JNTUH COLLEGE OF ENGINEERINGJAGTIAL
Nachupally, Kondagattu, Jagtial-505501

Department of Computer Science and Engineering

LIST OF COURSE OUTCOMES
2020-21
M.Tech - I-Year I Sem

CO#	Subject Name -CO Statemetns
CPG1	**CPG1-Mathematical Foundations of Computer Science**
CPG1.1	Understand the basic notions of discrete and continuous probability.
CPG1.2	Understand the methods of statistical inference, and the role that sampling distributions play in those methods.
CPG1.3	Differentiate regression and classification problems and can do over fitting model assessment.
CPG1.4	Model and solve the real-world problems using graphs.
CPG1.5	Perform correct and meaningful statistical analyses of simple to moderate complexity.

CPG2	CPG2-Advanced Data Structures
CPG2.1	Choose appropriate data structures, understand ADT/ libraries, and use it to design algorithms for a specific problem.
CPG2.2	Understand the implementation of symbol table using hashing techniques
CPG2.3	Understand the operations on skip list
CPG2.4	Understand and implement operations, applications of balanced binary search trees
CPG2.5	Develop algorithms for text processing applications
CPG2.6	Identify suitable data structures and develop algorithms for computational geometry problems

CPG3	PE-I : CPG3- Information Security
CPG3.1	Demonstrate the knowledge of cryptography, network security concepts and applications.
CPG3.2	Ability to apply security principles in system design.
CPG3.3	Understand the Public-Key Infrastructure
CPG3.4	Implement Hashing and Digital Signature techniques
CPG3.5	Understand security protocols for protecting data on networks
CPG3.6	Ability to identify and investigate vulnerabilities and security threats and mechanisms to counter them

CPG3	PE-I : CPG3- Machine Learning
CPG3.1	Identify the basic methods and Linear models in Supervised Learning and know the importance of binary classification.
CPG3.2	Understand and apply the Unsupervised Learning algorithms for Clustering, Dimensionality Reduction, Matrix Factorization and Completion.
CPG3.3	Evaluate Machine Learning algorithms and selects relevant models.
CPG3.4	Explain Modeling of Sparse, Sequence/Time-series data and analyzes Deep and Feature Representation Learnings.
CPG3.5	Extract features of Scalable Machine Learning techniques that can be used for various IoT applications.
CPG3.6	Recognize the characteristics of various machine learning techniques and get an insight of when to apply a particular machine learning approach to solve real-world application problems.

CPG4	PE-II : CPG4- Cloud Computing
CPG4.1	Understand the principles, techniques, protocols and algorithms that can be adapted from other distributed computing paradigms to the development of successful clouds
CPG4.2	Understanding about the cloud security and privacy concepts and implementation strategies
CPG4.3	Understand and explore various cloud service providers, facilities provided, costing involved etc
CPG4.4	Identify cloud services for application
CPG4.5	Analyze the financial and technological implications for selecting cloud computing platforms.
CPG4.6	Perform Cloud adoption decision making for different case studies and understanding of SLAs

CPG5	CPG5- Advanced Data Structures Lab
CPG5.1	Ability to select the data structures that efficiently model the information in a problem.
CPG5.2	Ability asses efficiently trade-offs among different data structure implementations or combinations.
CPG5.3	Implement and know the application of algorithms for sorting
CPG5.4	Design programs using a variety of data structures, including hash tables, binary and general tree structures, search trees, tries, heaps, graphs, and B-trees
CPG5.5	Implement and know the application of algorithms pattern matching.
CPG5.6	Identify suitable data structures and develop algorithms for computational geometry problems.

CPG6	CPG6- Machine Learning Lab
CPG6.1	Understand complexity of Machine Learning algorithms and their limitations.

CPG6.2	Explore modern notions in data analysis-oriented computing.
CPG6.3	Be capable of confidently applying common Machine Learning algorithms in practice and Implementing them on their own.
CPG6.4	Be capable of performing experiments in Machine Learning using real-world data.
CPG6.5	Apply appropriate data sets to the Machine Learning algorithms.
CPG6.6	Identify and apply Machine Learning algorithms to solve real world problems using python.

CPG7	**CPG7 -Research Methodology & IPR**
CPG7.1	Understand research problem formulation.
CPG7.2	To get the knowledge about technical writing.
CPG7.3	To know the literature studies, plagiarism and Analyze research related information and Follow research ethics.
CPG7.4	To know the patent rights.
CPG7.5	To analyze the nature of intellectual property rights and new developments.
CPG7.6	Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.

CPG8	**CPG8- Audit Course-I : English for Research Paper Writing**
CPG8.1	Understand Planning and Preparation for structuring paragraphs and sentences and avoiding ambiguity.
CPG8.2	Write a research paper in a standard format
CPG8.3	Analyze the research methodologies in a quantitative and qualitative aspects
CPG8.4	Analyze the content and formulate the title
CPG8.5	Identify the observations based on the results
CPG8.6	Obtain complete knowledge on Writing of a research paper