SILIGURI INSTITUTE OF TECHNOLOGY

ELECTRONICS & COMMUNICATION ENGINEERING

COURSE OUTCOME

7TH SEMESTER

Course Title : Wireless Communication and Networking (EC 701)

CO1: Describe fundamentals of cellular system design
CO2: Determine the characteristics of different multiple access techniques in mobile/wireless communication networks.
CO3: Classify various standard and protocols of wireless communication.
CO4: Explain the architecture & operation of different Cellular Communication Networks .
CO5: Identify the Characteristics of wireless channel and propagation path loss.

Course Title:*Microelectronics and VLSI Designs* (EC- 702) &VLSI Design Lab (EC- 792)

CO1: Describethe basic concept of VLSI design: Microelectronic evaluation, Scale of Integration, Types of VLSI Chips, different design domains and design principles.
CO2: Understand Silicon Semiconductor Technology and CMOS processing technology: P-well, N-well, Twin Tub process, layout Design rules.
CO3: Implement CMOS logic circuits, Complex logic circuits, Advanced Logic circuits and different sequential CMOS logic circuits.
CO4: Testdifferent combinational and sequential logic circuits and verify their behaviorwith Spice Simulation and EDA tools for VLSI Design.
CO5: Design and develop CPLD/FPGA based small prototype.

Course Title : Rf & Microwave Engineering (EC703A) & Rf & Microwave Engineering Lab (EC793A)

CO1: Describe the RF & Microwave spectrum and its application along with the advantages of microwave signal.
CO2: Understand the working principle of passive and active Microwave devices.
CO3: Utilize scattering matrix in different microwave passive components to realize their behaviour.
CO4:Analyze different modes of rectangular and circular waveguides, cavity resonators.
CO5: Investigate the characteristics of microwave sources and components for measurement techniques.

Course Title/Code: Embedded Systems (EC 704 B)

CO1: Describe the concept of Embedded Systems, **Identify** the differences between Embedded system Vs General computing systems & Microprocessor Vs Microcontroller.
CO2: Discuss the architecture of Embedded Systems. **Understand** the operation of various Devices and Communication Buses used in embedded systems.
CO3: Discuss the Program Modelling Concepts and Real Time Operation Systems used in embedded systems.
CO4: Use various Embedded C Compilers, IDEs and simulators for programming popular microcontrollers used in embedded systems design.

Course Title: POWER ELECTRONICS CODE: EC-705D & EC-795D

CO1: Describe operation of different AC voltage controller along with Cycloconverters.
CO2: Explain characteristics of various power electronics devices.
CO3: Analyze the performance of different types of DC converters.
CO4: Estimate the performance parameters of Bridge Inverters.
CO5: Describe operation of different AC voltage controller along with Cycloconverters.

Course Title: Group Discussion Code: HU 781

CO1: Internalize the basic principles of group discussion like initiating, turn taking, creative intervening and closing.
CO2: Co ordinate in a group on contemporary topics to enhance the speaking skills.
CO3: Demonstrate proper body language while expressing ones idea or opinion in a group.