its effects. Give reasons why testing is necessary by giving examples Describe why testing is part of quality assurance Understanding how testing contributes to higher quality. Explain the fundamental principles in testing.
Distributed Operating	To understand the principles and techniques behind the design of distributed systems, such as locking, concurrency, scheduling, and communication across networks .To learn

System	the principles, architectures, algorithms and programming models used in distributed systems. To examine state- of-the -art distributed systems, such as Google File System. To gain knowledge on Distributed operating system concepts that includes architecture, Mutual exclusion algorithms, Deadlock detection algorithms and agreement protocols and to the distributed resource management components viz. the algorithms for implementation of distributed shared memory, recovery and commit protocols.
Soft Computing	To understand the fundamental theory and concepts of neural networks, neuro-modeling, several neural network paradigms and its applications. To understand the concepts of fuzzy sets, knowledge representation using fuzzy rules, approximate reasoning, fuzzy inference systems, and fuzzy logic control and other machine intelligence applications of fuzzy logic.To understand the basics of an evolutionary computing paradigm known as genetic algorithms and its application to engineering optimization problems.
Neural Networks	Have a general understanding of soft computing methodologies, including artificial neural networks, fuzzy sets, fuzzy logic, and fuzzy clustering techniques. Study neuro fuzzy control and inference systems.
Fault Tolerant Systems	Understand the risk of computer failures and their peculiarities compared with other equipment failures. Know the different advantages and limits of fault avoidance and fault tolerance techniques. Be aware of the threat from software defects and human operator error as well as from hardware failures. Understand the basics of redundant design.
Software Project Management	Conduct project planning activities that accurately forecast project costs, timelines, and quality. Understand processes for successful resource, communication, and risk and change management. Demonstrate effective organizational leadership and change skills for managing projects, project teams, and stakeholders. Understand and practice the process of project management and its application in delivering successful IT projects.
Mobile Apps Development	Describe the limitations and challenges of working in a mobile and wireless environment as well as the commercial and research opportunities presented by these technologies. Describe the components and structure of a mobile development frameworks (Android SDK and Eclipse Android Development Tools (ADT)) and learn how and when to apply the different components to develop a working system. Describe and apply software patterns for the development of the application models described above. Describe and work within the capabilities and limitations of a range of mobile computing devices. Design, implement and deploy mobile applications using an appropriate software development environment
Design of Embedded Systems	To provide an overview of the Microprocessors and various Microcontrollers.To rely on elementary treatment and qualitative analysis of architecture and programming of the MicrocontrollersTo provide an overview of 8051 and PSOC architecture and programming.To gain the knowledge on various applications of Microcontrollers, Real time operating system and also advanced architectures like ARM and SHARC.
Robotics and Computer Vision	Provide access to a research biased Masters level degree course in computational intelligence and robotics suitable for graduates from a range of backgrounds and disciplines. Introduce the principles, models and applications of computer vision.

Digital Image Processing	To understand the fundamentals of digital image processing. Know how of image transformation used in digital image processing. In-depth knowledge about image enhancement techniques used in digital image processing. Discuss image restoration techniques and methods used in digital image processing. Understand image compression and Segmentation used in digital image processing. To gain experience in applying image processing algorithms to real problems.
Network Security and Cryptography	To provide deeper understanding into cryptography, its application to network security, threats/vulnerabilities to networks and countermeasures. And to study various approaches to Encryption techniques, symmetric key encryption and asymmetric key encryption algorithms. To know Digital Signature Standard and provide solutions for their issues.
Cloud Computing	To discuss the fundamental ideas behind Cloud Computing, the evolution of the paradigm, its applicability; benefits, as well as current and future challenges. To create awareness about the basic ideas and principles in data center design and management. And to explain different CPU, memory and I/O virtualization techniques that serve in offering software, computation and storage services on the cloud.