

5th SEM

S.NO.	Paper Code	Paper/COs
1	ETHS-301	Communication Skills Professionals
	ETHS-301.1	To understand and implement the communication cycle and development of soft skills for successful career.
	ETHS-301.2	To analyze, create and compile various communication skills for formal written communication like reports, research papers and formal letters.
	ETHS-301.3	To apply the use of paralanguage and various prosodic features for proficiency in communication skills.
	ETHS-301.4	To be able to demonstrate all the acquired skills for various public speaking platforms and other formal meetings.
2	ETEE-303	Power Electronics
	ETEE-303.1	To understand various power electronics devices, their characteristics and uses.
	ETEE-303.2	To analyze or design phase controlled converter and choppers.
	ETEE-303.3	To describe AC-AC voltage controller and cycloconverter and their industrial application.
	ETEE-303.4	To Explain square wave, square wave, PWM and multi-level inverter.
3	ETEE-305	Sensor and Transducers
	ETEE-305.1	Understand the concept of sensor & transducers along with their classifications & characteristics and various types of sensors.
	ETEE-305.2	Learn about the basic design, working principle of magnetic, thermal & radiation sensors along with their application.
	ETEE-305.3	Comprehend the principle of electro analytical sensor along with the various types of electrodes & advancement in sensor technology.
	ETEE-305.4	Understand the different types of transducers & their applications.
4	ETEE-307	Switching Theory and Logic Design
	ETEE-307.1	Understand basic computer network technology.
	ETEE-307.2	Understand and explain Data Communications System and its components.
	ETEE-307.3	Implements various network topologies and IP addressing, subnetting.
	ETEE-307.4	Enumerate the layers of the OSI model and TCP/IP.
5	ETEE-309	Communication Systems
	ETEE-309.1	Identify and solve basic random variable and random process based problem
	ETEE-309.2	Use of different analog modulation and demodulation techniques in communication system.
	ETEE-309.3	Analyze and compare various Digital modulation techniques.
	ETEE-309.4	Investigate the concepts of advanced communication systems.
6	ETEE-311	Industrial Management
	ETEE-311.1	Interpret the concept of industrial relations, industrial disputes, dispute settlement machineries and factory legislation.
	ETEE-311.2	Understand trade unionism and its functioning in India.
	ETEE-311.3	Apply the concept of work study and method study and their application to office work.
	ETEE-311.4	Understand the concept of quality management and implement the various instruments of quality improvement including control charts.

7	ETEE-351	Sensor and Transducers Lab
	ETEE-351.1	understand the basic working principle of different transducers used for the measurement of temp, level, speed, pressure, strain, displacement.
	ETEE-351.2	Practically use thermocouple, RTD, Thermistor, Strain gauge, Tacho-generator, Stroboscope, LVDT, Capacitive Transducer for the Measurement of physical quantity such as temp, Strain, speed and water level.
	ETEE-351.3	Compare the characteristics of optical transducers, photovoltaic, photo conductive, photodiode & photo transistor.
	ETEE-351.4	Learn the application of different transducers for different processes according to range of measurement, environmental condition, cost etc.
8	ETEE-353	Power Electronics Lab
	ETEE-353 .1	Demonstrate static and dynamic characteristics of various semiconductor devices
	ETEE-353 .2	Illustrate performance of different chopper circuits
	ETEE-353 .3	Analyse operation of inverters and cycloconverters
9	ETEE-355	Switching Theory and Logic Design Lab
	ETEE-355 .1	Design and analyze combinational circuits using basic gate IC'S
	ETEE-355 .2	Design and analyse Combinational circuits using MUX Ics
	ETEE-355 .3	Implement and analyze various sequential circuits using logic gate ICS and flip flip Ics
10	ETEE-357	Communication Systems Lab
	ETEE-357.1	Demonstrate the concept of Amplitude Modulation by learning different Amplitude Modulation techniques like DSB-FC, DSB-SC and SSB
	ETEE-357.2	Demonstrate various types of Frequency Modulation and Demodulation techniques using CRO and DSO
	ETEE-357.3	Develop the relation between Continuous and Discrete time Signals through different Sampling and Reconstruction techniques.
11	ETEE-359	Electrical and Electronic Workshop
	FALSE	Identify the electrical and electronics component and their symbol and become familiar with electrical safety precaution.
	ETEE-359 .2	To understand the domestic and industrial wiring and accessories used in wiring installation.
	ETEE-359 .3	To demonstate various types of illumination devices and their wiring connection.
12	ETHS 351	Communication Skills Professionals Lab
	ETHS 351.1	To analyze and develop the habit of reading as well as listening for various purposes and to make the students aware of varied uses and functions of language.
	ETHS 351.2	To implement the ability for written, oral and graphical communication in both technical and non-technical environments along with an ability to identify and use appropriate technical vocabulary and related literature.
	ETHS 351.3	To develop an ability to select and apply the knowledge, techniques, skills, and modern tools for conversational skills; i.e. D-day conversation, professional conversation, telephone conversation, interview, group discussions etc.
	ETHS 351.4	To compose an ability to perform effectively as a member or leader for a technical or professional teamwork during an Oral Presentation, PowerPoint Presentation (PPT) & Public Speaking etc.

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13	ETEE-302	Power System-II
	ETEE-302.1	Analyze construction and operating characteristics of protective relays and instrument transformers.
	ETEE-302.2	Gain Knowledge of various methods for protection of generators and transformers.
	ETEE-302.3	Comprehend different methods for protection of transmission lines.
	ETEE-302.4	Demonstrate the working principle of fuse and circuit breaker and their application.
14	ETEE-304	Utilization of Electrical Energy and Electrical Traction
	ETEE-304.1	Understand the principle of illumination and lighting schemes.
	ETEE-304.2	Apply the knowledge to solve the problem with the electric heating
	ETEE-304.3	Analyze the performance of electric traction systems.
	ETEE-304.4	Analyze the performance of different types energy stores devices.
15	ETEE-306	Digital Signal Processing
	ETEE-306.1	Illustrate and extend the basic knowledge of DFT, its properties, FFT and its applications
	ETEE-306.2	Develop and interpret the design of FIR and IIR filters and its realization..
	ETEE-306.3	Classify and distinguish quantization errors in Digital Signal Processing.
	ETEE-306.4	Understand the Multi-rate Digital Signal processing
16	ETEE-308	VLSI Design
	ETEE-308.1	Discuss design flow of VLSI and Explain the phenomenon of MOS technology.
	ETEE-308.2	Classify static characteristics of MOS, and CMOS inverters.
	ETEE-308.3	Design of combinational and sequential circuits using MOS technology.
	ETEE-308.4	Implementations of dynamic logic circuits.
17	ETEE-310	Microprocessor Microcontroller
	ETEE-310.1	Understand the internal organization of 8-bit and 16-bit Intel microprocessors and 8051 microcontrollers.
	ETEE-310.2	Apply the knowledge of microprocessors to develop assembly language programs.
	ETEE-310.3	Design and implement assembly language programs for 8051 microcontrollers.
	ETEE-310.4	Design and implement microcomputer systems.
18	ETEE-312	Power Station Practice
	ETEE-312.1	Students understand their knowledge of different forms and sources of energy & process of energy generation.
	ETEE-312.2	To discuss type of generating power station, their layout & their sub parts.
	ETEE-312.3	To execute power plant economics considering different economics operation of power systems parameters.
	ETEE-312.4	To distinguish substation & their layouts.

19	ETEE-352	Power System-II Lab
	ETEE-352.1	Understand the single line to ground fault and three phase fault in transmission lines using experimental set-up.
	ETEE-352.2	Analyze the characteristics of instantaneous over-current relay using experimental set-up.
	ETEE-352.3	Apply & analyze the characteristics of HRC fuse MCB using experimental set-up.
	ETEE-352.4	Analyze the characteristics of thermal bimetallic relay and IDMT earth fault relay using experimental set-up.
20	ETEE-354	Utilization of Electrical Energy Lab
	ETEE-354.1	Undersatnd braking scheme of traction motor.
	ETEE-354.2	Illustrate the charging and discharging of super capacitor.
	ETEE-354.3	Analyze the laws of illumination.
	ETEE-354.4	Evaluate the performance of electrical heating and welding.
21	ETEE-356	Digital Signal Processing Lab
	ETEE-356.1	Compute the convolutions and correlations of discrete-time sequences.
	ETEE-356.2	Evaluate the DFT of given sequence using user-defined functions
	ETEE-356.3	Analyze and design FIR and IIR filters to meet specific magnitude and phase requirements.
	ETEE-356.4	Understand the working of DSP processor and demonstrate its applications.
22	ETEE-358	Microprocessor Microcontroller Lab
	ETEE-358.1	Compile and run microprocessor and microcontroller programs on kits.
	ETEE-358.2	Compile and simulate microprocessor and microcontroller programs on assembler
	ETEE-358.3	Design and program interfacing of microprocessor and their peripheral devices
	ETEE-358.4	Demonstrate ability to effectively work as a team.