

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION
ENGINEERING**

List of Subjects:(Regulation 2013)

S.No.	Course code	Subject code	Course Name
Semester VII			
1.	C401	EC6701	RF and Microwave Engineering
2.	C402	EC6702	Optical Communication and Networks
3.	C403	EC6703	Embedded and Real Time Systems
4.	C404	IT6005	Digital Image Processing
5.	C405	EC6009	Advanced Computer Architecture
6.	C406	EC6013	Advanced Microprocessor and Microcontroller
7.	C407	EC6711	Embedded Laboratory
8.	C408	EC6712	Optical and Microwave Laboratory
Semester VIII			
9.	C409	EC6801	Wireless Communication
10.	C410	EC6802	Wireless Networks
11.	C411	CS6003	Ad hoc and Sensor Networks
12.	C412	GE6757	Total Quality Management
13.	C413	EC6811	Project Work

Course Outcomes of all subjects

Semester VII

RF and Microwave Engineering: C401	
C401.1	Understand the basic concepts of multi – port RF networks and HF components
C401.2	Analyze the RF Transistor amplifiers and design matching networks using smith charts
C401.3	Investigate the active & passive microwave devices and components used in microwave communication systems
C401.4	Explain the generation of Microwave signals and design microwave amplifiers
C401.5	Implement the measurement techniques microwave signal and parameters.

Optical Communication and Networks: C402	
C402.1	Students can Learnt the Principle & Parameters of Light wave.
C402.2	Students can facilitate the knowledge about the degradation of light waves in optical fiber.
C402.3	Students could have acquired knowledge about sources of optical fibers and

	transmission techniques.
C402.4	Students could be very meticulous in understanding the Photodetection methods in receiver block.
C402.5	Analyzing capacity of the students could have improved in the digital transmission and its associated parameters on system performance.

Embedded and Real Time Systems C403	
C403.1	Summarize Architecture and programming of ARM processor.
C403.2	Apply the concepts of embedded systems and its features.
C403.3	Analyze various Real time Operating system is used in Embedded System.
C403.4	Design the flow & Techniques to develop Software for embedded systems networks.
C403.5	Analyze Real-time applications using embedded System Products.

Digital Image Processing: C404	
C404.1	Review the fundamental concepts of a digital image processing system.
C404.2	Examine the various types of images, intensity transformations using spatial and frequency domain filtering
C404.3	Analyze the various types of filters in restoration and segmentation techniques.
C404.4	Categorize various compression techniques and Interpret Image compression standards.
C404.5	Interpret image representation and recognition techniques

Advanced Computer Architecture: C405	
C405.1	Understand the architectural design of CPU and their recent trends.
C405.2	Learn about the concept of Instruction level Parallelism.
C405.3	Expose the implementation difficulties of Data level Parallelism.
C405.4	Evaluate the memory consistency concepts.
C405.5	Study about memory and I/O systems

Advanced Microprocessor and Microcontroller: C406	
C406.1	Analyze the fundamentals of Pentium Processor and its relevant applications
C406.2	Design and implement the ARM processor with interfacing circuits
C406.3	Determine the advance application using ARM Interfacing Circuits
C406.4	Recognize the various advanced Microcontroller with Motorola
C406.5	Implement the PIC Microcontroller based on interfacing circuits and its advanced applications

Embedded Laboratory: C407	
C407.1	Design a ARM for the specific application by the way of basic building blocks of

	embedded system.
C407.2	Implement various interfacing mechanism and observe the performance by using in KEIL software.
C407.3	Analyze performance of ARM processor by interfacing keyboard, display, motor and sensor.
C407.4	Evaluate the interrupt performance of ARM processor by using in KEIL software.
C407.5	Apply the interfacing knowledge between zigbee communication protocols with ARM processor.

Optical and Microwave Laboratory: C408	
C408.1	Gain a knowledge on fundamental working principle of optical sources, detectors and fibers.
C408.2	Design fiber optic analog and digital communication link using plastic and glass fiber
C408.3	Investigate the characteristics of the fiber and measurements of signal in optical fiber
C408.4	Explain operating principles of microwave components used in microwave communication
C408.5	Implement the measurement techniques of various microwave parameters.

Semester VIII

Wireless Communication: C409	
C409.1	To Gain knowledge from various characteristics of wireless channels and study about various parameters of mobile multipath channels
C409.2	Understand the concept of cellular architecture and design a cellular system
C409.3	Evaluate and implement various signalling schemes for fading channels
C409.4	Analyse various multipath mitigation techniques and analyze their performance
C409.5	Apply and implement with transmit/receive diversity and MIMO systems and analyze their performance

Wireless Networks: C410	
C410.1	Gain a Knowledge on basics of wireless protocols layer and wireless standards such as wireless LAN, Bluetooth, WIMAX and Wi-Fi
C410.2	Understand the IP packet processing operation in mobile IP environments with the help of routing protocol
C410.3	Analyze the congestion control mechanism over the wireless network for data transmission environments.
C410.4	Design and implement wireless network environment for any application using latest wireless protocols and standards such as 3G and LTE
C410.5	Implement different type of applications for smart phones and mobile devices with latest network strategies such as 4G and 5G.

Ad hoc and Sensor Networks: C411	
C411.1	Understanding the fundamentals of wired and wireless communication with the

	help of EM spectrum. Realize the diverse design issues of MANET.
C411.2	Discriminate about identifying the different types of contention based channel accessing protocols.
C411.3	Recognize the awareness about different proactive and reactive routing mechanism in the wireless network
C411.4	Illustrate a through remembering about the multiple access technology with the help of hardware and software components of sensor node
C411.5	Gain information about the analyzing skills of the different sorts of quality of service and localization.

Total Quality Management: C412

C412.1	Understand the Quality Principles and Process
C412.2	Able to know the Assurance of quality in Organization
C412.3	Implementing the 5 S concepts in working Environment
C412.4	Gain the knowledge of different tools for Quality monitoring
C4112.5	Get idea about Various ISO standards and its uses.

Project Work: C413

C413.1	Competence in fundamental and advance knowledge of hardware and software.
C413.2	Graduates will be able to identify and define problems in the area of Computer science.
C413.3	Graduates will be able to explain and illustrate their practical skills needed to understand and modify problems related to programming and designing.
C413.4	Graduates will get a chance to apply current technologies , create systems and solve problems
C413.5	Graduates will get opportunities to practice as teams on multidisciplinary projects with effective writing and communication skills.