COURSE OUTCOMES
2024 – 2025 Academic Year

<u>Odd Semester</u>

S3 EEE (2022 Admission) Courses

MAT201	Partial Differentiation Equations & Complex Analysis	3	Ms. Savitha P Paul

CO1	Create and solve partial differential equations which are widely used in different engineering situation and modelling.
CO2	Apply partial differential equation in the analysis of various physical phenomena.
CO3	Analyse complex variables and conformality to transform functions from one domain to another.
CO4	Demonstrate mathematical reasoning through the concepts of complex analysis.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3				2		2			2
CO1	3	3	3				2		2			2
CO2	2	3										
CO4	3	3										2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2		
CO1	2		
CO2	2		
CO4	2		

EET201	Circuits and Networks	4	Ms. Maria Rose K J

CO1	Apply circuit theorems to solve DC and AC electric networks.
CO2	Analyse and Solve dynamic DC and AC circuits by transforming to s-domain.
CO3	Analyse three phase networks in star and delta configurations and resonant circuits.
CO4	Apply the two port representation of networks for solving any given circuit.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3		2								2
CO2	3	3		2								2
CO3	3	3		2								2
CO4	3	3										2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		
CO4	3		

EET203	Measurements & Instrumentation	3	Dr. Vishnu Gopan K

CO1	Identify and analyse the factors affecting performance of measuring systems
CO2	Choose appropriate instruments and bridges for the measurement of electrical parameters by knowing the working principle
CO3	Describe the principle of operation of Magnetic measurement systems and transducer-based systems and select appropriate for measuring a quantity
CO4	Discuss the operating principles of basic building blocks of digital systems, recording and display units

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										2
CO2	3	2	2									2
CO3	3	2	2									2
CO4	3											2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		
CO4	2		

EET205	Analog Electronic Circuits	4	Ms Neethu John

CO1	Analyze and compare biasing scheme for transistor circuits
CO2	Model BJT and FET amplifier circuits for electronic circuit applications
CO3	Select amplifiers and oscillators with appropriate specifications for various applications
CO4	Illustrate the performance of various circuits based on OPAMPs and 555 ICs

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3										2
CO2	3	3	2	2								2
CO3	2	3	3									2
CO4	3	3	3									2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3	2	
CO3	3	2	
CO4	3		

HUT200	Professional Ethics		2	Mr. Adarsh S R

CO1	Understand the core values that shape the ethical behaviour of a professional and to adopt a good character and follow an ethical life.
CO2	Explain the role and responsibility in technological development by keeping personal ethics and legal ethics.
CO3	Solve moral and ethical problems through exploration and assessment by established experiments.
CO4	Apply the knowledge of human values and social values to contemporary ethical values and global issues.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	3	3	3	2	2	2	3
CO2	-	-	-	-	-	3	3	3	2	2	2	3
CO3	-	-	-	-	-	3	3	3	2	2	2	3
CO4	-	-	-	-	-	3	3	3	2	2	2	3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	-	-	-
CO2	-	-	-
CO3	-	-	-
CO4	-	-	-

MCN201	Sustainable Engineering	2	Ms. Maria Rose K J

CO1	Understand the concept of sustainability, its relevance in societal context and the global initiatives taken in this direction
CO2	Analyze the sources and effects of environmental pollution and understand legal provisions and mechanisms for environmental protection
CO3	Understand and apply environmental management principles and standards to enhance sustainability practices in engineering.
CO4	Implement sustainable practices and technologies to enhance energy efficiency in buildings and urban development.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3						3					3
CO1	3	3				3	3					3
CO2	3	3	2			3	3				2	3
CO4	3	3	3			3	3				2	3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1		3	
CO1		3	
CO2		3	
CO4		3	

EEL201	Circuits and Measurements Lab	2	Dr. Vishnu Gopan K, Ms. Maria Rose K J

CO1	Verify the network theorems and operation of typical electrical circuits.
CO2	Choose the appropriate equipment for measuring electrical quantities and verify the same for different circuits.
CO3	Calibrate various meters used in electrical systems.
CO4	Analyse the characteristics of various types of transducer systems and bridges.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3					3	2		3
CO2	3	3	2	3					3	2		3
CO3	3	3		3					3	2		3
CO4	3	3	2	3					3	2		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		2
CO2	3		2
CO3	3		2
CO4	3		2

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), KODAKARA
Department of Electrical & Electronics Engineering

EEL203	Analog Electronics Lab	2	Ms. Maria Rose K J, Ms. Neethu John

CO1	Design and develop various electronic circuits using diodes and zener diodes
CO2	Design and implement amplifier and oscillator circuits using BJT and JFET
CO3	Select and implement analog circuits using OPAMPs and 555 ICs for particular applications.
CO4	Design and simulate electronic circuits using simulation and PCB layout software.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	2					3	2		2
CO2	3	3	3	2					3	2		2
CO3	3	3	3	2					3	2		2
CO4			3		3				3	2		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2	2	2
CO2	2	2	2
CO3	2	2	2
CO4	2	2	3

S5 EEE (2021 Admission) Courses

EET301	Power Systems I	4	Ms Neethu John

CO1	Identify different types of power generating stations & energy related terms.
CO2	Analyze the transmission line parameters and various protection schemes to be adopted in the power system.
CO3	Compute various physical characteristics of underground and overhead transmission systems.
CO4	Discuss various types of electrical distribution systems

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										2
CO2	3	3	2	2		2						2
CO3	3	3										2
CO4	3	2										2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		
CO4	3		

EET303	Microprocessors and Microcontrollers	3	Dr. V. Vijikala

CO1	Explain the architecture of 8085 microprocessor, 8051 Microcontroller and Embedded systems
CO2	Apply the fundamentals of assembly level programming of 8085 microprocessor and 8051 microcontroller
CO3	Identify the different ways of interfacing memory and I/O with 8085 microprocessor
CO4	Develop skill for writing C programs for 8051 microcontroller

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	3	2		2	2							2
CO3	3	2			2							2
CO4	3				3							2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2		
CO2	2		2
CO3	2		2
CO4	2		2

EET305	Signals and Systems	4	Ms. Drisya K Sasi

CO1	Identify the various types of signals and systems and perform the basic operations on signals.
CO2	Apply Fourier series and Fourier transform concepts on continuous and discrete time signals.
CO3	Analyse continuous and discrete time systems using Laplace transform and Z-transform
CO4	Analyse the stability of systems by obtaining transfer function theoretically and using software tools.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										2
CO2	3	3										2
CO3	3	3		2								2
CO4	3	3		2	2							2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		
CO4	3		3

EET307	Synchronous and Induction Machines	4	Mr. Sreekanth S

CO1	Describe the principle of operation and constructional details of synchronous and induction machines
CO2	Evaluate the performance of synchronous and induction machines under various conditions
CO3	Analyse starting and speed control methods of induction motors
CO4	Select appropriate AC machines for any application and appraise its significance

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											2
CO2	3	3	2	2								3
CO3	3	3		2								2
CO4	3	2	2	2								3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2		
CO2	3	2	
CO3	3		
CO4	2	2	

HUT300	Industrial Economics & Foreign Trade	3	Ms. Vini Valson

CO1	Understand the problem of society its resources and consumer behaviour and to evaluate the impact of govt. Policies on general economic welfare.
CO2	Apply the decisions regarding the volume of output and to evaluate the social cost of production.
CO3	Analyse the functional requirement of a firm under various competitive conditions.
CO4	Analyse the overall performance of the economy, the regulation of economic fluctuations, and its impact on various sections in the society and global economic policies on the business opportunities of the firm.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2										3	
CO2	2	2			2	2	3				3	
CO3	2	2	1								3	
CO4	2	2	1			1					3	

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1			
CO2			
CO3			
CO4			

MCN301	Disaster Management	--	Ms Maria Rose K J

CO1	Define and use various terminologies in disaster management parlance and distinguish between different hazard types
CO2	Identify factors that determine the nature of disaster response and components of risk assessment and apply appropriate methodologies to assess risk
CO3	Explain the core elements and phases of Disaster Risk Management and develop possible measures to reduce disaster risks across sector and community
CO4	Explain the various legislations and best practices for disaster management and risk reduction at national and international level

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1						3	3	3	2	2		3
CO2						3	3	3	2	2		3
CO3	2	2	3			2	3	3	2	2		3
CO4						2	3	3				3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	-	-	-
CO2	-	-	-
CO3	-	-	-
CO4	-	-	-

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), KODAKARA
Department of Electrical & Electronics Engineering

EEL331	Microprocessor & Microcontroller Lab	2	Dr. V. Vijikala

CO1	Develop and execute assembly language programs for solving arithmetic and logical problems using microprocessor/microcontroller.
CO2	Design and Implement systems with interfacing circuits for various applications.
CO3	Participate as a responsible group member with professional ethics and communicate effectively through oral and written reports

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	2	3							2
CO2	3	3	2	2	3							2
CO3								3	3	3		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2		3
CO2	2	2	3
CO3			

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), KODAKARA
Department of Electrical & Electronics Engineering

EEL333	Electrical Machines Lab II	1	Mr Sreekanth S, Mr. Adarsh S R

CO1	Analyze the performance of the alternator
CO2	Analyze the performance of induction machines
CO3	Function effectively in a group and to communicate effectively the complex engineering activities related to the AC machine analysis

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	2								2
CO2	3	3	2	2								2
CO3	3	3	2	2					3	3		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		2
CO2	3		2
CO3	3		

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), KODAKARA
Department of Electrical & Electronics Engineering

S7 EEE (2020 Admission) Courses

EET401	Advanced Control Systems	3	Mr Adarsh S R

CO1	Describe the concepts of state space and behaviour of nonlinear systems
CO2	Derive the state variable representation of physical systems
CO3	Analyse the system response and stability of linear and nonlinear systems
CO4	Design state feedback controllers according to the performance requirements.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											2
CO2	3	2	2									2
CO3	3	3		2								2
CO4	3	3	3	2		2						2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		
CO4	3	2	

EET413	Electric Drives	4	Mr Sreekanth S

CO1	Investigate dynamics of electric drives, their nature and classification, applying concepts of steady state stability.
CO2	Analyse & Apply configurations of controlled rectifiers and chopper-fed DC motor drive in various quadrants
CO3	Illustrate the various speed control techniques of induction motors & Examine the vector control of induction motor drives
CO4	Distinguish different speed control methods of synchronous motor drives

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	2								2
CO2	3	3		3								2
CO3	3	2	2	2								2
CO4	3	3										2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		
CO4	3		

MCN401	Industrial Safety Engineering	3	Ms Drisya K Sasi

CO1	Describe the theories of accident causation and preventive measures of industrial accidents
CO2	Discuss about the personal protection in work environment and select a protective equipment according to the requirement
CO3	Explain safety issues in various construction operations and take necessary control measures
CO4	Utilize different hazard identification tools to identify and analyse safety hazards in industries

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2				3		2				3
CO2	3	3				3		2				3
CO3	3	3				3		2				3
CO4	3	3		2		3		2				3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	-	-	-
CO1	-	-	-
CO2	-	-	-
CO4	-	-	-

EET455	Energy Management and Auditing	3	Ms. Sebin Davis K

CO1	Suggest the energy management techniques and strategies in energy management System
CO2	Improve thermal efficiency by designing suitable systems for heat recovery opportunities for energy savings.
CO3	Carry out energy audit of an industry/ Organization
CO4	Evaluate the techno-economic feasibility of the energy conservation technique adopted.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3		3			3					3
CO2	3	3	3	2			3					3
CO3	3			3	3		3					3
CO4	3	3	3				3				2	3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1		3	
CO2		3	
CO3		3	2
CO4		3	

EEL411	Control Systems Lab	2	Mr Adarsh S R

CO1	Demonstrate the knowledge of simulation tools for control system design.
CO2	Develop the mathematical model of a given physical system by conducting appropriate experiments.
CO3	Analyse the performance and stability of physical systems using classical and advanced control approaches.
CO4	Design controllers for physical systems to meet the desired specifications.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3			3				3			2
CO2	3	3	2	3	3				3			2
CO3	3	3		3	3				3			2
CO4	3	3	3	2	3	2			3			2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		3
CO2	3		3
CO3	3		3
CO4	3	2	3

EEQ413	Seminar		2	Dr. Vishnu Gopan K

CO1	Survey the literature on new research areas and propose findings on a particular topic related to electrical and electronics engineering.
CO2	Organize and illustrate technical documentation with scientific rigor and adequate literal standards on the chosen topic strictly abiding by professional ethics while reporting results and stating claims.
CO3	Promote and develop communication skills

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3				3	3			3		
CO2		3	3	3				3				3
CO3					3					3		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2		
CO2	2		
CO3			2

EED415	Project Phase I		2	Ms. Drisya K Sasi

CO1	Envisage applications for societal needs
CO2	Develop skills for analysis and synthesis of practical systems
CO3	Learn to use new tools effectively and creatively
CO4	Learn to carry out analysis and cost-effective, environmental friendly designs of engineering systems
CO5	Develops ability to write Technical / Project reports and oral presentation of the work done to an audience

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3					3	3	3	3		3	3
CO2		3	3	3					3			3
CO3					3				3			3
CO4		3	3	3	3	3	3		3		3	3
CO5					3				3	3		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3	3	
CO2	3		3
CO3			3
CO4	3	3	
CO5			3

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

COURSE OUTCOMES
2024 – 2025 Academic Year

Even Semester

S4 EEE (2022 Admission) Courses

MAT204	Probability, Random Process and Numerical Methods	4	Ms. Lickny I

Course Outcomes (COs)

CO1	Analyse suitable random phenomena by understanding the concept of discrete and continuous probability distributions
CO2	Analyse the concept of random process in interdisciplinary environment
CO3	Apply numerical technique in interpolation, definite integral evaluation and finding roots of equation
CO4	Solve linear system of equation, ordinary differential equation and curve fitting using numerical methods

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	2								2
CO2	3	3	3	3								2
CO3	3	3	3	3								3
CO4	3	3	2									2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2		
CO2	2		
CO3	2		
CO4	2		

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EET202	DC Machines and Transformers	4	Mr. Adarsh S R

CO1	Describe the constructional details and principle of operation of DC machines and transformers
CO2	Analyze the performance characteristics of DC machines and select appropriate type of machine for different applications
CO3	Analyze the performance of transformers under various conditions
CO4	Acquire knowledge in testing of DC machines and transformers to assess its performance

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										2
CO2	3	3	2	3								2
CO3	3	3	2	3								2
CO4	3	3										2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2		
CO2	3		
CO3	3		
CO4	3		

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EET204	Electromagnetic Theory	4	Ms. Maria Rose K J

CO1	Differentiate different types of coordinate systems and apply them for solving the problems of electromagnetic field theory.
CO2	Describe static electric and magnetic fields in different media and their associated laws.
CO3	Apply integral and point form of Maxwell's equations.
CO4	Describe propagation of time varying electromagnetic waves in different media.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3		2								2
CO2	3	3										
CO3	3	3		2								
CO4	3	2										2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	2		
CO3	2		
CO4	2		

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EET206	Digital Electronics	4	Ms. Drisya K Sasi

CO1	Identify various number systems, binary codes and formulate digital functions using Boolean algebra
CO2	Design and analyze various combinational and sequential logic circuits.
CO3	Analyse various analog to digital and digital to analog conversion circuits and compare the performance
CO4	Acquire basic knowledge on programmable logic devices and VHDL.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										
CO2	3	3	3	3								3
CO3	3	3		3								3
CO4	3				3							3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2		
CO2	3	2	
CO3	3		
CO4	2		3

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EST200	Design and Engineering	2	Mr. Adarsh S R

CO1	Identify the significance of Engineering Design and apply it for real time problem
CO2	Apply design thinking while learning and practicing engineering.
CO3	Develop innovative, reliable, sustainable and economically viable designs incorporating knowledge in engineering.
CO4	Analyze the prototype models and appraise various design aspects

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2			2		2			2		
CO2	3	2			3	2		3	3	2		2
CO3	3		3	3		2	2	3	2	3		3
CO4	2	3	3	3	2	2	2	3	3	3		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3	2	
CO2	3	3	
CO3		3	
CO4	2		

MCN202	Constitution of India	–	Mr. Anoop Lonappan

CO1	Understand the background of our constitution and show national and patriotic spirit as responsible citizens of the country.
CO2	Utilize the fundamental rights and duties.
CO3	Understand the working of state and central legislature, executive and judiciary.
CO4	Utilize the special provisions given by the constitution and to understand the role of statutory institutions.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1						2		2	2			2
CO2						3		2				2
CO3								2	2	2		2
CO4								2				2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1			
CO2			
CO3			
CO4			

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EEL202	Electrical Machines Lab I	2	Mr. Adarsh S R, Mr. Sebin Davis K

CO1	Analyze the performance of a DC Machine
CO2	Analyze the performance of a Transformer
CO3	Participate as a responsible group member with professional ethics and communicate effectively through oral and written reports

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	3								2
CO2	3	3	3	3								2
CO3								3	3	3		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		2
CO2	3		2
CO3			

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EEL204	Digital Electronics Lab	1	Ms. Maria Rose K J, Dr. Vishnu Gopan K

CO1	Formulate digital functions using Boolean Algebra and verify experimentally
CO2	Design and implement combinational and sequential logic circuits.
CO3	Design and simulate digital circuit using VHDL
CO4	Participate as a responsible group member with professional ethics and communicate effectively through oral and written reports

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3								
CO2	3	3	3	3								2
CO3	3	3	3	3	3							3
CO4								3	3	3		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		2
CO2	3	2	2
CO3	3	2	3
CO4			

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

S6 EEE (2021 Admission) Courses

EET302	Linear Control Systems	4	Mr Adarsh S R

CO1	Describe the role of various control blocks and components in feedback systems and develop mathematical models of various systems.
CO2	Analyze the stability aspects of linear time invariant systems.
CO3	Analyze performance characteristics of systems using Frequency response methods.
CO4	Design compensators using time domain and frequency domain techniques.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3										2
CO2	3	3		2								2
CO3	3	3		2								2
CO4	3	3	3	2								2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		
CO4	3	2	

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EET304	Power Systems II	4	Ms Neethu John

CO1	Discuss mathematical models for power system components
CO2	Analyze power systems under normal and abnormal conditions
CO3	Solve complex power system problems such as load flow, economic dispatch and load frequency control
CO4	Apply mathematical techniques to evaluate system stability

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3										
CO2	3	3		2		2						3
CO3	3	3		2		2						2
CO4	3	3		2								

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		
CO4	3		

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EET306	Power Electronics	4	Ms. Drisya K Sasi

CO1	Discuss the working and performance of various power semiconductor devices
CO2	Analyze the performance and design various power electronic converters
CO3	Compare the various switching techniques for power electronic converters
CO4	Identify various drive schemes for DC and AC motors in consonance with the requirements

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											2
CO2	3	3	2	3								2
CO3	3	3										2
CO4	3	3	2	2		2						2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2		
CO2	3	2	
CO3	3		
CO4	3		

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EET322	Renewable Energy Systems	3	Mr. Sebin Davis K

CO1	Identify global and Indian energy sources
CO2	Design and analyze the performance of small isolated renewable energy sources.
CO3	Develop sustainable solutions to energy related challenges using renewable energy sources
CO4	Examine various energy conversion technologies of renewable energy sources

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3					3	3					3
CO2	3	3	3	2		3	3					3
CO3	3	3	3			3	3					3
CO4	3	3				3	3					3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2	2	
CO2	3	3	
CO3	3	3	
CO4	3	3	

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

HUT310	Management for Engineers	3	Ms Maria Rose K J

CO1	Explain the characteristics and functions of management in the contemporary context
CO2	Demonstrate ability in decision making process and productivity analysis
CO3	Comprehend the concept of decision making process, project management techniques and productivity analysis
CO4	Comprehend the business plans, various functional areas of management and entrepreneurship

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1					3					2		2
CO2					3						2	2
CO3					3	2	3		2	2	2	2
CO4					3	2	3	2	2	2	3	2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	-	-	-
CO2	-	2	-
CO3	-	2	-
CO4	-	-	2

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EET308	Comprehensive Course Work	1	Mr. Sreekanth S

CO1	Apply the concepts and theorems to solve complex problems in the field of Electrical and Electronics Engineering
CO2	Analyze the comprehensive knowledge gained in the core courses of Electrical and Electronics Engineering
CO3	Comprehend the core principles and technologies in Electrical and Electronics Engineering and confidently prepare for competitive examinations

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3										3
CO2	3	3								3		3
CO3	3	2								3		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EEL332	Power Systems Lab	2	Ms Neethu John, Dr. Vishnu Gopan K

CO1	Design mathematical models and conduct transient analysis of power system networks using standard software
CO2	Perform Load flow analysis & fault analysis, prepare report regarding its effect on power system
CO3	Conduct appropriate tests for any power system component as per standards
CO4	Conduct site inspection and evaluate the performance of solar power plant.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	3	3				3	2		2
CO2	3	3	2	3	3				3	2		2
CO3	3	3	2	3	3				3	2		2
CO4	3	3	3	3	3		3		3	2		2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		3
CO2	3		3
CO3	3		3
CO4	3	2	3

EEL334	Power Electronics Lab	2	Mr. Sreekanth S, Mr. Sebin Davis K

CO1	Analyze the performance characteristics of various power semiconductor devices
CO2	Design and implement various switching circuits for power semiconductor devices
CO3	Design and implement various power electronic converters
CO4	Design and develop simulation models of various power electronic converters and their application in various drives

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3		2	3				3	2		2
CO2	3	3	3	3	3				3	2		2
CO3	3	3	3	3	3				3	2		2
CO4	3	3	3	3	3				3	2		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		3
CO2	3	2	3
CO3	3	2	3
CO4	3	2	3

S8 EEE (2020 Admission) Courses

EET402	Electrical System Design and Estimation	3	Dr. Vishnu Gopan K

CO1	Describe basic rules and regulations of electrical systems to design components for low, medium and high voltage installations.
CO2	Design lighting schemes for indoor and outdoor applications.
CO3	Design domestic and industrial electrical installations and 11KV transformer substation
CO4	Apply energy conservation techniques and design solar power generation systems

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3					2		3				3
CO2	3	3	3	3		2		3				3
CO3	3	3	3	3		2		3				3
CO4	3	3	3	3		2	2	3				3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3	2	
CO3	3	2	
CO4	3	3	

EET424	Energy Management and Auditing	3	Mr. Sreekanth S

CO1	Suggest the energy management techniques and strategies in energy management System and Perform energy audit of an industry/ Organization
CO2	Discuss the Energy efficiency and management of electrical loads
CO3	Improve thermal efficiency by designing suitable systems for heat recovery opportunities for energy savings.
CO4	Evaluate the techno-economic feasibility of the energy conservation technique adopted.

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3		3	3		3					3
CO2	3	2					3					3
CO3	3	3	3	2			3					3
CO4	3	3		3			3					3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2	3	2
CO2		3	
CO3	2	3	
CO4		3	

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EET426	Special Electric Machines	3	Dr. V. Vijikala

CO1	Explain construction of different special electrical machines
CO2	Discuss the working principle of special electrical machines
CO3	Analyze the performance of special electrical machines in varying conditions
CO4	Justify the selection of special electrical machines for various applications

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										
CO2	3	2										2
CO3	3	3		3								2
CO4	3	3	2	2		2				2		2

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		
CO4	3	2	

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

| EET468 | Industrial Instrumentation & Automation | 3 | Ms. Neethu John |

CO1	Identify instruments and transducers for various applications
CO2	Analyze the concepts of data transmission and Virtual Instrumentation related to automation
CO3	Design various signal conditioning Circuits for industrial Instrumentation and automation
CO4	Understand the concept of DCS, SCADA, programming with PLC

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2									
CO2	3	3		3	3							3
CO3	3	3	3	3		3						3
CO4	3				3							3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2		
CO2	3		
CO3	3	2	
CO4			3

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EED416	Project		6	Ms. Drisya K Sasi

CO1	Demonstrate sound technical knowledge in the domain of the selected project topic
CO2	Develop the skills of independent and collaborative learning and acquire the knowledge and awareness to carry out cost-effective and environmental friendly designs
CO3	Gain the expertise to use new tools for the design and development
CO4	Develop the ability to write good technical report and to make oral presentation of the work carried out
CO5	Develops ability to demonstrate a product developed

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	3								
CO2	3		3			2	2	2	3		3	3
CO3			3		3				3			2
CO4								3	3	3		3
CO5						3	3	3	3	3	3	3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	2	2	
CO2	3	3	
CO3			3
CO4	2		3
CO5	2		3

SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, KODAKARA
Department of Electrical & Electronics Engineering

EET404	Comprehensive Course Viva	1	Dr. V. Vijikala

CO1	Explain key concepts in Electrical and Electronics Engineering.
CO2	Analyze and solve engineering problems using relevant principles.
CO3	Effectively communicate technical information and present ideas in a professional manner, showcasing their understanding of engineering concepts

CO - PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3								3		3
CO2	3	3								3		3
CO3	3	2								3		3

CO-PSO Mapping

	PSO1	PSO2	PSO3
CO1	3		
CO2	3		
CO3	3		