SEMESTER	SUBJECT CODE	SUBJECT NAME	CO No.	COURSE OUTCOMES
S1	**MAT 101**	**LINEAR ALGEBRA AND CALCULUS**	CO1	Solve systems of linear equations, diagonalize matrices and characterise quadratic forms.
			CO2	Cmpute the partial and total derivatives and maxima and minima of multivariable functions
			CO3	Compute multiple integrals and apply them to find areas and volumes of geometrical shapes, mass and centre of gravity of plane laminas
			CO4	Perform various tests to determine whether a given series is convergent, absolutely convergent or conditionally convergent
			CO5	Determine the Taylor and Fourier series expansion of functions and learn their applications.
	PHT 100	**ENGINEERING PHYSICS A**	CO1	Compute the quantitative aspects of waves and oscillations in engineering systems.
			CO2	Apply the interaction of light with matter through interference, diffraction and identifythese phenomena in different natural optical processes and optical instruments
			CO3	Analyze the behaviour of matter in the atomic and subatomic level through the principles ofquantum mechanics to perceive the microscopic processes in electronic devices.
			CO4	Classify the properties of magnetic materials and apply vector calculus to static magneticfields and use Maxwell's equations to diverse engineering problems
			CO5	Analyze the principles behind various superconducting applications, explain the working ofsolid state lighting devices and fibre optic communication system
	EST 100	**ENGINEERING MECHANICS**	CO1	Recall principles and theorems related to rigid body dynamics
			CO2	Identify and describe the components of system of forces acting on the rigid body
			CO3	Apply the conditions of equilibrium to various practical problems involving different force system
			CO4	Choose appropriate theorems , principles or formulae to solve problems of mechanics

			CO5	Solve problems involving rigid bodies , applying the properties of distributed areas and masses
EST 120	BASICS OF CIVIL & MECHANICAL ENGINEERING		CO1	Recall the role of civil engineer in society and to relate the various disciplines of Civil Engineering.
			CO2	Explain different types of buildings, building components, building materials and building construction
			CO3	Describe the importance, objectives and principles of surveying.
			CO4	Summarise the basic infrastructure services MEP, HVAC, elevators, escalators and ramps
			CO5	Discuss the Materials, energy systems, water management and environment for green buildings.
HUT 101	LIFE SKILLS		CO1	Define and Identify different life skills required in personal and professional life
			CO2	Develop an awareness of the self and apply well-defined techniques to cope with emotions and stress.
			CO3	Explain the basic mechanics of effective communication and demonstrate these through presentations.
			CO4	Take part in group discussions.
			CO5	Use appropriate thinking and problem solving techniques to solve new problems
			CO6	Understand the basics of teamwork and leadership
PHL 120	ENGINEERING PHYSICS LAB		CO1	Develop analytical/experimental skills and impart prerequisite hands on experience forengineering laboratories
			CO2	Understand the need for precise measurement practices for data recording
			CO3	Understand the principle, concept, working and applications of relevant technologies andcomparison of results with theoretical calculations
			CO4	Analyze the techniques and skills associated with modern scientific tools such as lasers andfiber optics
			CO5	Develop basic communication skills through working in groups in performing the laboratoryexperiments and by interpreting the results
ESL 120			CO1	Name different devices and tools used for civil engineering measurements

			CO2	Explain the use of various tools and devices for various field measurements
			CO3	Demonstrate the steps involved in basic civil engineering activities like plot measurement, setting out operation, evaluating the natural profile of land, plumbing and undertaking simple construction work.
		CIVIL & MECHANICAL WORKSHOP	CO4	Choose materials and methods required for basic civil engineering activities like field measurements, masonry work and plumbing.
			CO5	Compare different techniques and devices used in civil engineering measurements
			CO6	Identify Basic Mechanical workshop operations in accordance with the material and objects
			CO7	Apply appropriate Tools and Instruments with respect to the mechanical workshop trades
			CO8	Apply appropriate safety measures with respect to the mechanical workshop trades
S2	MAT102	VECTOR CALCULUS, DIFFERENTIAL EQUATIONS AND TRANSFORMS	CO1	Compute the derivatives and line integrals of vector functions and learn their applications.
			CO2	Evaluate surface and volume integrals and learn their inter-relations and applications.
			CO3	Solve homogeneous and non-homogeneous linear differential equation with constant coefficients .
			CO4	Compute Laplace transform and apply them to solve ODEs arising in engineering .
			CO5	Determine the Fourier transforms of functions and apply them to solve problems arising in engineering .
	CYT100	ENGINEERING CHEMISTRY	CO1	Apply the basic concepts of electrochemistry and corrosion to explore its possible applications in various engineering fields.
			CO2	Understand various spectroscopic techniques like UV-Visible, IR, NMR and its applications.

			CO3	Apply the knowledge of analytical method for characterizing a chemical mixture or a compound. Understand the basic concept of SEM for surface characterisation of nanomaterials.
			CO4	Learn about the basics of stereochemistry and its application. Apply the knowledge of conducting polymers and advanced polymers in Engineering.
			CO5	Study various types of water treatment methods to develop skills for treating wastewater
	EST110	ENGINEERING GRAPHICS	CO1	prepare multi view orthographic projections of objects by visualising them in different quadrants
			CO2	draw sectional views and develop surfaces of the Given object
			CO3	draw pictorial drawing using isometric principles and perspective projections to visualise objects in 3D
			CO4	convert 3D to orthographic view and vice-versa
			CO5	obtain multiview projections and solid models of objects using CAD tools
	EST 130	BASICS OF ELECTRICAL ENGINEERING/BASIC ELEC:ENGG	CO 1	Apply the fundamental laws of electrical engineering to solve simple ac circuits in steady
			CO 2	Develop and solve models of magnetic circuits
			CO 3	Apply the fundamental laws of electrical engineering to solve simple ac circuits in steady
			CO 4	Describe working of a voltage amplifier
			CO 5	Outline the principle of an electronic instrumentation system
	HUT102	PROFESSIONAL COMMUNICATION	CO 1	Develop vocabulary and language skills relevant to engineering as a profession
			CO 2	Analyze, interpret and effectively summarize a variety of textual content
			CO 3	Create effective technical presentations
			CO 4	Discuss a given technical/non-technical topic in a group setting and arrive at generalizations/consensus

			CO 5	Identify drawbacks in listening patterns and apply listening techniques for specific needs	
			CO 6	Create professional and technical documents that are clear and adhering to all the necessary conventions	
	EST102	PROGRAMMING IN C	CO1	Analyze a computational problem and develop an algorithm/flowchart to find its solution	
			CO 2	Develop readable C programs with branching and looping statements, which uses Arithmetic, Logical, Relational or Bitwise operators	
			CO 3	Write readable C programs with arrays, structure or union for storing the data to be processed	
			CO 4	Divide a given computational problem into a number of modules and develop a readable multi-function C program by using recursion if required, to find the solution to the computational problem	
			CO 5	Write readable C programs which use pointers for array processing and parameter passing	
			CO 6	Develop readable C programs with files for reading input and storing output	
	CYL120	ENGINEERING CHEMISTRY LAB	CO1	Understand and practice different techniques of quantitative chemical analysis to generate experimental skills and apply these skills to various analyses	
			CO2	Develop skills relevant to synthesize organic polymers and acquire the practical skill to use TLC for the identification of drugs	
			CO3	Develop the ability to understand and explain the use of modern spectroscopic techniques for analysing and interpreting the IR spectra and NMR spectra of some organic compounds	
			CO4	Acquire the ability to understand, explain and use instrumental techniques for chemical analysis	
			CO5	Learn to design and carry out scientific experiments as well as accurately record andanalyze the results of such experiments.	

			CO6	Function as a member of a team, communicate effectively and engage in further learning. Also understand how chemistry addresses social, economical and environmental problems and why it is an integral part of curriculum.
	ESL 130	ELECTRICAL/ ELECTRONICS ENGINEERING WORKSHOP	CO1	Apply fundamental concepts and circuit laws to solve simple DC electric circuits
			CO2	Develop and solve models of magnetic circuits
			CO3	Apply the fundamental laws of electrical engineering to solve simple ac circuits in steady state
			CO4	Describe working of a voltage amplifier
			CO5	Outline the principle of an electronic instrumentation system
			CO6	Explain the principle of radio and cellular communication
S3	MA201	LINEAR ALGEBRA AND COMPLEX ANALYSIS	CO1	To equip the students with methods of solving a general system of linear equations.
			CO2	To familiarize them with the concept of Eigen values and diagonalization of a matrix which have many applications in Engineering.
			CO3	To understand the basic theory of functions of a complex variable and conformal Transformations.
	EC201	NETWORK THEORY	CO1	Students will be able to understand the basic circuit elements, circuit variables and Kirchoff's law
			CO2	Able to solve problems using mesh and node analysis
			CO3	Able to analyse circuits in the phasor form
			CO4	Able to analyse circuits in Laplace domain
			CO5	Able to understand the concept of two port networks
			CO6	Can understand tuned circuits and resonance
	EC203	SOLID STATE DEVICES	CO1	Apply Fermi-Dirac Distribution function and Compute carrier concentration at equilibrium and the parameters associated with generation, recombination and transport mechanism
			CO2	Explain drift and diffusion currents in extrinsic semiconductors and Compute current density due to these effects

			CO3	Define the current components and derive the current equation in a pn junction diode and bipolar junction transistor.
			CO4	Explain the basic MOS physics and derive the expressions for drain current in linear and saturation regions.
			CO5	Discuss scaling of MOSFETs and short channel effects.
	EC205	ELECTRONIC CIRCUITS	CO1	To understand the concept of RC circuits
			CO2	To provide insight into the working, analysis and design of basic analog circuits and design of basic analog circuits using BJT
			CO3	To understand different types of power amplifiers, feedback amplifiers and oscillators to understand concepts of switching circuits
			CO4	To provide insight into the working, analysis and design of different types of voltage regulator
			CO5	To provide insight into the working analysis and design of basic analog circuits using MOSFET
	EC207	LOGIC CIRCUIT DESIGN	CO1	To work with positiona number system
			CO2	To understnad the basis of boolean algebra
			CO3	To understnad the conbinational and sequentioal cicuits
			CO4	to study the fundamnetal of HDL
			CO5	to design and implemt the sequential logic circuits
	HS210	LIFE SKILLS	CO1	Communicate Effectively
			CO2	Make Effective Presentations
			CO3	Write different types of reports
			CO4	Face Interview and Group Discussion
			CO5	Critically think on a particular problem
			CO6	Solve Problems
			CO7	Work in groups and teams
			CO8	Handle engineering ethics and human values
			CO9	Become an effective leader

				CO	
	EC231	ELECTRONIC DEVICES AND CIRCUITS LAB	CO1		To design and demonstrate functioning of various discrete analog circuits
			CO2		To study the working of analog electronic circuits
			CO3		To design and implement analog circuits as per the specifications using discrete electronic components
			CO4		Function effectively as an individual and in a team to accomplish the given task
	EC233	ELECTRONICS DESIGN AND AUTOMATION LAB	CO1		An ability to apply knowledge of computer, science and engineering to the analysis of electrical and electronics engineering problem
			CO2		An ability to design system which include hardware and software components
			CO3		An ability to identify, Formulation and solve engineering problems
			CO4		An ability to use modern engineering techniques.
S4	MA 204	PROBABILITY DISTRIBUTIONS, RANDOM PROCESSES	CO1		To learn most of the important models of discrete probability distributions.
			CO2		To learn most of the important models of continuous probability distributions.
			CO3		To learn most of the important models of JOINT discrete and continuous probability distributions.
			CO4		To introduce the modern theory of probability and its applications to modelling and analysis and processing of random processes and signals.
			CO5		To learn Poisson processes and Markov Chains.
	EC 202	SIGNALS AND SYSTEMS	CO1		Students will be able to identify, classify the basic difference between continuous and discrete time signals and systems
			CO2		Ability to represent continuous time signals and interpret the properties in Fourier Transform and Laplace Transform
			CO3		Ability to find out the relation between convolution, correlation and to find the orthogonality ofcontinuous time and discrete time signals
			CO4		Gain the concept of Transfer function and the magnitude and phase response in LTI systems
			CO5		Ability to determine Z Transform, inverse Z Transform and analysis of LTI system using Z Transform
	EC 204		CO1		To equip the students with a sound understanding of fundamental concepts of operational amplifiers

		ANALOG INTEGRATED CIRCUITS	CO2	To introduce special function integrated circuits
			CO3	To understand the wide range of applications of operational amplifiers
			CO4	To introduce the basic concepts and types of data converters
	EC 206	**COMPUTER ORGANIZATION**	CO1	Understand the functional units of computer
			CO2	Identify the different types of instructions
			CO3	Understand the various addressing modes o
			CO4	Understand the I/O addressing system
			CO5	Categorize the different types of memories
	EC 208	**ANALOG COMMUNICATION ENGINEERING**	CO1	To understand and apply the need for modulation and modulation techniques in a communication system
			CO2	To identify the effect of different types of noises in communication system.
			CO3	To understand the radio transmitters and receivers.
			CO4	To have sound knowledge of the working of a communication system like the telephone system.
	HS 210	**BUSSINESS ECONOMICS**	CO1	Understand elementary principles of Economics and Business Economics.
			CO2	Analyze the various market situations with good grasp on the effect of trade cycle.
			CO3	Analyze the basic macro-economic concepts and monetary theory.
			CO4	Understand macro- economic concepts to improve their ability to analyses the business climate
			CO5	Analyze their employability by combining their technical knowledge with appropriate economic model
			CO6	Attain knowledge of elementary accounting concepts used for preparing balance sheet and interpretation of balance sheets.
	EC 230	**LOGIC CIRCUIT DESIGN LAB**	CO1	To study the working of standard digital ICs and basic building blocks
			CO2	To design and implement combinational circuits
			CO3	To design and implement sequential circuits
	EC 232		CO1	To acquire skills in designing and testing analog integrated circuits.

				CO2	To expose the students to a variety of practical circuits using various analog ICs.
		ANALOG INTEGRATED CIRCUITS LAB		CO3	The student should able to Design and demonstrate functioning of various analog circuits.
				CO4	Students will be able to analyze and design various applications of analog circuits.
S5	EC301	**DIGITAL SIGNAL PROCESSING**		CO1	To find DFT of a given signal through Fast Fourier Transform Techniques
				CO2	Design FIR and IIR type digital filters.
				CO3	Identify filter structures and evaluate the coefficient quantization effects
				CO4	Understand sample rate conversion techniques
				CO5	Compare the architectures of DSP and General Purpose Processors.
	EC303	**APPLIED ELECTROMAGNETIC THEORY**		CO1	To develop a solid foundation and a fresh perspective in the analysis and application of electromagnetic fields.
				CO2	To analyse the propagation of electromagnetic waves in different media.
				CO3	To analyse the characteristics of transmission lines.
				CO4	To solve different transmission line problems using Smith Chart.
				CO5	To understand different modes of propagation in waveguides.
	EC305	**MICROPROCESSORS AND MICROCONTROLLERS**		CO1	Distinguish various types of processor
				CO2	Describe architecture, memory organisation of 8085
				CO3	Develop skills in assembly for interfacing peripheral device with 8051
				CO4	Describe the architecture of 8051 microcontroller
	EC307	**POWER ELECTRONICS AND INSTRUMENTATION**		CO1	To provide and the insight of the elements of control system and its modelling
				CO2	To study the application of power electronics such as switched mode regulators and inverter
				CO3	To understand the concepts of digital instruments
				CO4	To develop understanding the concepts of transduccer
	HSS300	**PRINCIPLES OF MANAGEMENT**		CO1	Define management of people and organization
				CO2	Evaluate current challenges to management including modern world social, environmental and economic structures & crisis.

			CO3	Understand and apply a variety of management theories and their sustainable practices.
			CO4	Plan and make decisions for organizations.
			CO5	Do staffing and related HRD functions.
			CO6	To generate their own innovative management competency for todays and global workplace.
	EC365	BIOMEDICAL ENGINEERING	CO1	To understand diagnosis and therapy related equipments.
			CO2	To understand the problem and identify the necessity of equipment for diagnosis and therapy.
			CO3	To understand the importance of electronics engineering in medical field.
			CO4	Students are able to understand and analyze Clinical Flame photometer, spectrophotometer ,Colorimeter, chromatography, Blood Gas Analyz, Blood pH Measurement, Blood Cell Counters
			CO5	Students are able to understand and explain Medical imaging,
			CO6	To understand the importance of telemetry in patient care
	EC341	DESIGN PROJECT	CO1	To understand the engineering aspects of design with reference to simple products.
			CO2	To foster innovation in design of products, processes or systems.
			CO3	To develop design that add value to products and solve technical problems.
			CO4	The students will be able to Think innovatively on the development of components, products, processes or technologies in the engineering field
			CO5	The students will be able to Analyse the problem requirements and arrive workable design solutions.
	EC333	DIGITAL SIGNAL PROCESSING LAB	CO1	Understand signal types, their basic properties and their representation.
			CO2	Implement Z- transform and its properties.
			CO3	Develop basics of frequency domain signal analysis and Fourier-Transform
			CO4	Utilize Discrete Fourier Transform for signal analysis.
			CO5	Develop basic filter concept, understand various types of filters and their design.
	EC335		CO1	To design and implement of basic power electronics circuit

		POWER ELECTRONICS AND INSTRUMENTATION LAB	CO2	To train the usage of digital instruments
				To develop understanding the concepts of transducers
			CO3	
S6	**EC 302**	**DIGITAL COMMUNICATION**	CO1	Illustrate the Digital representation of analog source
			CO2	Compare the performance of various Digital Pulse Modulation Schemes
			CO3	Apply the knowledge of ISI problems in Digital communication to derive Nyquist criteria for zero ISI
			CO4	Construct signal space representation of signal using Gram Schmidt orthonormalisation procedure
			CO5	Describe the principle of spread spectrum communication and to illustrate the concept of FHSS and DSSS
	EC 304	**VLSI**	CO1	To give the knowledge about IC Fabrication Techniques
			CO2	To impart the skill of analysis and design of MOSFET and CMOS logic circuits
	EC 306	**ANTENNA AND WAVE PROPOGATION**	CO1	Will have a sound understanding of the various parameters used for characterizing antennas: their optimum values and their measurement
			CO2	Will have a sound understanding of the basic principle of electromagnetic radiation and will be able to deduce the electric fields and magnetic fields radiated by a Hertzian dipole
			CO3	Will have a sound understanding of the concept of antenna arrays, its analysis and their different types;
			CO4	Will have a sound understanding of the different antenna types and their applications
			CO5	Will have able to understand the various modes of radio propagation and relate it to real communication instances
	EC 308	**EMBEDDED SYSTEMS**	CO1	Ability to understand basics of embedded system and to design an embedded system product
			CO2	Ability to understand the different standards and protocols used for communication with I/O devices
			CO3	Ability to distinguish different ways of communication with I/O devices

			CO4	Ability to understand basic programming concepts of Embedded Systems
			CO5	Ability to understand about inter-process communication
			CO6	Ability to design real time embedded systems using the concepts of RTOS.
	EC 312	OBJECT ORIENTED PROGRAMMING	CO 1	Students will have a thorough understanding of the features of OOP like class construction, polymorphism and inheritance of C++ and Java.
			CO 2	Students will have an understanding of the advanced features of C++ like templates, abstract classes and virtual functions.
			CO 3	Students will have knowledge of advanced features of Java such as multi threading, packages and error management.
			CO 4	Students will gain Skills in designing Android application development
			CO 5	Students will have skills in debugging, deploying and testing mobile applications.
	EC 370	DIGITAL IMAGE PROCESSING	CO 1	will understand Image representation and will be able to experiment with color coordinates of images
			CO 2	will understand Image representation and Image transforms and will be able to analyze image transforms.
			CO 3	will understand Image enhancement and will be able to experiment with image enhancement
			CO 4	will understand Image restoration.
			CO 5	will understand Image segmentation
			CO 6	will understand Image Compression and apply image compression methods
	EC 332	COMMUNICATION ENGG LAB	CO1	To provide and the insight of the elements of analog system and digital system
			CO2	To study the application of communication circuits
			CO3	To develop understanding the modulation
	EC 334	MICROCONTROLLER LAB	CO1	To understand Assembly Language microcontroller programmes
			CO2	To interface simple peripheral device to the microcontroller
			CO3	To equip students group to design and implement simple embedded systems
	EC 352	COMPREHENSIVE EXAM	CO1	To assess the comprehensive knowledge gained in basic courses relevant to the branch of study

			CO2	Students will be able to comprehend the questions asked and answer them with confidence
			CO3	Students will be confident in discussing rhe fundamental aspects of any Engineering problem situation
			CO4	Students will be able to find answers to the fundamental problems
S7	EC401	INFORMATION THEORY AND CODING	CO 1	To introduce the concept of information
			CO 2	To understand the limits of error free representation of information signals and thetransmission of such signals over a noisy channel
			CO 3	To design and analyze data compression techniques with varying efficiencies as perrequirements
			CO 4	To understand the concept of various theorems proposed by Shannon for efficient datacompression and reliable transmission
			CO 5	To give idea on different coding techniques for reliable data transmission
	EC403	MICROWAVE AND RADAR ENGINEERING	CO 1	Acquire knowledge about the characteristics of microwaves, Cavity resonators and Klystron amplifiers.
			CO2	Microwave tubes such as reflex klystrons and magnetron oscillators are studied
			CO3	Will have an idea about TWT, various measurement techniques for MW parameters such as power, impedance and frequency.
			CO4	Understand the basics of various hybrid circuits ,Directional couplers and scattering parameters with S matrix formulation
			CO5	Knows the basic theory of operation of microwave transistor, Tunnel Diodes and Gunn Diodes.
			CO6	The students are introduced about the concept of various types of radar systems
	EC405	OPTICAL COMMUNICATION	CO 1	Know the working of optical source and detectors.
			CO2	Compare the performance of various optical modulation schemes.
			CO3	Apply the knowledge of optical amplifiers in the design of optical link.
			CO4	Analyse the performance of optical amplifiers.
			CO5	Know the concept of WDM
			CO6	Describe the principle of FSO and LiFi.

			CO1	Study different types of of network topologies and pprotocol
	EC407	COMPUTER COMMUNICATION	CO2	Understand the layers of OSI and TCP /IP and their topologies
			CO3	Understand the concept of subnet ting and routing mechsnisms
			CO4	Understand the basic protocols of computer networks and how they can be used to assist in network design and implement
			CO5	Understand the security aspects in designing a trusted computer communication
	EC409	CONTROL SYSTEM	CO1	To introduce the elements of control system and its modelling
			CO2	To introduce methods for analyzing the time response, the frequency response and the stability of systems.
			CO3	To design control systems with compensating technique
			CO4	To introduce the state variable analysis method
			CO5	To introduce basic concepts of digital control systems
	EC465	MEMS	CO1	Understand the working principle s of micro sensors and actuators
			CO2	Understand the operation of major classes of MEMS devices/ systems
			CO3	Understand the application of scaling laws in the design of microsyatems
			CO4	Understand the typical materials used for fabrication of micro systems
			CO5	Understand the principles of standard micro fabrication techniques
			CO6	Appreciate the challenges in the design and fabrication of Micro systems
	EC451	SEMINAR & PROJECT PRELIMINARY	CO1	To develop skills in doing literature survey
			CO2	To develop technical presentation
			C03	To report presentation
			CO4	To enable project identification
			CO5	To execution of preliminary works on final semester project
	EC431	COMMUNICATION SYSTEMS LAB	CO1	Familiarize with Microwave and Optical components
			CO2	Understand the generation and propagation of Microwave signals
			CO3	Understand the basics of optical passive components Measurements.
			CO4	Design and setup a digital optical transmission system.

			CO5	Understand the attenuation measurements in an optical link
S8	**EC 402**	**NANO ELECTRONICS**	CO1	Students are introduced to nanotechnology, Mesoscopic physics and basic properties of Quantum Wells,Wires and Dots.
			CO2	Students learn about different methods of fabrication of Nano layers and Nano particles.
			CO3	Students are introduced to tools used for characterisation of nanomaterials and the working principle of Electron Microscope.
			CO4	Students learn in detail about Heterojunctions and the concept of super lattices.
			CO5	Students learn in detail about Transport of charge in Nanostructures under the influence of Electric and Magnetic Field.
			CO6	Students are made aware of the different Nano electronic devices and their principle of operation.
	EC 404	**ADVANCED COMMUNICATION SYSTEMS**	CO1	To understand the concept of microwave radio communication and diversity techniques.
			CO2	Sound knowledge about the concepts of digital TV and various standards used.
			CO3	To understand the concept of orbital mechanics and launch methodologies, satellitesubsystems, powerbudget of satellites and various satellite applications
			CO4	To understand about cellular radio concepts, techniques in mobile communication, communication standards,propogation models,MIMO systems
			CO5	To get an idea about new data services and their applications
	EC436	**CYBER SECURITY**	CO1	Students shall be able to understand what are the common threats faced today
			CO2	What is the foundational theory behind information security
			CO3	What are the basic principles and techniques when designing a secure system
			CO4	How today's attacks and defenses work in practice
			CO5	How to assess threats for their significance
			CO6	How to gauge the protections and limitations provided by today's technology
	CE488	**DISASTER MANAGEMENT**	CO1	Explain various types of natural disasters
			CO2	Categorize earthsystem, Disaster management cycle, global warming and greenhouse effects

			CO3	Get general ideas about the processes involved in anthropogenic disasters
			CO4	Understand the concepts of Disaster management and measures to mitigate and contain common episodes of Disasters
	EC 492	**PROJECT**	CO1	Apply fundamental and disciplinary concepts and methods in ways appropriate to their principal areas of study
			CO2	Think innovatively on the development of components, products, processes or technologies in the engineering field
			CO3	Apply knowledge gained in solving real life engineering problems
M3	**01EC7111**	**RF MEMS CIRCUIT DESIGN**	CO1	Introduction to RF MEMS
			CO2	Get a thorough understanding of the physical and practical aspects of RF circuit design.
	01EC7121	**WIRELESS SENSORS AND SYSTEMS**	CO1	Introduction to the concept of wireless sensors and associated circuits and networking.
			CO2	To enable students to appreciate various applications of wireless sensor network
			CO3	To impart design principles of wireless networks
	01EC7191	**SEMINAR II**	CO 1	Get good exposure in the current topics in the specific stream
			CO 2	Improve the writing and presentation skills.
			CO 3	Explore domains of interest so as to pursue the course project.
	01EC7193	**PROJECT(PHASE 1)**	CO1	Identify the topic, objectives and methodology to carry out the pjt
			CO2	Finalize the project plan for their course project
M4	**01EC7194**	**PROJECT(PHASE 2)**	CO1	Get a good exposure to a domain of interest
			CO2	Get a good domain and experience to pursue future research activities