



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

COURSE OUTCOMES FOR B.E. ELECTRICAL AND ELECTRONICS ENGINEERING



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

HS8151: COMMUNICATIVE ENGLISH	
C101.1	Understand framing of sentences, enrich vocabulary and develop basic LSRW Skills
C101.2	Implement the formation of sentences and enhance LSRW skills for general purposes
C 01.3	Apply coherence and sequence expressions and substitutes for advanced task
C101.4	Understand tense sense and word enrichment techniques for more complex and demanding social activities
C101.5	Develop usage of language to ensure development in the LSRW Skills
MA8151 – ENGINEERING MATHEMATICS I	
C102.1	Understand the various techniques in differentiation
C102.2	Solve the maxima, minima of functions of two variables and applications of Lagrange's method
C102.3	Analyze the integral problems by using boundary conditions.
C102.4	Solve the problems based on multiple integration
C102.5	Acquire skills in analyzing and solving the ordinary differential equations.
PH8151 – ENGINEERING PHYSICS	
C103.1	Remember the basics of properties of matter and
C103.2	Understand the concepts of waves, optical devices and analyze their applications in fiber optics.
C103.3	Describe the concepts of thermal properties of materials and assess their applications in expansion joints and heat exchangers
C103.4	Apply the physics concepts of quantum theory and apply in tunneling microscopes
C103.5	Define the basics of crystals, their structures and experimenting the preparation of different growth techniques.
CY8151 – ENGINEERING CHEMISTRY	
C104.1	Understand the concept of hard water, its problems and water treatment techniques.
C104.2	Classify the concepts of adsorption, its isotherms and catalytic reaction
C104.3	Apply the phase rule to the one and two component system and to understand the significance of alloys.
C104.4	Describe the different types of fuels and its manufacturing process and able to calculate the calorific value of the fuel
C104.5	Apply the principles of generation of energies in batteries, nuclear reactors and solar cells.



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

GE8151- PROBLEM SOLVING AND PYTHON PROGRAMMING	
C105.1	Understand the basics of algorithmic problem solving skills
C105.2	Analyse skills required for reading and writing simple Python programs.
C105.3	Discuss about developing Python programs with conditionals and loops.
C105.4	Understand about Python functions and calling them.
C105.5	Explain about Python data structures, lists, tuples, dictionaries, input/output .
GE8152 – ENGINEERING GRAPHICS	
C106.1	Understand the fundamentals and standards of Engineering graphics
C106.2	Explain freehand sketching of basic geometrical constructions and multiple views of objects
C106.3	Understand the concept of orthographic projections of lines and plane surfaces
C106.4	Describe the projections of section of solids and development of surfaces
C106.5	Explain project isometric and perspective sections of simple solids
GE8161- PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY	
C107.1	Understand about writing, testing, and debugging simple Python programs.
C107.2	Describe about Python programs with conditionals and loops.
C107.3	Understand about functions for structuring Python programs.
C107.4	Explain the Representation of compound data using Python lists, tuples, dictionaries
C107.5	Implement Read and write data from/to files in Python.
BS8161 – PHYSICS AND CHEMISTRY LABORATORY	
C108.1	Acquire the skills in the determination hardness of the water by EDTA method
C108.2	Analyze the alkalinity present in water by titrimetric method
C108.3	Determine the molecular weight of a polymer.
C108.4	Deduce the amount substance present by pH metry and Potentiometry method.
C108.5	Solve the amount of acid and base present in the solution and in the mixture Conductometric method.
HS8251 – TECHNICAL ENGLISH	
C109.1	Understand the competence in LSRW for basic general and technology-based professional requirements.
C109.2	Develop ability in LSRW to achieve more demanding tasks in technical fields
C109.3	Apply more strategies and skills to enhance LSRW to produce quick, effective and coherent responses in the professional fields
C109.4	Build communication employment-based communication competence by making students



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

	self reliant and analytical
C109.5	Explain LSRW ability to respond effectively and competently for job-based demands
	MA8251 – ENGINEERING MATHEMATICS II
C110.1	Understand the concepts in diagonalisation of matrices
C110.2	Describe the concept of vector calculus
C110.3	Explain the uses of analytic functions. and conformal mapping
C110.4	Understand the techniques of complex integration and contour integrals
C110.5	Understand the applications of laplace transforms
	PH8253 – PHYSICS FOR ELECTRONICS ENGINEERING
C111.1	Understand the classical and quantum electronic theories and explaining the energy band structures,
C111.2	Describe the basis of semiconductor physics and its application in various devices.
C111.3	Analyze the magnetic and electrical properties of materials.
C111.4	Describe the functioning of optical properties for opto electronics.
C111.5	Remember the basics of quantum structures and analyzing their applications in spintronics and carbon electronics
	BE8252 – BASIC CIVIL AND MECHANICAL ENGINEERING
C112.1	Understand the Mechatronics and Concepts of Mechatronics approach and Classification of Mechatronics Sensors and Transducers.
C112.2	Describe the architecture and its Pin configuration .Addressing modes Instruction set and timing diagram.
C112.3	Understand the architecture of 8255 and keyboard interfacing .Led display Interfacing, ADC and DAC interface. Temperature control, Stepper Motor control and Traffic control interface.
C112.4	Explain the Basic structure and programming of Mnemonics, Timers, counters and internal relays. Data handling and selection of PLC
C112.5	Analyse the Types of Stepper Motors and servo motors and its construction working principle, advantages and disadvantages. Design process of Traditional and mechatronics design concepts and its stages. Case studies of Mechatronics system and Pick and place robot.
	EE8251 – CIRCUIT THEORY
C113.1	Apply Kirchhoff's current & voltage law to simple circuits and solve Complex circuits using Mesh & Nodal Methods.
C113.2	Apply Network theorems to solve simple and complex linear circuits.



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

C113.3	Solve the Series and Parallel resonant circuit, analyze the performance of single & double tuned circuits.
C113.4	Understand the Transient response of RLC circuits using Laplace Transform, explain the characteristics of two port networks.
C113.5	Explain three phase balanced and unbalanced star, delta network.
	GE8291 – ENVIRONMENTAL SCIENCE AND ENGINEERING
C214.1	Categorize the sources, causes, consequences and control methods the different types of pollution
C214.2	Understand the existence of natural resources and problems of over utilization of these resources.
C214.3	Analyze social issues related to environment.
C214.4	Use the human population growth and issues related to human health with the role of Information technology
C214.5	Classify various sources, causes, consequences and control methods the different types of pollution
	GE8261 – ENGINEERING PRACTISE LABORATORY
C115.1	Demonstrate the carpentry components like switches, lamps and energy meter.
C115.2	Understand the measurements of voltage, current power & power factors in RLC.
C115.3	Explain the measurement of energy and resistance using electrical equipment.
C115.4	Analyse the verification of logic gates and generation logic gates.
C115.5	Demonstrate the experiment to measure ripples in HWR and FWR.
	EE8261– ELECTRIC CIRCUITS LAB
C116.1	Demonstrate practical experience with verification of Kirchoff's voltage and current laws.
C116.2	Understand and apply circuit theorems and concepts in engineering applications.
C116.3	Explain the time constant and frequency response of series RLC circuits.
C116.4	Implement and Simulate the series and parallel resonant circuits
C116.5	Understand the parameters of two port network and Simulate the low pass and high pass passive filters.
	MA8353 – TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATION
C201.1	Understand the formation and solving of PDE by using various techniques
C201.2	Explain the Methods to solve various problems in Fourier Series
C201.3	Solve the One Dimensional Wave and Heat Flow equations using boundary condition.
C201.4	Understand about the Fourier Transforms in Engineering Fields.



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

C201.5	Solve Z-Transform and finding its solution using initial and final value condition.
	EE8351 – DIGITAL LOGIC CIRCUITS
C202.1	Remember the various number systems and simplifications using mathematical expression and understand the concepts of digital logic families
C202.2	Explain features of combinational logic circuits and its implementation.
C202.3	Understand sequential logic circuits and its implementation.
C202.4	Analyse asynchronous sequential circuits and describe the operation of Programmable Logic Devices
C202.5	Understand the digital simulation techniques for application oriented logic circuits using VHDL coding.
	EE8391 – ELECTROMAGNETIC THEORY
C203.1	Understand the concepts of electromagnetic vector fields and various transformation techniques
C203.2	Interpret the concepts of electrostatics, electrical potential, energy density and their applications.
C203.3	Apply the concepts of magneto statics, magnetic flux density, scalar and vector potential and its applications.
C203.4	Understand the concepts of Faraday's law, induced emf and Maxwell's equations to analyze the electrodynamic fields.
C203.5	Interpret the concepts of electromagnetic waves and Pointing vector.
	EE8301 – ELECTRICAL MACHINES I
C204.1	Understand the techniques of magnetic-circuit analysis and introduce magnetic materials
C204.2	Analyse the constructional details, the principle of operation, prediction of performance, the methods of testing
C204.3	Describe the working principles of electrical machines using the concepts of electromechanical energy conversion principals
C204.4	Explain the working principles of dc machines as generator determination of their no load and full load characteristics.
C204.5	Understand the working principles of dc motor types, characteristics, braking and testing.
	EC8353 – ELECTRON DEVICES AND CIRCUITS
C205.1	Understand the basic structure of electronic devices such as diodes, Rectifiers and display devices
C205.2	Analyse the operation of various types of transistors and thyristor families
C205.3	Analyse various amplifiers hybrid parameters and study their frequency and gain response
C205.4	Describe about multistage amplifiers and differential amplifiers



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

C205.5	Apply the advantages of feedback amplifiers, various oscillators and their applications
	ME8792 – POWER PLANT ENGINEERING
C206.1	Understand the concepts of coal based thermal power plant
C206.2	Explain the concepts of diesel, gas turbine, and combined cycle power plant
C206.3	Analyse the concepts of Nuclear power plant
C206.4	Describe the concepts of Power generation from renewable energy
C206.5	Analyze and solve energy and economic related issues in power sectors
	EC8311 – ELECTRONICS LABORATORY
C207.1	Analyse the characteristics of Diodes and transistors in different configurations.
C207.2	Understand the characteristics of JFET, UJT and the generation of sawtooth waveforms.
C207.3	Execute a common emitter amplifier and analyse the characteristics of common emitter amplifier , photo diode and photo transistor.
C207.4	Understand about oscillators, Filter circuits and test the characteristics.
C207.5	Examine the differential amplifier, Multivibrators and filters and analyse the characteristics.
	EE8311 – ELECTRICAL MACHINES I LABORATORY
C208.1	Understand the calculation of the critical speed and critical resistance Open circuit and load characteristics of DC shunt generator with differential and cumulative connections.
C208.2	Experiment the characteristics and efficiency of DC shunt and compound motors u
C208.3	Demonstrate the efficiency of DC shunt motor Swinburne’s test and speed control of DC shunt motor.
C208.4	Examine the regulation and efficiency of a single phase transformer as well as transformation ratio
C208.5	Understand various losses like hysteresis loss and eddy current loss and its calculation
	MA8491 – NUMERICAL METHODS
C209.1	Solve the algebraic and transcendental equations, Inversion, Eigen values of a matrix.
C209.2	Analyze and solve the interpolation problems.
C209.3	Describe the concept of Numerical Differentiations and Integrations
C209.4	Exposure on various methods to solve the Differential Equations numerically.
C209.5	To Solve Boundary value Problems
	EE8401 –ELECTRICAL MACHINES II
C210.1	Understand the constructional details and the performance of salient and non - salient type synchronous generators.



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

C210.2	Discuss the Principle of operation and analyse the performance of synchronous motor
C210.3	Understand the construction, principle of operation and performance analysis of induction machines
C210.4	Explain the starting, Braking and speed control of three-phase induction motors.
C210.5	Discuss the construction, principle of operation and performance of single phase induction motors and special
	EE8402 – TRANSMISSION AND DISTRIBUTION
C211.1	Understand the structure of power system, mechanical design, HVDC systems and FACTS Controller
C211.2	Apply a expression for computation of transmission line parameters.
C211.3	Discuss the equivalent circuit for transmission line based on distance and operating voltage for determining the voltage and operating efficiency
C211.4	Analyse the voltage distribution in insulator strings and cables and method to improve the same.
C211.5	Understand the various types of busbar schemes, feeders, distributors, service mains and methods of grounding, types of substation,
	EE8403 – MEASUREMENTS AND INSTRUMENTATION
C212.1	Describe the basic functional elements of instrumentation, characteristics of measuring instruments and different error in measurement.
C212.2	Analyse the suitable instrument for measuring different and magnetic parameters.
C212.3	Implement a suitable circuit for measuring unknown resistance, capacitance and inductance values.
C212.4	Explain the construction and working principles of various types of storage and display devices and compare them.
C212.5	Apply the various types of transducers and explain the function of different blocks in data acquisition systems.
	EE8451 – LINEAR INTEGRATED CIRCUITS AND APPLICATIONS
C213.1	Understand the procedure for the fabricating of IC.
C213.2	Analyze the DC & AC characteristics of Operational amplifier.
C213.3	Explain the various applications of Operational amplifier.
C213.4	Describe the internal functional blocks of special ICs like 555,565 &566.
C213.5	Understand the merits and demerits of different types of voltage regulators and applications.
	IC8451 – CONTROL SYSTEM
C214.1	Understand the control system components and transfer function models of physical



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

	systems.
C214.2	Analyze the time response of systems and steady state error.
C214.3	Apply the basic knowledge in determination of open loop and closed-loop frequency responses.
C214.4	Explain about compensators and its stability analysis.
C214.5	Describe the state variable representation of physical systems and the effect of state feedback.
	EE8411 – ELECTRICAL MACHINES II LABORATORY
C215.1	Understand the regulation of three phase alternator by various methods like EMF, MMF, ZPF and ASA methods.
C215.2	Describe the regulation of three phase salient pole alternator by slip test and measuring its negative and zero sequence impedance.
C215.3	Understand the fundamental characteristics of synchronous motor by relating parameters like field current, armature current.
C215.4	Explain the performance characteristics of three phase induction motor
C215.5	Analyze the performance characteristics of single phase induction motor Learning the various types of starters using
	EE8461 – LINEAR AND DIGITAL INTEGRATED CIRCUITS LABORATORY
C216.1	Implement the Boolean functions and construct & verify the code converter circuits
C216.2	Explain the operation of Parity generator, parity checking, Encoders and Decoders
C216.3	Understand the operation of counters and shift registers
C216.4	Demonstrate the applications of multiplexer, de multiplexer and 555 Timer.
C216.5	Apply the applications of op amp, 566[VCO] and 565 PLL
	EE8412 –TECHNICAL SEMINAR
C217.1	Analyze the strengths and weakness of students by allowing them to choose a technical topic of their choice to deliver seminars.
C217.2	Demonstrate the specific technical skills are analyzed by conducting seminars and exams on topics like Smart grid, electric vehicles, automation & robotics, advanced programming skills
C217.3	Describe the Environmental awareness is inhibited and enhanced among students by handling seminars and conducting tests
C217.4	Explain the sustainability of advanced technologies contributing to the continuous development and well being of society is achieved by delivering seminars
C217.5	Describe the importance for adapting professional ethical standards in their future pursuits which has been analyzed from their presentations.



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

EE8501 – POWER SYSTEM ANALYSIS	
C301.1	Describe the importance of single line diagram, Impedance diagram and form the Y-bus matrix for the power system.
C301.2	Develop the power flow equation for power system problems and Determine the line flows using various algorithm
C301.3	Analyse the importance of short circuit studies; Calculate the fault currents for symmetrical fault condition.
C301.4	Understand about symmetrical fault analysis and Draw the sequence network for L-G, L-L and L-L-G fault of the power system
C301.5	Explain the concept of power system stability, Analyze the stability of single machine infinite bus system
EE8551 – MICROPROCESSOR AND MICROCONTROLLER	
C302.1	Understand the architecture of 8085
C302.2	Analyse the addressing modes and instruction set of 8085 and write the assembly language programs for the basic operation
C302.3	Explain the architecture and memory organization of 8051
C302.4	Describe the interfacing of external peripherals to 8085 using peripheral interfacing ICS
C302.5	Discuss about addressing modes and instruction set of 8051 and its applications
EE8552–POWER ELECTRONICS	
C303.1	Understand different types of power semiconductor devices, their switching characteristics and driver circuits
C303.2	Classify the various performance parameters in controlled rectifiers with different load conditions
C303.3	Analyse DC –DC switching regulators with its Commutation Techniques and apply it for real time applications like SMPS
C303.4	Explain the various pulse width modulated inverters for different loads and infer the effect of power quality disturbances over the system.
C303.5	Analyse AC voltage controllers, Matrix Converters & Cyclo converters with various loads and infer its various configurations.
EE8591 – DIGITAL SIGNAL PROCESSING	
C204.1	Classify the different types of signals and systems and understand their mathematical representation and sampling process of signals.
C204.2	Apply Z Transform and inverse Z transform for analyzing the discrete time systems.
C204.3	Understand various transformation techniques for FFT and their computation.



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

C204.4	Expalin different types of Infinite impulse response filters and Finite impulse response filters
C204.5	Describe the various programmable digital signal processors and apply their concepts in real time application.
	CS8392 –OBJECT ORIENTED PROGRAMMING
C205.1	Understand the basic concepts in object oriented programming concepts.
C205.2	Analyse the basic characteristics of oops like iterators and containers.
C205.3	Explain the basic concepts of advanced of programming.
C205.4	Describe the basics of Java like arrays, operators and control statements.
C205.5	Understand the packages and interfaces involved in exception handling.
	OAN551 –SENSORS AND TRANSDUCERS
C206.1	Understand the concept of measurement technology and study about characteristics of transducers.
C206.2	Analyse the various sensors used to measure motion proximity and ranging parameters.
C206.3	Describe the various sensors used to measure force magnetic and heading parameter.
C206.4	Explain the various sensors used to measure optical pressure temperature parameter.
C206.5	Understand the fundamental of signal conditioning, data acquisition and communication system used in mechatronics.
	EE8511 – CONTROL AND INSTRUMENTATION LABORATORY
C307.1	Understand the use of transfer function for Modeling & analysis of Systems – Machines, Sensors, Transducers Characteristics.
C307.2	Explain the working of P, PI and PID controllers & Process Simulation.
C307.3	Describe the Stability Analysis and design of Lag, Lead and Lag-Lead Compensators using Simulation of Control Systems by Mathematical development tools.
C307.4	Understand the working of Bridge Networks and Dynamics of Sensors/Transducers.
C307.5	Analyse the Signal Conditioning like Instrumentation Amplifier, Analog – Digital and Digital –Analog converters Measurement of Power and Energy.
	HS8581 – PROFESSIONAL COMMUNICATION
C308.1	Develop communicative competence through technology-based tools.
C308.2	Apply critical reading to comprehend different genres of text and practise different forms of written correspondence.
C308.3	Explain the preparation for National and International Competitive exams.
C308.4	Demonstrate the employability skills through self-motivational, managerial and career



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

	planning abilities.
C308.5	Understand the soft skills using various learning styles and strategies.
CS8383 – OBJECT ORIENTED PROGRAMMING LABORATORY	
C209.1	Understand the basics of object oriented programming concepts.
C209.2	Explain the object oriented programming through C++ and JAVA.
C209.3	Demonstrate the package creation, interfacing and threading.
C209.4	Analyse the development applications using object oriented programming.
C209.5	Implement features of object oriented programming to solve real world problems.
EE8601 – SOLID STATE DRIVES	
C310.1	Understand steady state operation and transient dynamics of a motor load system
C310.2	Analyze the operation of the converter/chopper fed dc drive
C310.3	Describe the operation and performance of AC motor drives.
C310.4	Analyze current and speed controllers for a closed loop solid state AC motor drive.
C310.5	Analyze and compare the various controllers for Electric drives.
EE8602– PROTECTION AND SWITCHGEAR	
C311.1	Identify the various types of over voltages in power system and grounding methods.
C311.2	Describe the characteristics and functions of protective relays.
C311.3	Explain the protection schemes for alternator, transformer, busbar and transmission line.
C311.4	Analyze Rate of Rise of Recovery Voltage of the faulted system
C311.5	Understand the functioning of circuit breakers
EE8691 – EMBEDDED SYSTEM	
C312.1	Understand about the Building Blocks of Embedded System
C312.2	Explain the Various Embedded Development Strategies
C312.3	Understand about Bus Communication in processors, Input/output interfacing various processor scheduling algorithms.
C312.4	Describe about Basics of Real time operating system and example tutorials to discuss on one real time operating system tool
C312.5	Discuss about embedded system application development.
EE8002 – DESIGN OF ELECTRICAL MACHINES	
C313.1	Analyze the concept of thermal rating of various types of electrical machines.
C313.2	Solve the output equation of DC machine and calculate its main dimensions and winding details.



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

C313.3	Understand the core, yoke, windings and cooling systems of transformers.
C313.4	Solve the output equation of AC machines and design the stator and rotor of induction machines.
C313.5	Analyse the stator and rotor of synchronous machine and analyze their thermal behavior.
	EE8005 – SPECIAL ELECTRICAL MACHINES
C414.1	Understand the Construction, principle of operation and performance of synchronous reluctance motors and control techniques
C414.2	Describe the Construction, principle of operation, control and performance of stepping motors and control techniques
C414.3	Understand the Construction, principle of operation, control and performance of switched reluctance motors and control techniques
C414.4	Explain the Construction, principle of operation, control and performance of permanent magnet brushless D.C. motors and control techniques
C414.5	Discuss the Construction, principle of operation and performance of permanent magnet synchronous motors and control techniques
	EE8661 –POWER ELECTRONICS AND DRIVES LABORATORY
C315.1	Understand various triggering circuits are designed to generate gate pulses and its Characteristics.
C315.2	Analyse how AC supply is converted to DC and fed to various types of loads
C315.3	Explain DC supply is regulated using the experiments “Step down and step up MOSFET based choppers” and its performance parameters are calculated and analyzed.
C315.4	Describe about DC supply is converted into 1-phase and 3-phase and various modes are studied.
C315.5	Apply Practical application of a power electronic circuit in Switched mode power converter.
	EE8681- MICROPROCESSOR AND MICROCONTROLLER LABORATORY
C316.1	Demonstrate Simple arithmetic operations using 8085
C316.2	Apply the Control instructions like sorting, code conversion and fundamental instructions were used in programs to understand their usage.
C316.3	Understand the Programming 8051 Micro controller using conditional jumps and subroutines
C316.4	Explain about fundamental interface concepts of 8085 microprocessor.
C316.5	Understand the practical interface concepts of 8051 microcontroller.



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

EE8611– MINI PROJECT	
C317.1	Solve a specific problem right from its identification and literature review till the successful solution of the same.
C317.2	Analyse the circuit using simulation software which is designed from base paper
C317.3	Implement the project components, PCB design, soldering part, Final prototype model
C317.4	Explain the students in preparing project reports and publication.
C317.5	Solve practical problems and find solution by formulating proper methodology.
EE8701 - High Voltage Engineering	
C701.1	Ability to understand Transients in power system
C701.2	Ability to understand Generation and measurement of high voltage
C701.3	Ability to understand High voltage testing
C701.4	Ability to understand various types of over voltages in power system
C701.5	Ability to measure over voltages
C701.6	Ability to test power apparatus and insulation coordination
EE8702 - Power System Operation and Control	
C702.1	Ability to understand the day-to-day operation of electric power system
C702.2	Ability to analyze the control actions to be implemented on the system to meet the minute-to-minute variation of system demand
C702.3	Ability to understand the significance of power system operation and control
C702.4	Ability to acquire knowledge on real power-frequency interaction
C702.5	Ability to understand the reactive power-voltage interaction
C702.6	Ability to design SCADA and its application for real time operation
EE8703 –Renewable Energy Systems	
C703.1	Ability to create awareness about renewable Energy Sources and technologies
C703.2	Ability to get adequate inputs on a variety of issues in harnessing renewable Energy.
C703.3	Ability to recognize current and possible future role of renewable energy sources.
C703.4	Ability to explain the various renewable energy resources and technologies and their applications
C703.5	Ability to understand basics about biomass energy
C703.6	Ability to acquire knowledge about solar energy
OCS752 - Introduction to C Programming	
C704.1	Develop simple applications using basic constructs



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

C704.2	Develop applications using arrays and strings
C704.3	Develop applications using functions and structures
	EI8075- Fibre Optics and Laser Instrumentation
C705.1	Understand the principle, transmission, dispersion and attenuation characteristics of optical fibers
C705.2	Apply the gained knowledge on optical fibers for its use as communication medium and as sensor as well which have important applications in production, manufacturing industrial and biomedical applications
C705.3	Understand laser theory and laser generation system
C705.4	Students will gain ability to apply laser theory for the selection of lasers for a specific Industrial and medical application
	EE8010 - Power System Transients
C706.1	Ability to understand and analyze switching and lightning transients
C706.2	Ability to acquire knowledge on generation of switching transients and their control
C706.3	Ability to analyze the mechanism of lighting strokes
C706.4	Ability to understand the importance of propagation, reflection and refraction of travelling waves
C706.5	Ability to find the voltage transients caused by faults
C706.6	Ability to understand the concept of circuit breaker action, load rejection on integrated power system
	EE8711- Power System Simulation Laboratory
C707.1	Ability to understand power system planning and operational studies
C707.2	Ability to acquire knowledge on Formation of Bus Admittance and Impedance Matrices and solution of networks
C707.3	Ability to analyze the power flow using GS and NR method
C707.4	Ability to find Symmetric and Unsymmetrical fault
C707.5	Ability to understand the economic dispatch
C707.6	Ability to analyze the electromagnetic transients
	EE8712 – Renewable Energy Systems Laboratory
C708.1	Ability to understand and analyze Renewable energy systems
C708.2	Ability to train the students in Renewable Energy Sources and technologies
C708.3	Ability to provide adequate inputs on a variety of issues in harnessing Renewable Energy
C708.4	Ability to simulate the various Renewable energy sources
C708.5	Ability to recognize current and possible future role of Renewable energy sources



IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: indhaya@iecw.edu.in

C708.6	Ability to understand basics of Intelligent Controllers
	EE8015 - Electric Energy Generation, Utilization And Conservation
C809.1	To understand the main aspects of generation, utilization and conservation
C809.2	To identify an appropriate method of heating for any particular industrial application
C809.3	To evaluate domestic wiring connection and debug any faults occurred
C809.4	To construct an electric connection for any domestic appliance like refrigerator as well as to design a battery charging circuit for a specific household application.
C809.5	Realize the appropriate type of electric supply system and to evaluate the performance of the traction unit
C809.6	To understand the main aspects of Traction
	EE8017 - High Voltage Direct Current Transmission
C810.1	Ability to understand the principles and types of HVDC system
C810.2	Ability to analyze and understand the concepts of HVDC converters
C810.3	Ability to acquire knowledge on DC link control
C810.4	Ability to understand the concepts of reactive power management, harmonics and power flow analysis
C810.5	Ability to get knowledge about Planning of DC power transmission & comparison with AC power transmission
C810.6	Ability to understand the importance of power flow in HVDC system under steady state
	EE8811 - Project Work
C811.1	Identify and apply the real world and societal importance problems in the Electrical and its allied area
C811.2	Identify, analyze, design, implement and handle prototype projects with a complete and organized solution methodologies
C811.3	Apply modern engineering tools for solution
C811.4	Contribute as an individual or in a team in development of technical projects
C811.5	Develop effective communication skills for presentation of project related activities and prepare reports and examination following professional ethics

ABBREVIATIONS

- C101.1** **C stands for Course**
- 1 stands for year of study**
- 01 stands for first paper as per the curriculum**
- .1 stands for Outcomes for particular course**

***The same format is followed for remaining years and courses**