II Year B.Tech. IT/CST -I SEM

1. PROBABILITY AND STATISTICS:

❖ **OUTCOMES**:
1. Students would be able to identify distribution in certain realistic situation. It is mainly useful for circuit as well as non-circuit branches of engineering. Also able to differentiate among many random variable involved in the probability models. It is quite useful for all branches of engineering.
2. The student would be able to calculate mean and proportions (small and large sample) and to make important decisions from few samples which are taken out of unmanageably huge population's .It is mainly useful for non-circuit branches of engineering.
3. The students would be able to find the expected queue length, the ideal time, the traffic intensity and the waiting time. These are very useful tools in many engineering and data management problems in the industry. It is useful for all branches of engineering.
4. The student would able to understand about the random process, Markov process and Markov chains which are essentially models of many time dependent processes such as signals in communications, time series analysis, queuing systems. The student would be able to find the limiting probabilities and the probabilities in nth state. It is quite useful for all branches of engineering.

2. MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE:

❖ **OUTCOMES**:
1. Ability to illustrate by examples the basic terminology of functions, relations, and sets and demonstrate knowledge of their associated operations.
2. Ability to demonstrate in practical applications the use of basic counting principles of permutations, combinations, inclusion/exclusion principle and the pigeonhole methodology.
3. Ability to represent and Apply Graph theory in solving computer science problems

3. DATA STRUCTURES

❖ **OUTCOMES**:
1. Learn how to use data structure concepts for realistic problems.
2. Ability to identify appropriate data structure for solving computing problem In respective language.
3. Ability to solve problems independently and think critically.

4. DIGITAL LOGIC DESIGN AND COMPUTER ORGANIZATION

❖ **OUTCOMES**:

1. Student could able to design, understand the number systems, combinational sequential circuits. And they should be in a position to continue with computer organization.
2. Students understand in a better way the I/O and memory organization in depth. They should be in a position to write assembly language programs for various applications.

5. ELECTRONIC DEVICES AND CIRCUITS

❖ **OUTCOMES**:

At the end of the course, the student will be able to:
1. Understand and analyze the different types of diodes, operation and its characteristics
2. Design and analyses the DC bias circuitry of BJT and FET.
3. Design biasing circuits using diodes and transistors.
4. To analyze and design diode application circuits, amplifier circuits and oscillators employing BJT, FET devices.

6. BASIC ELECTRICAL ENGINEERING

❖ **OUTCOMES**:

1. After going through this course the student gets a thorough knowledge on basic electrical circuits, parameters, and operation of the transformers in the energy conversion process, electromechanical energy conversion, construction operation characteristics of DC and AC machines and the constructional features and operation of operation measuring instruments like voltmeter, ammeter, wattmeter etc...
2. With which he/she can able to apply the above conceptual things to real-world electrical and electronics problems and applications.

7. ELECTRICAL AND ELECTRONICS LAB

❖ **OUTCOMES**:
After completion of this course, the student
1. Understand different types of measuring instruments, their construction, operation and characteristics
2. Identify the instruments suitable for typical measurements

3. Apply the knowledge about transducers and instrument transformers to use them effectively.

8. DATA STRUCTURES LAB

❖ OUTCOMES:

1. Ability to identify the appropriate data structure to given problem.
2. Graduate able to design and analyze the time and space complexity of algorithm or program.
3. Ability to effectively use compilers includes library functions, debuggers and trouble shooting.