COURSE OUTCOMES FOR M.TECH-CSE R18 FOR THE YEAR 2018-2020

Course Outcome	Year/Semester I Sem	Subject Name (Subject Code) Data Structures and Algorithms(M18CS01)	No. of Hours L:3 T:0 P:0	Credits: 3
On successful completion of this course, students will be able to:				
1	Define knowledge basic on data structures to store and retrieve an ordered or unordered data. Such as, arrays, linked lists, trees, heaps, and hash tables.			
2	Develop knowledge on applications of data structures having the ability to implement algorithms to perform operation as create, insert, delete, search, and sorting.			
3	Learn to analyze and to compare efficiency of an algorithm.			
4	Understand the basic concepts of latest techniques.			
5	Ability to have concepts on tree and graphs.			
6	Implement various projects on these data structures and plan B-Trees to implement different various operations.			
Course Outcome	**Year /Semester I Sem**	**Subject Name (Subject Code)** Distributed Systems(M18CS02)	**No. of Hours L:3 T:0 P:0**	**Credits:3**
On successful completion of this course, students are able to:				
1	Explain distributed system design and its properties.			
2	List the principles underlined along with its functionality.			
3	Implement problems and challenges with these principles.			
4	Identify the effectiveness and shortcomings for solutions.			
5	Identify the principles that are based on these contemporary distributed systems.			
6	Explain its affect on software design to identify the features.			
Course Outcome	**Year / semester I Sem**	**Subject Name (Subject Code)** Internet of Things(M18CS03)	**No. of Hours L:3 T:0 P:0**	**Credits:3**
After the completion of this course, the students should be able to				
1	Describe the basic terminology, latest technology along with its applications.			
2	Discuss the protocols based on the concepts such as machine to machine.			
3	Illustrate the IOT devices using Python Scripting Language.			
4	Develop an application with Raspberry PI platform which can be widely used in many applications of IoT devices.			
5	Implement it widely that can be used in many applications of IoT devices.			
6	Design a web application framework on REST ful web API.			
Course Outcome	**Year / semester I Sem**	**Subject Name (Subject Code)** Machine Learning(M18CS04)	**No. of Hours L:3 T:0 P:0**	**Credits: 3**
1	Discuss different application on Machine Learning problems.			
2	Describe various algorithms on Machine Learning mentioning its strengths and weaknesses..			

3	Illustrate the basic theory focused on Machine Learning
4	Improve the performance of Machine Learning algorithms with different parameters.
5	Analyze current research papers
6	Understand the latest issues raised by current researchers

Course Outcome	**Year/Semester I Sem**	**Subject Name (Subject Code)** Cloud Computing(M18CS05)	**No. of Hours L:3 T:0 P:0**	**Credits: 3**
On successful completion of this course, students will be able to:				
1	Discuss main concepts, key strengths, and limitations for cloud computing.			
2	Develop the architecture along with specific infrastructure on cloud computing, including SaaS, PaaS, IaaS, public cloud, private cloud, hybrid cloud, etc.			
3	Explain the issues on cloud computing along with security, privacy, and interoperability.			
4	Choose and use the appropriate technology, methods on these issues.			
5	Identify problems, and explain, analyze, and evaluate various cloud computing solutions.			
6	Provide the appropriate solutions on cloud computing based on the application.			
Course Outcome	**Year /Semester I Sem**	**Subject Name (Subject Code)** Data Science(M18CS06)	**No. of Hours L:3 T:0 P:0**	**Credits:3**
On successful completion of this course, students are able to:				
1	Describe a Data Science, skill sets available for a data scientist.			
2	Discuss the terms Statistical Inference, its significance to explore data analysis.			
3	Understand Data Science Process and its components interact			
4	Adapt APIs tools to understand the Web data.			
5	Illustrate EDA and the Data Science as a case study.			
6	Plan a effective visualization on given data.			
Course Outcome	**Year / semester I Sem**	**Subject Name (Subject Code)** Advanced Wireless and Mobile Networks(M18CS07)	**No. of Hours L:3 T:0 P:0**	**Credits:3**
After the completion of this course, the students should be able to				
1	Discuss the state-of-the-art in network protocols, architectures and applications			
2	Analyze existing network protocols and networks.			
3	Develop new protocols on networking			
4	Describe novel ideas in the area of Networking via term-long research projects.			
5	Implement various protocols on localization Methods.			
6	Design a real time applications on RFID.			

Course Outcome	Year / semester I Sem	Subject Name (Subject Code) Scripting Languages(M18CS08)	No. of Hours L:3 T:0 P:0	Credits: 3
1	Explain scripting as well as contributions on scripting languages.			
2	Discuss Python on regard as the object-oriented concepts,			
3	Design the different built-in objects of Python,			
4	Discuss advanced applications such as TCP/IP network programming, multithreaded programming, Web applications, discrete-event simulations, etc.			
5	Develop different modules on exception handling applications.			
6	Plan a Real Time Web systems.			
Course Outcome	Year/Semester I Sem	Subject Name (Subject Code) Research Methodology(M18MC01)	No. of Hours L:2 T:0 P:0	Credits: 2
On successful completion of this course, students will be able to:				
1	Acquire knowledge on Research Design and statistical methods in research.			
2	Analyze the various methods in Data Collection, Data Organization and different approaches of Data Representation.			
3	Understand all the basic concepts required to prepare a. Research synopsis b. Dissertation c. Writing a good research proposal			
4	Interpret the Scope of Patent Rights and Administration of Patent System.			
Course Outcome	Year /Semester I Sem	Subject Name (Subject Code) English for Research Paper Writing(M18MC01)	No. of Hours L:2 T:0 P:0	Credits:0
On successful completion of this course, students are able to:				
1	Obtain complete knowledge on Definition of a research paper, Purpose of writing any research paper, its Scope and Benefits.			
2	Understand the standard English formats .for scripting the best research paper			
3	Analyze all the Qualitative and Quantitative Research Methodologies and the ethics of plagiarism.			
4	Explain the detailed process of writing and publishing any research paper and perform a case study on paper writing.			
Course Outcome	Year / semester I Sem	Subject Name (Subject Code) Data Structures and Algorithms Lab(M18CS09)	No. of Hours L:0 T:0 P:4	Credits:2
After the completion of this course, the students should be able to				
1	Analyze algorithms efficiency .			
2	Summarize and implement various searching and sorting techniques.			
3	Demonstrate stack, queue and linked list with various operations			
4	Implement different trees and graphs concepts.			

Course Outcome	Year / semester I Sem	Subject Name (Subject Code) Cloud Computing Lab (M18CS10)	No. of Hours L:0 T:0 P:4	Credits:2
1	Develop the architecture along with specific infrastructure on cloud computing, including SaaS, PaaS, IaaS, public cloud, private cloud, hybrid cloud, etc.			
2	Explain the issues on cloud computing along with security, privacy, and interoperability			
3	Identify problems, and explain, analyze, and evaluate various cloud computing solutions.			
4	Provide the appropriate solutions on cloud computing based on the application.			

II-SEMESTER

Course Outcome	Year/Semester II Sem	Subject Name (Subject Code) Network Programming(M18CS11)	No. of Hours L:3 T:0 P:0	Credits: 3
On successful completion of this course, students will be able to:				
1	Determine Linux utilities.			
2	Identify file handling techniques and signals.			
3	Explain what is IPC and network programming in Java.			
4	Learn how processes communicate with each other across a Computer Network.			
5	Develop Network programming using TCP/UDP sockets			
6	Implement Real Time and current trends in client server Application.			
Course Outcome	**Year /Semester II Sem**	**Subject Name (Subject Code)** Soft Computing Techniques(M18CS12)	**No. of Hours L:3 T:0 P:0**	**Credits:3**
On successful completion of this course, students are able to:				
1	Understand the fuzzy logic, concepts of fuzziness involved in fuzzy set theory			
2	Explain the concepts of fuzzy sets, knowledge representation using fuzzy rules, approximate reasoning, fuzzy inference systems, and fuzzy logic.			
3	Build the fundamental theory, concepts of neural networks.			
4	Identify different neural network architectures, algorithms, applications along their limitations.			
5	Classify different learning rules, architectures to learn several neural network paradigms along with its applications.			
6	Deploy different applications of these models to solve engineering			
Course Outcome	**Year / semester II Sem**	**Subject Name (Subject Code)** Computer Vision(M18CS13)	**No. of Hours L:3 T:0 P:0**	**Credits:3**
After the completion of this course, the students should be able to				
1	Elaborate development of algorithms and techniques.			
2	Analyze and interpret the visible world around us with real time problems.			

3	Apply the fundamental concepts on multi-dimensional signal processing, feature extraction, pattern analysis visual geometric modeling, stochastic optimization etc.			
4	Take part to makeup and contribute in research developments in the field of computer vision.			
5	Explain different applications ranging from Biometrics, Medical diagnosis, document processing, mining of visual content, to surveillance, advanced rendering etc.			
6	Identify applications In-vehicle vision system.			
Course Outcome	**Year / semester II Sem**	**Subject Name (Subject Code)** Data Preparation and Analysis(M18CS14)	**No. of Hours L:3 T:0 P:0**	**Credits: 3**
1	Work for a business environment dealing with data preparation.			
2	Prepare data marts for statistical analysis using SAS software.			
3	Implement SAS with an efficient			
4	Analyze data from databases to clean the data for statistical analysis in SAS.			
4	Develop many strategies to deal with imperfect real world data.			
Course Outcome	**Year/Semester II Sem**	**Subject Name (Subject Code)** Digital Forensics(M18CS15)	**No. of Hours L:3 T:1 P:0**	**Credits: 3**
On successful completion of this course, students will be able to:				
1	Discuss digital forensics related to investigative process.			
2	Explain the legal issues to prepare, perform digital forensic analysis based on the investigator's position.			
3	Demonstrate the techniques, usage of digital forensics tools			
4	Elaborate digital forensics in detail.			
5	Analyze the state of the practice, gaps in technology, policy, and legal issues			
6	Develop techniques used on Data Analysis, cybercrime.			
Course Outcome	**Year /Semester II Sem**	**Subject Name (Subject Code)** Distributed Databases (M18CS16)	**No. of Hours L:3 T:0 P:0**	**Credits:3**
On successful completion of this course, students are able to:				
1	Describe various techniques used for data fragmentation, replication, and allocation for a distributeddatabase.			
2	Compare simple strategies for executing a distributed query optimization.			
3	Learn the two-phase commit protocol on multiple nodes.			
4	Describe distributed concurrency control.			
5	Illustrate techniques based on the distinguished voting methods.			
6	Learn different types of Heterogeneous Database System			
Course Outcome	**Year / semester II Sem**	**Subject Name (Subject Code)** Human Computer Interaction(M18CS17)	**No. of Hours L:3 T:0 P:0**	**Credits:3**
After the completion of this course, the students should be able to				
1	Discuss the characteristics of graphical and web user interfaces.			
2	Understand the principles of design of business function.			
3	Demonstrate the system menus and screen based controls.			

4	Adapt the goals and conceptualization interaction.			
5	Design the process of interaction and affective aspects			
6	Compare the framework, predictive models and prototypes.			
Course Outcome	**Year / semester II Sem**	**Subject Name (Subject Code)** Software Process and Project Management (M18CS18)	**No. of Hours L:3 T:0 P:0**	**Credits: 3**
1	Discuss and plan to execute projects based on required standards.			
2	Understand the range of tools used on project management**.**			
3	Analyze the concepts related on project governance and methodologies.			
4	Apply critical analysis on solving problems and planning process.			
5	Describe planning, Risk and issues management.			
6	Plan process, pragmatic planning service delivery and quality assurance			
Course Outcome	**Year/Semester II Sem**	**Subject Name (Subject Code)** Stress Management (M18AC02)	**No. of Hours L:2 T:0 P:0**	**Credits: 0**
On successful completion of this course, students will be able to:				
1	Maintain a stress awareness log. Include identification of causes, symptoms, and analysis of effects.			
2	Gather information on current stress management techniques and evaluate personal relevance.			
3	Practice specific techniques, track effectiveness, and revise to meet personal preferences.			
4	Choose an adaptable stress management plan for academic success incorporating selected techniques.			
Course Outcome	**Year /Semester II Sem**	**Subject Name (Subject Code)** Network Programming Lab(M18CS19)	**No. of Hours L:0 T:0 P:4**	**Credits:2**
On successful completion of this course, students are able to:				
1	Understand the concepts of Socket commands.			
2	Implement Connection-Oriented Service using standard ports.			
3	Define Connectionless and Connection Oriented Service.			
4	Plan a case study on client and server and construct a Remote Command Execution using sockets.			
Course Outcome	**Year / semester II Sem**	**Subject Name (Subject Code)** Digital Forensics Lab (M18CS20)	**No. of Hours L:0 T:0 P:2**	**Credits:2**
After the completion of this course, the students should be able to				
1	Understand the methods available for retrieving the lost data.			
2	Classify the various mobile forensic techniques and how to handle them.			
3	Identify the different Open-source intelligence techniques			
4	Demonstrate how to develop certification for Cyber Forensic.			

Course Outcome	Year / semester I I Sem	Subject Name (Subject Code) Mini Project (M18CS21)	No. of Hours L:0 T:0 P:2	Credits: 2
1	Enhance students' knowledge in current technology			
2	Develop leadership ability and responsibility to execute the given task			
3	Enhance their employability skills along with real corporate exposure			
4	Elaborate the completed task and compile the report.			

III-SEMESTER

Course Outcome	Year/Semester Ⅲ Sem	Subject Name (Subject Code) Semantic Web & Social Networks (M18CS22)	No. of Hours L:3 T:0 P:0	Credits: 3
On successful completion of this course, students will be able to:				
1	Perceive the concept structure of the semantic web technology and how this technology revolutionizes the World Wide Web and its uses.			
2	Analyze the concepts of metadata, semantics of knowledge and resource, ontology, andtheir descriptions in XML-based syntax and web ontology language (OWL).			
3	Describe logic semantics and inference with OWL.			
4	Use ontology engineering approaches in semantic applications			
5	Program semantic applications with Java API.			
6	Perceive the concept structure of the semantic web technology and how this technology revolutionizes the World Wide Web and its uses.			
Course Outcome	**Year /Semester III Sem**	**Subject Name (Subject Code)** Mobile Application and Security (M18CS23)	**No. of Hours L:3 T:0 P:0**	**Credits: 3**
On successful completion of this course, students are able to:				
1	Explain the mobile issues and development strategies.			
2	Discuss WAP and mobile security issues.			
3	Define the Bluetooth security issues.			
4	Classify the SMS Security issues.			
5	Demonstrate the Enterprise Security on the Mobile OS.			
6	Develop Application and security on Mobile OS.			
Course Outcome	**Year /Semester III Sem**	**Subject Name (Subject Code)** Compiler for HPC (M18CS24)	**No. of Hours L:3 T:0 P:0**	**Credits: 3**

After the completion of this course, the students should be able to				
1	Transform algorithms in the computational area to efficient programming code for modern computer architectures.			
2	Discuss, organize and handle programs for scientific computations.			
3	Develop tools for performance optimization and debugging.			
4	Analyze code with respect to performance and suggest and implement performance improvements.			
5	Report on performance analysis in clear and correct writing.			
6	Implement algorithms on sparse graphs.			
Course Outcome	**Year /Semester III Sem**	**Subject Name (Subject Code)** Advanced Optimization Techniques (M18MA01)	**No. of Hours L:3 T:0 P:0**	**Credits: 3**
On successful completion of this course, students will be able to:				
1	Describe problem clearly, identify and analyze the individual functions.			
2	Analyze study on solving optimization problem.			
3	Translate verbal formula on optimization problem.			
4	Design algorithms, reliably to find an approximate solution.			
5	Compare the performance of an algorithm.			
6	Discovery, study, understand and solve optimization techniques using algorithms			
Course Outcome	**Year /Semester III Sem**	**Subject Name (Subject Code)** Waste Management (M18SE27)	**No. of Hours L:3 T:0 P:0**	**Credits: 3**
On successful completion of this course, students are able to:				
1	Compare the subject from the technical, legal and economical points .			
2	Learn solid waste management.			
3	Describe environment for sound management.			
4	Understand a municipal solid waste management system.			
5	Plan a solid waste management system for decision makers.			
6	Design an incineration facility.			
Course Outcome	**Year /Semester III Sem**	**Subject Name (Subject Code)** Embedded System Design (M18VL07)	**No. of Hours L:3 T:0 P:0**	**Credits: 3**
After the completion of this course, the students should be able to				
1	Describe embedded systems, design, technology to explain its metrics or challenges.			
2	Design custom single – purpose processors using combinational as well as sequential logic.			
3	Discuss about optimizing single – purpose processors. Discuss about the basic architecture andoperation of general purpose processors.			
4	Define and distinguish between a timer and a counter, various types of timers and UniversalAsynchronous Receiver/ Transmitter. Explain controllers for LCD, Keypad and Stepper Motor.			

5	Discuss common memory types ROM , RAM, advanced RAM. Explain microprocessor interfacingand arbitration methods, various protocols like serial, parallel.			
6	Explain basics of interrupts, architectures like Round Robin, Real – Time Operating Systemarchitecture.			
Course Outcome	**Year /Semester III Sem**	**Subject Name (Subject Code)** Dissertation Phase-I (M18CS25)	**No. of Hours L:0 T:0 P:20**	**Credits: 10**
1	Identify the problem by applying acquired knowledge.			
2	Analyze and categorize executable project modules.			
3	Choose efficient tools for designing project modules.			
4	Combine all the modules through effective team work after efficient testing			
5	Elaborate the completed task and compile the project report.			

IV-SEMESTER

Course Outcome	**Year/Semester I Sem**	**Subject Name (Subject Code)** Dissertation Phase-II (M18CS26)	**No. of Hours L:0 T:0 P:32**	**Credits: 16**
On successful completion of this course, students will be able to:				
1	Identify the problem by applying acquired knowledge.			
2	Analyze and categorize executable project modules.			
3	Choose efficient tools for designing project modules.			
4	Combine all the modules through effective team work after efficient testing			
5	Elaborate the completed task and compile the project report.			