Course Number:ELC501 Course Name: Principle of Control System

Unique CO Number	Course Outcome (CO) Statement
ELC5011	Derive the mathematical models of physical systems
ELC5012	Sketch various plots in time and frequency domain and analyse the system using the plots.
ELC5013	Evaluate the stability of control systems in time and frequency domain.
ELC5014	Design performance specification based controller for a given system.
ELC5015	Analyze the control systems using state-space methods and design state feedback controllers.
ELC5016	Design performance specification based controller for a given system.

Course Number:ELC502 Course Name: Digital Signal Processing

Unique CO Number	Course Outcome (CO) Statement
ELC5021	To list the defining equations related to discrete transforms ,digital filters and to briefly describe the relevance of multirate DSP,finite length effects and DSP processors
ELC5022	To explain the concepts of DFT and FFT and the design procedure of digital filters and the principles of multirate processing ,processors and their applications and finite word length effects
ELC5023	To apply the signal processing concepts in solving problems of discrete transforms,digital filters and finite word length effects
ELC5024	To analyze the effects of finite word length and illustrate the different methods of filter design
ELC5025	To evaluate and assess the advantages and disadvantages between different methods of digital filter design
ELC5026	To design different types of digital filters and formulate strategies to minimize finite word length effects

Course Number: ELC503 Course Name: Linear Integrated Circuits

Unique CO Number	Course Outcome (CO) Statement
ELC5031	Recognize and examine the fundamentals of integrated circuits
ELC5032	Classify and explain various circuits based on linear applications of Operational Amplifiers.
ELC5033	Construct and explain various circuits based on Non linear applications of Operational Amplifiers
ELC5034	Examine and analyze building up of specific circuits and their corresponding ICs based upon the principles of basic operational amplifier circuits.
ELC5035	Select and assess the use of appropriate ICs to build up a complex circuit for given application
ELC5036	Develop and design specialized applications using knowledge of analog integrated circuits

Course Number: ELC504 Course Name: Digital Communication

Unique CO Number	Course Outcome (CO) Statement
ELC5041	Recall the knowledge of mathematics, science and engineering to analyze and design digital communication systems.
ELC5042	Describe the concept of different Modulation and coding techniques
ELC5043	Compute various parameters of digital signals and their modulation techniques.
ELC5044	Examine the performance of different modulation and coding methods.
ELC5045	Assess the efficiency of different schemes
ELC5046	Discuss the significance and applications of spread spectrum.

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Course Number: ELDO501 Course Name: Computer Organization Architecture

Unique CO Number	Course Outcome (CO) Statement
ELC6621	Recall various organization and performance matrix of computer system.
ELC6622	Explain design consideration of Processor, Memory & I/O in Computer systems.
ELC6623	Demonstrate the objectives and functions of an Operating system.
ELC6624	Demonstrate the concept of Process management and compare performance of process scheduling algorithms.
ELC6625	Compare advantages and limitations of parallelism in system.
ELC6626	Discuss various architectural enhancements in modern processor.

Course Number: ELL501 Course Name: Principles of Control System Lab

Unique LO Number	Lab Outcome (LO) Statement
ELL5011	Analyze a control system in time and frequency domain
ELL5012	Solve a differential equation model using simulation software
ELL5013	Design a performance specification based controller in time and frequency domain.
ELL5014	Develop and tune PID controller for given control system.
ELL5015	Evaluate controllability and observability of a control system.
ELL5016	Design a state feedback controller according to given specifications.

Course Number: ELL502 Course Name: Linear Integrated Circuits Lab

Unique LO Number	Lab Outcome (LO) Statement
ELL5021	Build the circuit and see the performance of the various applications of IC 741 linear applications such as integrator, differentiator, peak detector, precision rectifier, data converters.
ELL5022	Built the circuit and see the performance of the various applications of IC 741 nonlinear applications such as comparator, Schmitt trigger.
ELL5023	See the change of IC 723 regulator in terms of line and load regulation.
ELL5024	Perform and calculate the frequency of the wein bridge oscillator and RC Phase shift oscillator and compare the same using calculated value.
ELL5025	Study the operation of 555 timer and also understand the designing of astable and monostable multivibrator.
ELL5026	Design aspects of various filters and also see its performance using software multisim.

Course Number:ELC503 Course Name: Digital Communication Lab

Unique LO Number	Lab Outcome (LO) Statement
ELL5031	To analyze digital modulation techniques.
ELL5032	To analyze different coding techniques.
ELL5033	To identify the advantages of different data formats.
ELL5034	To make use of different simulation tools
ELL5035	To select the topic for presentation.
ELL5036	To document a report for the presentation.

Course Number: ELL504 Course Name: Professional Communication & Ethics-II

Unique LO Number	Lab Outcome (LO) Statement
ELL5041	Plan and prepare effective business/ technical documents which will in turn provide solid foundation for their future managerial roles.
ELL5042	Strategize their personal and professional skills to build a professional image and meet the demands of the industry.
ELL5043	Emerge successful in group discussions, meetings and result-oriented agreeable solutions in group communication situations
ELL5044	Deliver persuasive and professional presentations
ELL5045	Develop creative thinking and interpersonal skills required for effective professional communication.
ELL5046	Apply codes of ethical conduct, personal integrity and norms of organizational behavior.

Course Number: ELM501 Course Name: Mini Project–2 A

Unique LONumber	Lab Outcome (LO) Statement
ECM5011	Identify problems based on research needs
ECM5012	Apply Knowledge and skill to solve societal problems in a group.
ECM5013	Draw the proper inferences from available results through theoretical/ experimental/simulations.
ECM5014	Analyze the impact of solutions in societal and environmental context for sustainable development
ECM5015	Use standard norms of engineering practices
ECM5016	Excel in written and oral communication.