Semester - IV

Unique Course Number: ELX401 Course Name: Applied Mathematics-IV

Unique CO Number	Course Outcome (CO) Statement
EXC4911	Apply fundamental concepts & Principles of functionals to obtain the externals using Euler-Lagrange's equations under different cases of a function
EXC4912	Demonstrate the ability to perform calculations involving Dot products, Norms, Cauchy-Schwartz's inequality and the Triangle inequality.
EXC4913	Compute Eigen values & Eigen vectors of a square matrix and relate their applicability in diagoalising a square matrix, finding a function of a square matrix and deciding Derogatory & Non- Derogatory matrices
EXC4914	Distinguish between discrete and continuous random variable and choose appropriate probability distribution for statistical inference in data analysis and extend the investigation of the relationship between two random variables to quantify the extent or degree to which the variables are correlated
EXC4915	Apply the concept of Correlation and Regression to the Engineering problems
EXC4916	Analyse and synthesize core knowledge of complex analysis to integrate the complex functions by Cauchy's theorem, Cauchy's Integral Formula and Cauchy's Residue theorem by demonstrating the use of singularities, poles, power series and residues at poles

Unique Course Number: ELX402 Course Name: Electronic Devices and Circuits II

Unique CO Number	Course Outcome (CO) Statement
EXC4311	Students will be able to understand single stage and multistage amplifier through frequency response
EXC4312	Students will be able to understand working and also derive expressions for different performance parameters of feedback amplifiers and oscillators
EXC4313	Students will be able to perform DC and AC analysis of MOSFET

	differential amplifier
EXC4314	Students will be able to compare and analyse various power amplifiers
EXC4315	Students will be able to explain working and construction details of special semiconductor devices
EXC4316	Students will be able to select appropriate circuit for the given specifications/application.

Unique Course Number: ELX403 Course Name: Microprocessors and Applications

Unique CO Number	Course Outcome (CO) Statement
EXC4611	Describe architecture of 8086 microprocessor.
EXC4612	Explain instruction set of 8086 with assembly language programming
EXC4613	Design 8086 CPU module.
EXC4614	Design single board computer using peripherals.
EXC4615	Describe 32bit Intel Pentium.

Unique Course Number: ELX404 Course Name: Digital System Design

Unique CO Number	Course Outcome (CO) Statement
EXC4711	To identify different synchronous sequential logic circuits.
EXC4712	To analyze various types of digital logic circuits.
EXC4713	To design and implement synchronous sequential logic circuits.
EXC4714	To describe and implement digital hardware functions using hardware description language
EXC4715	To explain steps involved in digital circuit implementation using programmable logic devices.

Unique Course Number: ELX405 Course Name: Principles of Communication Engineering

Unique CO Number	Course Outcome (CO) Statement
EXC4511	comprehend the need for various components in analog communication systems

EXC4512	analyze various analog modulation methods
EXC4513	design modulators, demodulators for AM &FM system
EXC4514	assess the characteristics of Pulse modulation techniques
EXC4515	recognize the need for digital modulation &multiplexing techniques.

Unique Course Number: ELX406 Course Name: Linear Control Systems

Unique CO Number	Course Outcome (CO) Statement
EXC4211	Drive the mathematical model of different types of control systems and represent them in various forms.
EXC4212	Derive transfer function of bigger systems by reduction techniques.
EXC4213	Analyze system using time domain analysis techniques.
EXC4214	Apply concepts of frequency domain techniques in stability of control systems
EXC4215	Create state variable models of systems and analyze their controllability, observability and time response.

LO STAEMENTS

Unique Course Number: ELXL401 Course Name: Electronic Devices & Circuits-II Laboratory

Unique number	LO statement
EXL4311	Perform frequency response of multistage and feedback amplifier.
EXL4312	Find frequency of oscillator and Ad,Acm and CMRR differential amplifier.
EXL4313	Calculate Efficiency of power amplifiers and analyze the characteristics of special semiconductor devices(DIAC)
EXL4314	Design Mini project based on devices and circuits mentioned in the syllabus

Unique Course Number:ELXL402 Course Name: Microprocessor &Applications Laboratory

Unique number	LO statement
EXL6411	To use instruction set of 8086 for writing assembly language program
EXL6412	To use string instructions of 8086 for writing assembly language program
EXL6413	To demonstrate the interfacing of IO peripheral to 8086.
EXL6414	To use assembler and emulator for DOS interrupt.

Unique Course Number:ELXL403 Course Name: Digital System Design Laboratory

Unique number	LO statement
EXL4711	To design and implement sequential circuits using MSI IC's.
EXL4712	To simulate combinational circuits using VHDL.
EXL4713	To simulate sequential circuits using VHDL.
EXL4714	To analyze, design and implement the selected circuit for miniproject.

Unique Course Number:ELXL404 Course Name: Principle of Communication Engineering Laboratory

Unique number	LO statement
EXL4511	ANYLYZE THE AM CIRCUITE AND ITS PARAMETER USING WAVEFORM.
EXL4512	ANYLYZE THE FM CIRCUITE AND ITS PARAMETER USING WAVEFORM.
EXL4513	ANYLYZE THE PWM CIRCUITE AND ITS PARAMETER USING WAVEFORM.
EXL4514	ANYLYZE THE PPM CIRCUITE AND ITS PARAMETER USING WAVEFORM.
EXL4515	ANYLYZE THE DM CIRCUITE AND ITS PARAMETER USING WAVEFORM.

EXL4516	ANALYZE SAMPLING OUTPUT FREQUENCY.