

BHARATHIYAR INSTITUTE OF ENGINEERING FOR WOMEN
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CO-PO MAPPING-2013 REGULATION

Course code & Name : HS6151 (C101) & TECHNICAL ENGLISH - I


Semester : I

COURSE OUTCOMES:

CO	Course Outcomes
C101.1	Define the fundamentals of engineering after learning the rules of English Grammar.
C101.2	Observe and interpret the contextual knowledge by speaking, listening and reading the social issues such as public health, safety, legal and culturally related considerations.
C101.3	Apply the creative, appropriate techniques, resources to analyze complex engineering problems by interactive exercises such as interviews and dialogue-writing.
C101.4	Design the multidisciplinary settings to manage projects as an individual, as a member or leader after taking the exercises like role-play, group discussion and making presentations
C101.5	Model the life-long learning methods suitable for all the environments committed to Professional ethics and responsibilities after inculcating the habit of reading and writing
C101.6	Analyze and identify the root for an effective managerial skills through different spoken discourse and excerpts

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C101.1	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-
C101.2	3	2	1	-	-	-	-	-	-	-	-	-	1	-	-
C101.3	3	2	1	-	-	-	-	-	-	-	-	-	1	-	-
C101.4	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-
C101.5	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-
C101.6	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-
C101	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-


D.R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: MA6151 (C102) & MATHEMATICS – I

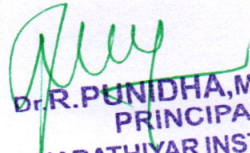
Semester : I

COURSE OUTCOMES:

C102.1	Define Eigen values and Eigen vectors and explain how to analyze the stability of a system using these concepts and much other real time application in engineering.
C102.2	Explain the physical interpretation of divergence, curl and gradient of a vector field and also how to apply these concepts in solving engineering problems.
C102.3	Define the convergence of a sequence and series and make the student knowledgeable in the area of infinite series and their convergence so that he/ she will be familiar with limitations of using infinite series approximations for solutions arising in mathematical modelling
C102.4	Introduce the concept of multivariable functions of real variables arise inevitably in engineering and physics due to any one physical quantity will generally depend on a number of other quantities and help to solve real time problems.
C102.5	Extend the concept of single integral to multiple integral and explain how to evaluate it. Also explain the idea of change of order of integration and explain how to find Area and volume of solids
C102.6	Understand various mathematical tools and apply it to solve the engineering problems most effectively

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C102.1	2	1	1	-	-	-	2	2	1	-	-	2	1	-	-
C102.2	2	1	1	-	-	-	2	2	1	-	-	2	1	-	-
C102.3	2	1	1	-	-	-	2	2	2	-	-	2	1	-	-
C102.4	2	1	1	-	-	-	2	2	2	-	-	1	1	-	-
C102.5	2	1	1	-	-	-	2	2	2	-	-	1	1	-	-
C102.6	2	1	1	-	-	-	2	2	2	-	-	2	1	-	-
C102	2	1	1	-	-	-	2	2	2	-	-	2	1	-	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVİYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: PH6151 (C103) & ENGINEERING PHYSICS - I


Semester : I

COURSE OUTCOMES:

C103.1	To understand the possible crystal structures and to analyze various growth techniques in the view of increasing demand of crystals for various Engineering and Technological applications
C103.2	To understand the basic concepts of elastic behavior of materials and evaluate the structural stability of beams. Remembering functional ideas of thermal physics and compare the thermal conductivity of different materials to meet the specific needs
C103.3	Describe and analyzing the quantum nature of radiation and matter to solve the real time societal and technological problems
C103.4	The significance of frequency dependent sound waves is discussed and to solve the Medical and Engineering problems using ultrasonic's.
C103.5	To discuss the propagation of light in optical fibers, compare various types of fibers and its applications in Medical and Engineering fields
C103.6	To make the students understand the fundamentals of Physics to solve complex engineering problems for benefit of the society

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C103.1	3	2	1	-	1	-	-	1	-	-	-	1	2	1	1
C103.2	3	2	1	-	1	-	-	1	-	-	-	1	2	1	1
C103.3	3	2	1	-	1	-	-	2	-	-	-	1	2	1	1
C103.4	3	3	1	-	1	-	-	2	-	-	-	1	2	1	1
C103.5	3	3	1	-	1	-	-	2	-	-	-	1	2	1	1
C103.6	3	3	1	-	1	-	-	2	-	-	-	1	2	1	1
C103	3	3	1	-	1	-	-	2	-	-	-	1	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: CY6151 (C104) & ENGINEERING CHEMISTRY - I

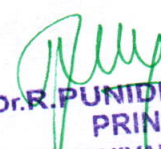
Semester : I

COURSE OUTCOMES:

C104.1	To apply and implement the knowledge of synthesis and uses of polymers in industries and environment
C104.2	To analyze and understand the concepts of thermodynamic laws in various industrial applications
C104.3	To understand and remember the concepts of photo physical, photochemical process and spectroscopy for getting knowledge in light emitting properties of compounds and identifying the functional groups of molecules
C104.4	Knowledge of alloys gives an idea about the manufacturing process in various industries
C104.5	To create the knowledge of nonmaterial's and their applications in fields like medicinal, electrical, electronic, chemical,etc
C104.6	The knowledge gained on polymer chemistry, Thermodynamics, Spectroscopy, phase rule and nano materials will provide a strong platform to understand the concept on various fields like mechanical, electrical, civil engineering for further learning

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C104.1	3	2	2	-	2	-	1	1	-	-	-	1	2	1	1
C104.2	3	2	2	-	2	-	1	1	-	-	-	1	2	1	1
C104.3	3	2	2	-	2	-	1	2	-	-	-	1	2	1	1
C104.4	3	3	2	-	2	-	1	2	-	-	-	1	2	1	1
C104.5	3	3	2	-	2	-	1	2	-	-	-	1	2	1	1
C104.6	3	3	2	-	2	-	1	2	-	-	-	1	2	1	1
C104	3	3	2	-	2	-	1	2	-	-	-	1	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: GE6151 (C105) & COMPUTER PROGRAMMING

Semester : I

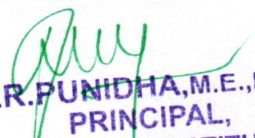
COURSE OUTCOMES:

After the course, the student should be able to:

C105.1	Understand the organization of a digital computer.
C105.2	Be exposed to the number systems
C105.3	Ability to think logically and write pseudo code or draw flow charts for problems.
C105.4	Ability to use arrays, strings, functions, pointers, structures and unions in C.
C105.5	Design C Programs for problems
C105.6	Write and execute C programs for simple applications

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C105.1	3	3	2	-	3	1	1	-	-	-	-	3	2	2	1
C105.2	3	3	2	-	3	1	1	-	-	-	-	3	2	2	1
C105.3	3	3	2	-	3	1	1	-	-	-	-	3	2	2	1
C105.4	3	3	2	-	3	1	1	-	-	-	-	3	2	2	1
C105.5	3	3	2	-	3	1	1	-	-	-	-	3	2	2	1
C105.6	3	3	2	-	3	1	1	-	-	-	-	3	2	2	1
C105	3	3	2	-	3	1	1	-	-	-	-	3	2	2	1


Dr.R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: GE6152 (C106) & ENGINEERING GRAPHICS

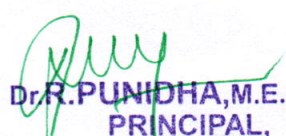
Semester : I

COURSE OUTCOMES:

C106.1	Ability to draw different engineering curves, draw different orthographic projections.
C106.2	Illustrate different views of points, lines and planes inclined to both HP and VP in the first quadrant.
C106.3	Develop the projections of simple solids inclined to any one plane
C106.4	Categorize Section and develop various solids
C106.5	Evaluate to Draw 3D projections of simple solids by Perspective by visual ray method and Isometric projections
C106.6	Build an engineering component using Paper drawing as well as in CAD

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C106.1	3	2	1	-	-	2	-	-	1	-	-	2	2	-	1
C106.2	3	2	2	-	-	2	-	-	1	-	-	2	2	-	1
C106.3	3	2	1	-	-	2	-	-	1	-	-	2	1	-	1
C106.4	3	2	1	-	-	2	-	-	1	-	-	2	1	-	1
C106.5	3	2	1	-	-	2	-	-	1	-	-	2	1	-	1
C106.6	3	2	2	-	-	2	-	-	1	-	-	2	1	-	1
C106	3	2	1	-	-	2	-	-	1	-	-	2	1	-	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: GE6161 (C107) & COMPUTER PRACTICES LABORATORY

Semester : I


COURSE OUTCOMES:

After the course, the student should be able to:

C107.1	Conversant with the use of Office software.
C107.2	Knowledge to use presentation and visualization tools.
C107.3	Familiar with problem solving techniques and flow charts.
C107.4	Apply good programming design methods for program development.
C107.5	Design and implement C programs for simple applications.
C107.6	Develop recursive programs.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C107.1	2	-	-	-	2	2	-	2	3	-	-	2	2	2	1
C107.2	2	-	-	-	2	2	-	2	3	-	-	2	2	1	1
C107.3	2	-	-	-	2	2	-	2	3	-	-	2	2	1	1
C107.4	2	-	-	-	2	2	-	2	3	-	-	2	2	1	1
C107.5	2	-	-	-	2	2	-	2	3	-	-	2	2	1	1
C107.6	2	-	-	-	2	2	-	2	3	-	-	2	2	2	1
C107	2	-	-	-	2	2	-	2	3	-	-	2	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: GE6162 (C108) & ENGINEERING PRACTICES LABORATORY


Semester : I

COURSE OUTCOMES:

C108.1	Hands on experience on welding, sheet metal and lathe works
C108.2	Experience the plumbing and carpentry work
C108.3	Demonstration on centrifugal pump and air conditioning working principles
C108.4	Measurement of Electrical quantities, earthing procedures, wiring methods etc
C108.5	Study of Electronic components and equipments – Resistor, colour coding measurement of AC signal parameter, Gates , Circuits etc
C108.6	Provide exposure to the students with hands-on experience on various basic engineering practices in Civil, Mechanical, Electrical and Electronics Engineering.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C108.1	3	1	-	-	-	1	-	2	2	2	-	1	2	-	1
C108.2	3	1	-	-	1	1	-	1	2	1	-	1	2	-	1
C108.3	3	1	-	-	1	1	-	2	1	1	-	1	2	-	1
C108.4	3	1	-	-	1	1	-	2	2	1	-	1	2	-	1
C108.5	3	1	-	-	1	1	-	2	2	1	-	1	2	-	1
C108.6	3	1	-	-	1	1	-	-	1	1	-	1	2	-	1
C108	3	1	-	-	1	1	-	2	2	1	-	1	2	-	1


Dr. R. PUNDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: GE6163 (C109) & PHYSICS AND CHEMISTRY LABORATORY-1

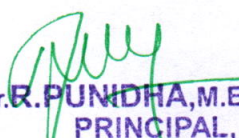
Semester : I

COURSE OUTCOMES:

C109.1	To apply the physics principles of Thermal physics and Properties of Matter to evaluate properties of materials
C109.2	To understand measurement technique and usage of new instrument in Optics for real time application in Engineering.
C109.3	Apply the concept of Ultrasonic to determine the physical parameters.
C109.4	Able to analyze the quality of water for domestic and industrial purpose.
C109.5	Used to find out the emf for different metallic solutions from which electrode potential is determined.
C109.6	To acquire knowledge about the conductivity of acids and bases.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C109.1	2	-	-	-	-	1	-	2	2	2	-	1	-	-	-
C109.2	2	1	-	-	1	1	-	1	2	1	-	1	-	-	-
C109.3	2	-	-	-	1	1	-	2	1	1	-	1	-	-	-
C109.4	2	-	-	-	1	1	-	2	2	1	-	1	-	-	-
C109.5	2	-	-	-	1	1	-	2	2	1	-	1	-	-	-
C109.6	2	-	-	-	1	1	-	-	1	1	-	1	-	-	-
C109	2	1	-	-	1	1	-	2	2	1	-	1	-	-	-


Dr. R. PUNDRA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course Code & Name: HS6251 (C110) & TECHNICAL ENGLISH - II

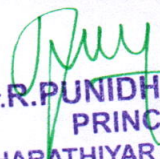
Semester: II

COURSE OUTCOMES:

C110.1	Define the impact of the professional engineering solution in societal and environmental contexts with the help of the basic grammar taught to communicate effectively and confidently.
C110.2	Observe the usage of modern engineering and IT tools in designing and developing solutions after developing their reading skills with different types of reading strategies.
C110.3	Apply the creative, appropriate techniques, resources to analyze complex engineering problems by interactive exercises like sample interviews and dialogue – writing.
C110.4	Analyze the engineering and Project management principles in consequence of the listening and speaking skills acquired during the classroom activities.
C110.5	Model the time varying natural and engineering sciences after learning to write an imaginary reports, essays, process description, and visualizing materials.
C110.6	Understand the responsibilities relevant to the professional engineering practice after reading the different genres of texts.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C110.1	2	-	-	-	-	-	-	-	3	3	2	2	-	-	-
C110.2	2	-	-	-	-	-	-	-	3	3	2	2	-	-	-
C110.3	2	-	-	-	-	-	-	-	3	3	2	2	-	-	-
C110.4	1	-	-	-	-	-	-	-	3	3	2	1	-	-	-
C110.5	1	-	-	-	-	-	-	-	3	3	2	1	-	-	-
C110.6	1	-	-	-	-	-	-	-	3	3	2	1	-	-	-
C110	2	-	-	-	-	-	-	-	3	3	2	2	-	-	-


Dr.R.PUNIDHA,M.E.,Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL:(TK), SALEM (DT).

Course Code & Name: MA6251 (C111) & MATHEMATICS – II


Semester: II

COURSE OUTCOMES:

C111.1	Apply the knowledge of techniques in solving ordinary differential equations that model Engineering problems.
C111.2	Define and understand the concepts of vector calculus, needed for problems in all engineering disciplines.
C111.3	Develop an understanding of the standard techniques of complex variable theory so as to enable the student to apply them with confidence, in application areas such as heat conduction, elasticity, fluid dynamics and flow the of electric current.
C111.4	Evaluate real integrals by applying concept of complex integration
C111.5	Understand and apply the knowledge of Laplace Transforms in solving system of linear differential equations.
C111.6	Introduces fundamental knowledge in mathematics that is applicable in the Engineering aspects.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C111.1	3	2	1	-	-	-	-	-	-	-	-	-	3	-	-
C111.2	3	2	1	-	-	-	-	-	-	-	-	-	3	-	-
C111.3	3	2	1	-	-	-	-	-	-	-	-	-	3	-	-
C111.4	3	2	1	-	-	-	-	-	-	-	-	-	3	-	-
C111.5	3	2	1	-	-	-	-	-	-	-	-	-	3	-	-
C111.6	3	2	1	-	-	-	-	-	-	-	-	-	3	-	-
C111	3	2	1	-	-	-	-	-	-	-	-	-	3	-	-

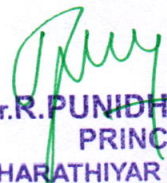

Dr. R. PUNDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course Code & Name: PH6251 (C112) & ENGINEERING PHYSICS- II**Semester: II****COURSE OUTCOMES:**

C112.1	To understand the basic principles of the electrical and thermal conductivity of metals and to analyze the electron behavior by classical and quantum theories.
C112.2	To discuss the electron behavior in conduction and valence band in semiconducting materials, comparing the mobility and carrier concentration of N and P type semiconductors by theoretical method and applying Hall effect experimental method for biasing application.
C112.3	To identify the different types of magnetic materials based on the atomic magnetic dipoles and utilize them for different technological applications. To explain the superconducting behaviors of materials and to solve real time medical and engineering applications.
C112.4	To describe different polarization mechanism in dielectric materials and to meet the specific need in energy sector.
C112.5	State and explain modern engineering materials such as metallic glasses, shape memory alloys, Nonmaterial's and NLO materials to design new engineering devices.
C112.6	To emphasize the role of conventional and modern engineering materials in Technological applications for the sustainable development of the society.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C112.1	3	2	2	-	-	1	-	-	1	-	-	-	-	-	-
C112.2	3	2	2	-	-	1	-	-	1	-	-	-	-	-	-
C112.3	3	2	2	-	-	1	-	-	1	-	-	-	-	-	-
C112.4	3	2	2	-	-	1	-	-	1	-	-	-	-	-	-
C112.5	3	2	2	-	-	1	-	-	1	-	-	-	-	-	-
C112.6	3	2	2	-	-	1	-	-	1	-	-	-	-	-	-
C112	3	2	2	-	-	1	-	-	1	-	-	-	-	-	-


Dr. R. PUNDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course Code & Name: CY6251 (C113) & ENGINEERING CHEMISTRY – II


Semester: II

COURSE OUTCOMES:

C113.1	To gain knowledge about water quality parameters to analyze and provide them with latest equipment and technologies by using external and internal treatments.
C113.2	To impart knowledge in principles of electrochemical reactions, redox reactions in corrosion of materials and methods for corrosion prevention and protection of materials.
C113.3	To understand the principles and generation of energy in batteries, nuclear reactors, solar cells, wind mills and fuel cells.
C113.4	To get adequate knowledge in preparation, properties and applications of engineering materials.
C113.5	Analyze issues related to fuels and their synthesis and able to understand working of IC and diesel engines.
C113.6	The knowledge gained on engineering materials, fuels, energy sources and water treatment techniques will facilitate better understanding of engineering processes and applications for further learning

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C113.1	3	3	1	1	-	-	-	-	-	-	-	-	2	-	-
C113.2	3	3	2	2	-	-	-	-	-	-	-	-	2	-	-
C113.3	3	3	1	2	-	-	-	-	-	-	-	-	2	-	-
C113.4	3	2	2	1	-	-	-	-	-	-	-	-	2	-	-
C113.5	2	2	2	2	-	-	-	-	-	-	-	-	2	-	-
C113.6	3	3	2	2	-	-	-	-	-	-	-	-	2	-	-
C113	3	3	2	2	-	-	-	-	-	-	-	-	2	-	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course Code & Name: GE6251 (C114) - BASIC CIVIL AND MECHANICAL ENGINEERING


Semester: II

COURSE OUTCOMES:

C114.1	Explain the working principles of various power plants
C114.2	Able to differentiate the pumps and turbines.
C114.3	State the functions of IC engine and classify the various types of boilers.
C114.4	Apply the principles of vapour absorption and compression systems and Explain the Operation of air conditioner.
C114.5	Apply the principles of surveying and use various measurements for surveying and study about various engineering materials and leveling instruments.
C114.6	Classify the types of bridges, foundation, floorings, roofs, plasters and R.C.C structural members and state the purpose of dam.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C114.1	-	-	3	1	-	1	2	2	-	1	-	2	-	-	-
C114.2	-	-	3	1	-	1	2	2	-	1	-	2	-	-	-
C114.3	-	-	3	1	-	1	2	2	-	1	-	2	-	-	-
C114.4	-	-	3	1	-	1	2	2	-	1	-	2	-	-	-
C114.5	-	-	3	1	-	1	2	2	-	1	-	2	-	-	-
C114.6	-	-	3	1	-	1	2	2	-	1	-	2	-	-	-
C114	-	-	3	1	-	1	2	2	-	1	-	2	-	-	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course Code & Name: EE6201 (C115) & CIRCUIT THEORY


Semester: II

COURSE OUTCOMES:

C115.1	Define and understanding the basic circuit elements and mesh and nodal analysis
C115.2	Understanding the concepts of network theorems
C115.3	Analyze the phenomenon of resonance and coupled circuits.
C115.4	Evaluate the transient response of AC and DC circuits.
C115.5	Understanding and analyzing the three phase circuits.
C115.6	Understanding the applications of circuit theory

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C115.1	3	2	1	1	-	-	-	-	-	-	-	2	2	-	-
C115.2	3	2	1	1	-	-	-	-	-	-	-	2	2	-	-
C115.3	3	1	1	1	-	-	-	-	-	-	-	2	2	-	-
C115.4	3	1	1	1	-	-	-	-	-	-	-	2	2	-	-
C115.5	3	2	1	1	-	-	-	-	-	-	-	2	2	-	-
C115.6	3	2	1	1	-	-	-	-	-	-	-	2	2	-	-
C115	3	2	1	1	-	-	-	-	-	-	-	2	2	-	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIAKURICHI - 636 112,
THALAIVASAL (TK), SRI PERIYAR (DT).

Course Code & Name: GE6262 (C116) & PHYSICS AND CHEMISTRY LABORATORY-II

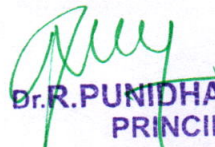
Semester: II

COURSE OUTCOMES:

C116.1	Apply the knowledge of semiconducting material to evaluate the band gap of the material useful for engineering solutions.
C116.2	Apply the concept of elasticity to analyze the properties related to multidisciplinary field
C116.3	To demonstrate an experiment using spectrometer to determine the refractive index of various color and dispersive power of the material of the given prism and to develop instrument handling skill.
C116.4	Able to analyze the quality of water for domestic and industrial purpose
C116.5	Used to find out the Emf for different metallic solutions from which electrode potential is determined
C116.6	To acquire knowledge about the conductivity of acids and bases

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C116.1	3	2	-	1	1	1	-	2	2	2	-	1	1	1	-
C116.2	3	2	-	1	1	1	-	2	2	1	-	1	1	1	-
C116.3	3	2	-	1	1	1	-	2	2	1	-	1	1	1	-
C116.4	3	2	-	1	1	1	-	2	2	1	-	1	1	1	-
C116.5	3	2	-	1	2	1	-	2	1	2	-	2	1	1	-
C116.6	3	2	-	1	1	1	-	2	2	2	-	1	1	1	-
C116	3	2	-	1	1	1	-	2	2	2	-	1	1	1	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIVASAL (TK) SRI EM (DT).

Course Code & Name: GE6263 (C117) - COMPUTER PROGRAMMING LABORATORY


Semester: II

COURSE OUTCOMES:

C117.1	Explain UNIX Operating system and usage of file system.
C117.2	Apply Shell Commands for a given task using filter and pipe commands.
C117.3	Develop and implement the Shell scripts in VI editor.
C117.4	Develop C Program on Unix environment.
C117.5	Apply File handling in C to copy.
C117.6	Learn to merge and display the given file.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C117.1	3	2	1	-	-	-	-	2	2	2	-	1	1	1	-
C117.2	3	2	1	-	-	-	-	2	2	2	-	1	1	1	-
C117.3	3	2	1	-	-	-	-	2	2	2	-	1	1	1	-
C117.4	3	2	1	-	-	-	-	2	2	2	-	1	1	1	-
C117.5	3	2	1	-	-	-	-	2	2	2	-	1	1	1	-
C117.6	3	2	1	-	-	-	-	2	2	2	-	1	1	1	-
C117	3	2	1	-	-	-	-	2	2	2	-	1	1	1	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course Code & Name: EE6211 (C118) - ELECTRIC CIRCUITS LABORATORY

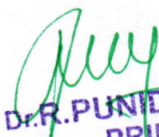
Semester: II

COURSE OUTCOMES:

C118.1	Apply KCL, KVL and Network Theorems to Simple and Complex circuits.
C118.2	Demonstrate the working of CRO and Determine the Time Constant of RC circuit.
C118.3	Determine frequency response of RLC circuits.
C118.4	Use MATLAB to simulate series, parallel resonant circuit, low pass, high pass filter.
C118.5	Use MATLAB to simulate three phase balanced, unbalanced circuit and Measure power in three phase circuits by two wattmeter methods.
C118.6	Determine h-parameters of Two port networks and Calibrate single phase energy meter.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C118.1	3	2	2	1	1	1	-	2	2	2	-	2	2	1	-
C118.2	3	2	2	1	1	1	-	2	2	1	-	2	2	1	-
C118.3	3	2	2	1	1	1	-	2	2	1	-	2	2	1	-
C118.4	3	2	2	1	1	1	-	2	2	1	-	2	2	1	-
C118.5	3	2	2	1	1	1	-	2	2	2	-	2	2	1	-
C118.6	3	2	2	1	1	1	-	2	2	2	-	2	2	1	-
C118	3	2	2	1	1	1	-	2	2	2	-	2	2	1	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code &Name: MA6351 (C201) & TRANSFORMS PARTIAL AND DIFFERENTIAL EQUATIONS

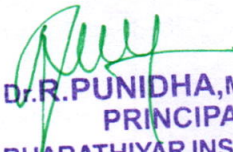
Semester : III

COURSE OUTCOMES:

CO	Course Outcomes
C201.1	Formulate the partial differential equations and solve linear partial differential equations of second and higher order with constant coefficients
C201.2	Develop Fourier series of functions defined in any interval and make use of it in finding root mean square value
C201.3	Solve the boundary value problems such as one dimensional wave equation, one dimensional equation of heat conduction and two dimensional equation of heat conduction
C201.4	Evaluate the Fourier transform pair, Fourier sine transform pair and Fourier cosine transform pair of functions
C201.5	Estimate the value of some indefinite integrals using Convolution theorem and Parseval's identity on Fourier transforms
C201.6	Determine the Z-transform of discrete functions and solve the difference equations by using Z-transform properties

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C201.1	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C201.2	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C201.3	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C201.4	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C201.5	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C201.6	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C201	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code &Name : EE6301 (C202) & DIGITAL LOGIC CIRCUITS

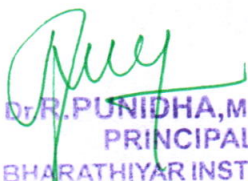
Semester : III

COURSE OUTCOMES:

CO	Course Outcomes
C202.1	Recall the use of number systems and its conversion and compare the operation, characteristics of digital logic families
C202.2	Apply the minimal SOP and POS forms of logic expression using K map and implement it with the combinational logic .
C202.3	Analyze and design a synchronous sequential circuit to obtain a state table, state diagram for the time sequence of all the variables
C202.4	Analyze and design an asynchronous sequential circuit and describe the race conditions, hazards and errors in digital circuits
C202.5	Explain the assembly of combinational circuits by programmable logic memories and implementation using PLA and PAL
C202.6	Explain the assembly of combinational circuits by programmable logic memories and implementation using PLA and PAL

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C202.1	3	2	1	1	1	-	1	-	-	-	-	1	2	1	1
C202.2	3	2	1	1	1	-	1	-	-	-	-	1	2	1	-
C202.3	3	2	1	1	1	-	1	-	-	-	-	1	2	-	1
C202.4	3	2	1	1	1	-	1	-	-	-	-	1	2	1	-
C202.5	3	2	1	1	1	-	1	-	-	-	-	1	2	-	1
C202.6	3	2	1	1	1	-	1	-	-	-	-	1	2	1	1
C202	3	2	1	1	1	-	1	-	-	-	-	1	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIYASAL (TK), SALEM (DT).

Course code &Name: EE6302 (C203) & ELECTROMAGNETIC THEORY

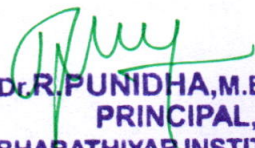
Semester : III

COURSE OUTCOMES:

CO	Course Outcomes
C203.1	Explain the sources and effects of electromagnetic fields and apply the basic mathematical concepts to analyze the vector fields
C203.2	Discuss the electric field intensity due to discrete and continuous charge distributions by applying appropriate laws
C203.3	Explain the concept of electric potential, polarization, energy density, capacitance for different applications
C203.4	Describe the concepts of magnetic fields, magnetic materials, magnetization, magnetic torque, inductance, energy density and its applications
C203.5	Describe and apply Faraday's law, Maxwell's equations for electromagnetic field applications and differentiate field and circuit theory related applications
C203.6	Describe and analyze electromagnetic wave propagation, power in conductor, free-space, dielectric medium and its applications

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C203.1	3	2	2	1	1	-	1	-	-	-	-	1	1	1	-
C203.2	3	2	2	1	1	-	1	-	-	-	-	1	1	1	1
C203.3	3	2	2	1	1	-	1	-	-	-	-	1	1	1	1
C203.4	3	2	2	1	1	-	1	-	-	-	-	1	1	1	1
C203.5	3	2	2	1	1	-	1	-	-	-	-	1	1	-	1
C203.6	3	2	2	1	1	-	1	-	-	-	-	1	1	1	1
C203	3	2	2	1	1	-	1	-	-	-	-	1	1	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: GE6351 (C204) & ENVIRONMENTAL SCIENCE AND ENGINEERING

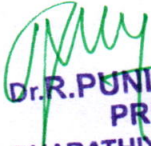
Semester : III

COURSE OUTCOMES:

CO	Course Outcomes
C204.1	Infer the importance of environment and explain the concept, types, structure and functions of ecosystem
C204.2	Recall the various functions, different values, measurement, levels, threats and the need for conservation of biodiversity
C204.3	Analyze the different types of pollution and propose the suitable methods to prevent the same to enhance the environment
C204.4	Discuss the different types of natural resources, characteristics, optimum usage and its importance of conservation
C204.5	List the various social issues, environmental protection acts, different disasters and possible solutions to protect the environment for sustainable development
C204.6	Describe the effects of population explosion, trend of population in various countries and explain the role of IT in environment and human health

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C204.1	3	2	1	1	-	1	1	-	-	-	-	1	1	1	1
C204.2	3	2	1	1	-	1	1	-	-	-	-	1	1	1	-
C204.3	3	2	1	1	-	1	1	-	-	-	-	1	1	-	1
C204.4	3	2	1	1	-	1	1	-	-	-	-	1	1	1	1
C204.5	3	2	1	1	-	1	1	-	-	-	-	1	1	1	1
C204.6	3	2	1	1	-	1	1	-	-	-	-	1	1	1	1
C204	3	2	1	1	-	1	1	-	-	-	-	1	1	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
TRALAVASAL (TK), SALEM (DT).

Course code &Name : EC6202 (C205) & ELECTRONIC DEVICES AND CIRCUITS

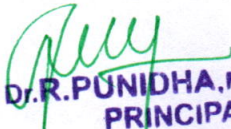
Semester : III

COURSE OUTCOMES:

CO	Course Outcomes
C205.1	Illustrate the structure, operation and characteristics of PN junction diode and its applications
C205.2	Explain the structure, operation and characteristics of various transistors with its biasing concept
C205.3	Explain the gain and frequency response of various configurations of BJT and MOSFET
C205.4	Describe the concepts of differential amplifiers with its gain and frequency response and explain the concepts of neutralization methods and power amplifiers
C205.5	illustrate the concepts of various positive and negative feedback amplifiers and derive its parameters
C205.6	Illustrate the conditions for oscillation and explain the various types of oscillators

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C205.1	3	2	1	1	-	-	-	-	-	-	-	1	-	1	1
C205.2	3	2	1	1	-	-	-	-	-	-	-	1	1	-	-
C205.3	3	2	1	1	-	-	-	-	-	-	-	1	1	1	1
C205.4	3	2	1	1	-	-	-	-	-	-	-	1	1	1	-
C205.5	3	2	1	1	-	-	-	-	-	-	-	1	1	-	1
C205.6	3	2	1	1	-	-	-	-	-	-	-	1	1	1	-
C205	3	2	1	1	-	-	-	-	-	-	-	1	1	1	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code &Name: EE6303 (C206) & LINEAR INTEGRATED CIRCUITS AND APPLICATIONS

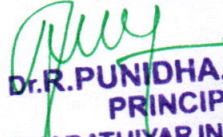
Semester : III

COURSE OUTCOMES:

CO	Course Outcomes
C206.1	Explain the fundamentals, classification, procedures for the realization of monolithic ICs and discuss the fabrication of diodes, capacitance, resistance, FETs
C206.2	Describe the characteristics of operational amplifier and explain the basic applications of OP-Amp
C206.3	Explain the concepts of amplifiers, filters, comparators, multivibrators, waveform generators, peak detectors, S/H circuit, A/D and D/A converters using OP-Amp
C206.4	Describe the internal functional blocks, characteristics and applications of timer, voltage controlled oscillator, phase lock loop and analog multiplier ICs
C206.5	Discuss the internal functional blocks, working principle and applications of voltage regulators and SMPS
C206.6	Describe the internal functional blocks, characteristics and application of power amplifier and function generator IC

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C206.1	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C206.2	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C206.3	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C206.4	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C206.5	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C206.6	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C206	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code &Name: EC6361 (C207) & ELECTRONICS LABORATORY

Semester : III

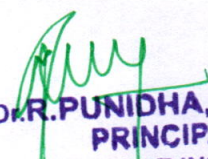
COURSE OUTCOMES:

After the course, the student should be able to:

CO	Course Outcomes
C207.1	Determine the breakdown voltage of PN Diode and Zener diode and sketch the V-I characteristics of BJT for various configurations
C207.2	Draw the equivalent circuit of JFET and sketch the V-I characteristics of UJT and also develop the saw tooth waveform using UJT
C207.3	Design the Common Emitter amplifier and develop the circuit for light activated relay using photo diode and photo transistor
C207.4	Compare the theoretical and practical frequency response of oscillators and estimate the ripple factor of rectifier
C207.5	Design Astable and Monostable multivibrators for generation of different waveforms
C207.6	Estimate the frequency, phase using CRO and draw frequencies versus gain characteristics of passive filters

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C207.1	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C207.2	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C207.3	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C207.4	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C207.5	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C207.6	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C207	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1


D.R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: EE6311 (C208) / LINEAR AND DIGITAL INTEGRATED CIRCUITS

LABORATORY

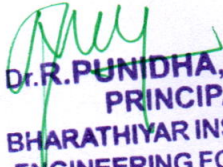
Semester : III

COURSE OUTCOMES:

CO	Course Outcomes
C208.1	Apply Boolean functions to implement adder, subtractor circuits and convert Excess 3 to BCD, Binary to Gray code and vice versa
C208.2	Design parity generator, parity checker, encoder and decoder circuits
C208.3	Design and implement 4-bit modulo synchronous, Asynchronous counters and implement 4-bit shift registers in SISO, SIPO, PISO, PIPO modes
C208.4	Explain multiplexer, demultiplexer circuits and demonstrate 555 timer in Monostable and Astable operation
C208.5	Design and demonstrate inverting amplifier, non-inverting amplifier, adder, comparator, integrator and differentiator circuits using Op-Amp
C208.6	Explain voltage to frequency characteristics of NE/ SE 566 IC and frequency multiplication using NE/SE 565 PLL IC

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C208.1	3	2	2	1	-	-	-	-	-	-	1	1	1	1	-
C208.2	3	2	2	1	-	-	-	-	-	-	1	1	1	1	1
C208.3	3	2	2	1	-	-	-	-	-	-	1	1	1	1	1
C208.4	3	2	2	1	-	-	-	-	-	-	1	1	1	-	-
C208.5	3	2	2	1	-	-	-	-	-	-	1	1	1	1	1
C208.6	3	2	2	1	-	-	-	-	-	-	1	1	-	1	-
C208	3	2	1	1	-	-	-	-	-	-	-	1	2	1	1


 Dr. R. PUNIDHA, M.E., Ph.D.,
 PRINCIPAL,
 BHARATHIYAR INSTITUTE OF
 ENGINEERING FOR WOMEN,
 DEVIYAKURICHI - 636 112,
 THALAIVASAL (TK), SALEM (DT).

Course code &Name: MA6459 (C209) & NUMERICAL METHODS

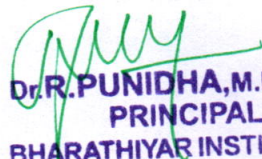
Semester : IV

COURSE OUTCOMES:

CO	Course Outcomes
C209.1	Find the solution of algebraic equations and simultaneous linear system of equations using numerical analysis technique
C209.2	Evaluate interpolated values in a data using Lagrangian method, Newton forward & backward and divided difference method
C209.3	Determine the numerical differentiation of a given data by Newton forward & backward method
C209.4	Formulate single and double integration of a given data by trapezoidal, Simpson, Romberg and Gaussian methods
C209.5	Apply single step and multi step method to solve initial value problems for ordinary differential equations
C209.6	Solve boundary value problems differential equations by using finite difference method, explicit and implicit methods

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C209.1	3	3	2	-	1	-	-	-	-	-	-	1	1	1	1
C209.2	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C209.3	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C209.4	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C209.5	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C209.6	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1
C209	3	3	2	-	-	-	-	-	-	-	-	1	1	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: EE6401 (C210) & ELECTRICAL MACHINES-I

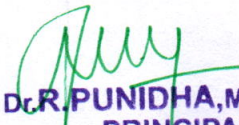
Semester : IV

COURSE OUTCOMES:

CO	Course Outcomes
C210.1	Explain the basic concept of magnetic materials and circuits used in an electric machines
C210.2	Explain the construction, working principle of single and three phase transformers and analyze their performance for different loading conditions
C210.3	Examine the diversified parameters of single phase transformer through various testing methods
C210.4	Illustrate the concepts of electromechanical energy conversion principles and formulate the expressions for voltage and torque in all rotating machines
C210.5	Explain the construction, working principle, types, characteristics and applications of DC generators
C210.6	Explain the working principle, speed control methods of DC motor and estimate the performance of DC motors through various testing methodologies

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C210.1	3	2	1	1	1	-	1	-	-	-	-	1	2	1	1
C210.2	3	2	1	1	1	-	1	-	-	-	-	1	2	1	-
C210.3	3	2	1	1	1	-	1	-	-	-	-	1	2	-	1
C210.4	3	2	1	1	1	-	1	-	-	-	-	1	2	1	-
C210.5	3	2	1	1	1	-	1	-	-	-	-	1	2	-	1
C210.6	3	2	1	1	1	-	1	-	-	-	-	1	2	1	1
C210	3	2	1	1	1	-	1	-	-	-	-	1	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: CS6456 (C211) & OBJECT ORIENTED PROGRAMMING

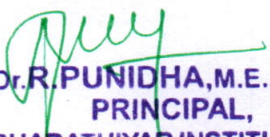
Semester : IV

COURSE OUTCOMES:

CO	Course Outcomes
C211.1	Explain the overview of object oriented programming, use of pointers, functions and abstract data types
C211.2	Recall the basic knowledge on object oriented concepts and its characteristics
C211.3	Develop programs using advanced programming concepts like templates, STL, Exceptions, etc
C211.4	Design and implement the basic concepts of object oriented programming in Java
C211.5	Explain the exception handling in Java
C211.6	Develop, debug and document well-structured programs using C++ and Java

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C211.1	3	2	2	1	1	-	-	-	-	-	-	1	1	1	-
C211.2	3	2	2	1	1	-	-	-	-	-	-	1	1	1	1
C211.3	3	2	2	1	1	-	-	-	-	-	-	1	1	1	1
C211.4	3	2	2	1	1	-	-	-	-	-	-	1	1	1	1
C211.5	3	2	2	1	1	-	-	-	-	-	-	1	1	-	1
C211.6	3	2	2	1	1	-	-	-	-	-	-	1	1	1	1
C211	3	2	2	1	1	-	-	-	-	-	-	1	1	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

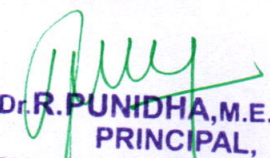
Course code & Name : EE6402 (C212) & TRANSMISSION AND DISTRIBUTION
Semester : IV

COURSE OUTCOMES:

CO	Course Outcomes
C212.1	Explain the basic elements, types of distributor and different transmission system of electrical power systems
C212.2	Estimate the transmission line parameters for different spacing and transposition of conductors
C212.3	Evaluate the performance of transmission lines based on the classification of lines
C212.4	Illustrate the various types of insulators, underground cables and analyze the voltage distribution
C212.5	Estimate the mechanical design of transmission lines for different weather conditions
C212.6	Interpret the tower spotting, types of towers, substation layout and different methods of grounding in power systems

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C212.1	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C212.2	3	2	1	1	1	-	-	-	-	-	-	1	1	1	-
C212.3	3	2	1	1	1	-	-	-	-	-	-	1	1	-	1
C212.4	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C212.5	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C212.6	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C212	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1


Dr. R. PUNDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIYASAL (TK), SALEM (DT).

Course code &Name: EE6403 (C213) & DISCRETE TIME SYSTEMS AND SIGNAL PROCESSING


Semester : IV

COURSE OUTCOMES:

CO	Course Outcomes
C213.1	Classify different types of signals and systems
C213.2	Apply Z transform to solve problems on DT systems
C213.3	Compute Discrete Fourier transform using Fast Fourier transform
C213.4	Design of IIR digital filters for the given specifications
C213.5	Design of FIR digital filters for the given specifications
C213.6	Compare various types of Digital Signal Processors

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C213.1	3	2	1	-	1	-	-	-	-	-	-	1	-	1	1
C213.2	3	2	1	-	1	-	-	-	-	-	-	1	1	-	-
C213.3	3	2	1	-	1	-	-	-	-	-	-	1	1	1	1
C213.4	3	2	1	-	1	-	-	-	-	-	-	1	1	1	-
C213.5	3	2	1	-	1	-	-	-	-	-	-	1	1	-	1
C213.6	3	2	1	-	1	-	-	-	-	-	-	1	1	1	-
C213	3	2	1	-	1	-	-	-	-	-	-	1	1	1	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: EE6404 (C214) & MEASUREMENTS AND INSTRUMENTATION


Semester : IV

COURSE OUTCOMES:

CO	Course Outcomes
C214.1	Explain the operation and performance characteristics of measuring instruments
C214.2	Identify the analog and digital techniques to measure voltage, current, energy and power in the instruments
C214.3	Describe the measurement techniques of various instruments and explain the operation of instrument transformers
C214.4	Distinguish between the DC and AC type instruments and classify the external interference signals
C214.5	Explain the most versatile laboratory instrument used for making a permanent record of electrical quantities and for display purpose
C214.6	Classify the different types of transducers and describe the signal measurement recording using data acquisition system

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C214.1	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C214.2	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C214.3	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C214.4	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C214.5	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C214.6	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1
C214	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code &Name: CS6461 (C215) & OBJECT ORIENTED LABORATORY

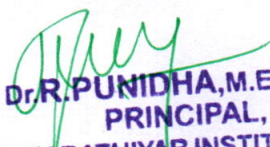
Semester : IV

COURSE OUTCOMES:

CO	Course Outcomes
C215.1	Apply the basic knowledge on object oriented theory and develop basic programs
C215.2	Develop applications using object oriented programming concepts
C215.3	Develop programs using advanced programming skills such as file handling, Exceptions, etc.
C215.4	Build simple and nested packages in Java
C215.5	Develop user and pre defined interfaces in Java
C215.6	Create threading applications in Java

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C215.1	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C215.2	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C215.3	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C215.4	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C215.5	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C215.6	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C215	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: EE6411 (C216) & ELECTRICAL MACHINES LABORATORY-I

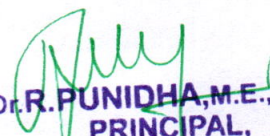
Semester : IV

COURSE OUTCOMES:

CO	Course Outcomes
C216.1	Analyze the characteristics of DC shunt generator DC compound generator and calculate critical resistance and critical speed
C216.2	Examine load characteristics of DC shunt, series and compound motor and identify its maximum efficiency operating point
C216.3	Estimate the efficiency of DC machines in different methods
C216.4	Sketch the load characteristics of single phase and three phase transformer, separate the different losses and find the efficiency
C216.5	Predetermine the equivalent circuit parameters of single phase transformer in two different methods and compare the results
C216.6	Examine the types of starters and 3-phase transformer connections

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C216.1	3	2	2	1	1	-	-	-	-	1	1	1	1	1	-
C216.2	3	2	2	1	1	-	-	-	-	1	1	1	1	1	1
C216.3	3	2	2	1	1	-	-	-	-	1	1	1	1	1	1
C216.4	3	2	2	1	1	-	-	-	-	1	1	1	1	-	-
C216.5	3	2	2	1	1	-	-	-	-	1	1	1	1	1	1
C216.6	3	2	2	1	1	-	-	-	-	1	1	1	1	1	1
C216	3	2	1	1	1	-	-	-	-	-	-	1	1	1	1


Dr. R. PUNIQHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIYASAL (TK), SALEM (DT).

Course code & Name: EE6501 (C301) & POWER SYSTEM ANALYSIS

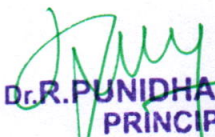
Semester : V

COURSE OUTCOMES:

CO	Course Outcomes
C301.1	Explain the concept of the nature of the modern power system, including the behavior of the constituent components and sub-systems
C301.2	Apply load flow analysis to an electrical power network and interpret the results of the analysis
C301.3	Analyze the network under balanced fault conditions and interpret the results
C301.4	Analyze a network under unbalanced fault conditions and interpret the results
C301.5	Describe the concept of transient stability of a single machine/infinite bus system using both analytical and time simulation methods
C301.6	Explain the factors which determine transient stability in both single machine and multi-machine systems

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C301.1	3	-	-	-	-	-	-	-	-	-	-	-	3	2	1
C301.2	3	3	-	-	3	-	-	-	-	-	-	-	3	2	1
C301.3	3	3	-	-	-	-	-	-	-	-	-	-	3	2	1
C301.4	3	3	-	-	-	-	-	-	-	-	-	-	3	2	1
C301.5	3	3	-	-	-	-	-	-	-	-	-	-	3	2	1
C301.6	3	-	-	-	-	-	-	-	-	-	-	-	3	2	1
C301	3	3	-	-	3	-	-	-	-	-	-	-	3	2	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code &Name: EE6502 (C302) & MICROPROCESSORS AND MICROCONTROLLERS

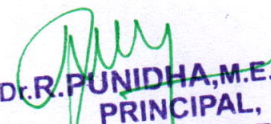
Semester : V

COURSE OUTCOMES:

CO	Course Outcomes
C302.1	Explain about the architecture of 8085 microprocessor, pin configuration, interrupts and the timing diagram of 8085
C302.2	Develop the assembly language program using mnemonics and corresponding machine code based on architecture of 8085 microprocessor
C302.3	Define the 8051 microcontroller with its architecture, pin outs, memory organization, interrupts and compare the programming concepts with 8085
C302.4	Illustrate the interfacing of 8085 with various peripheral devices for transmission, reception and control of data
C302.5	Make use of the data conversion technique such as ADC and DAC and to interface with 8085 processor and 8051 microcontroller
C302.6	Develop the microcontroller assembly language program for various real time applications

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C302.1	2	-	-	-	1	-	-	-	-	-	-	-	2	2	1
C302.2	2	2	2	-	1	-	-	-	-	-	-	-	2	2	1
C302.3	2	-	-	-	1	-	-	-	-	-	-	-	2	2	1
C302.4	2	2	2	-	1	-	-	-	-	-	-	-	2	2	1
C302.5	2	2	2	-	1	-	-	-	-	-	-	-	2	2	1
C302.6	2	2	2	-	1	-	-	-	-	-	-	-	2	2	1
C302	2	2	2	-	1	-	-	-	-	-	-	-	2	2	1


Dr.R.PUNIDHA,M.E.,Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIVASAL(TK), SALEM (DT).

Course code &Name : ME6701 (C303) & POWER PLANT ENGINEERING

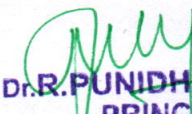
Semester : V

COURSE OUTCOMES:

CO	Course Outcomes
C303.1	Explain the layout of modern thermal power plant and list the various components used in thermal power plant
C303.2	Identify the components of diesel and gas turbine power plants and explain the layout of integrated gassifier based combined cycle systems
C303.3	Describe the layout of subsystems of various nuclear power plants and explain safety measures for nuclear power plants
C303.4	Distinguish different hydroelectric power plants and explain the layout for various renewable energy power generation such as wind, tidal, solar PV, solar thermal, geo thermal, biogas and fuel cell
C303.5	Explain the objectives and requirements to decide tariff and write the general form of tariff
C303.6	Explain the working of Rankine, Otto, Diesel, Dual and Brayton cycle and describe the pollution control techniques for Coal and Nuclear power plants

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C303.1	3	2	2	2	-	-	1	-	-	-	-	-	2	1	1
C303.2	3	2	2	2	-	-	1	-	-	-	-	-	2	1	1
C303.3	3	2	2	2	-	-	1	-	-	-	-	-	2	1	1
C303.4	3	2	2	2	1	-	1	-	-	-	-	-	2	1	1
C303.5	3	2	2	2	-	-	1	-	-	-	-	-	2	1	1
C303.6	3	2	2	2	-	-	1	-	-	-	-	-	2	1	1
C303	3	2	2	2	1	-	1	-	-	-	-	-	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code &Name: EE6503 (C304) & POWER ELECTRONICS

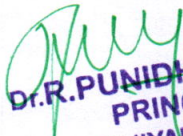
Semester : V

COURSE OUTCOMES:

CO	Course Outcomes
C304.1	Explain the constructional details of various power semi-conductor devices, characteristics and protection circuits
C304.2	Analyze the topologies of single, three phase power converter circuits and comprehend its applications
C304.3	Categorize different dc-dc converters with respect to their operation and application along with their characteristics
C304.4	Examine the operation of single and three phase inverters with different switching techniques
C304.5	Illustrate the operation of single and three phase ac voltage controllers and its control strategies
C304.6	Explain the operation and applications of cycloconverter and matrix converters

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C304.1	3	2	2	2	-	-	1	-	-	-	-	-	2	1	1
C304.2	3	2	2	2	-	-	1	-	-	-	-	-	2	1	1
C304.3	3	2	2	2	-	-	1	-	-	-	-	-	2	1	1
C304.4	3	2	2	2	1	-	1	-	-	-	-	-	2	1	1
C304.5	3	2	2	2	-	-	1	-	-	-	-	-	2	1	1
C304.6	3	2	2	2	-	-	1	-	-	-	-	-	2	1	1
C304	3	2	2	2	1	-	1	-	-	-	-	-	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: EE6504 (C305) & ELECTRICAL MACHINES II

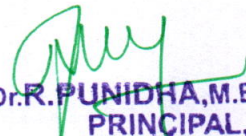
Semester : V

COURSE OUTCOMES:

CO	Course Outcomes
C305.1	Interpret the construction and analyse the performance of synchronous generators and can predict the voltage regulation by various methods
C305.2	Explain the working of synchronous motor and analyze the performance of motor under different loading and excitation conditions
C305.3	Outline the construction and working principle of three phase induction motor and predict its performance by conducting various testing procedures
C305.4	Select the appropriate method of starting, speed control and braking for efficient operation of three phase induction motors
C305.5	Explain the working, equivalent circuit and also categorize the different types of single phase induction motor based on its starting methods
C305.6	Summarize the constructional and operating principle of various special electrical machines and can use it appropriately

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C305.1	3	3	2	-	-	-	-	-	-	-	-	-	3	2	1
C305.2	3	3	2	-	-	-	-	-	-	-	-	-	3	2	1
C305.3	3	3	2	-	-	-	-	-	-	-	-	-	3	2	1
C305.4	3	3	2	-	-	-	-	-	-	-	-	-	3	2	1
C305.5	3	3	2	-	-	-	-	-	-	-	-	-	3	2	1
C305.6	3	3	2	-	-	-	-	-	-	-	-	-	3	2	1
C305	3	3	2	-	-	-	-	-	-	-	-	-	3	2	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVİYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: IC6501 (C306) & CONTROL SYSTEMS

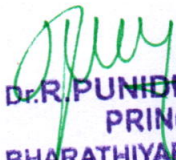
Semester : V

COURSE OUTCOMES:

CO	Course Outcomes
C306.1	Derive the transfer function of electrical and mechanical systems using various reduction techniques
C306.2	Analyze the response of the control system by investigating steady state error and time domain specifications
C306.3	Construct the root locus to find the stability of the system and explain the effects of different types of controller
C306.4	Construct the frequency response of the system using various plots and correlate the time and frequency domain specifications and effect of compensation
C306.5	Design the different types of compensators using frequency response plots to stabilize the control system
C306.6	Explain the state variable representation of physical systems with the effects of state feedback

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C306.1	3	3	3	3	-	-	-	-	2	-	-	-	2	2	1
C306.2	3	3	3	3	-	-	-	-	2	-	-	-	2	2	1
C306.3	3	3	3	3	-	-	-	-	2	-	-	-	2	2	1
C306.4	3	3	3	3	-	-	-	-	2	-	-	-	2	2	1
C306.5	3	3	3	3	-	-	-	-	2	-	-	-	2	2	1
C306.6	3	3	3	3	-	-	-	-	2	-	-	-	2	2	1
C306	3	3	3	3	-	-	-	-	2	-	-	-	2	2	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
THALAIYASAL (TK), SALEM (DT).

Course code & Name: EE6511 (C307) & CONTROL AND INSTRUMENTATION LABORATORY

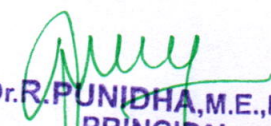
Semester : V

COURSE OUTCOMES:

CO	Course Outcomes
C307.1	Design and simulate the different types of controllers and compensators and analyse the stability of the given system
C307.2	Model and analyse the stability response of machines, sensors and transducers
C307.3	Explain the concept of position control systems, synchro and analyse its characteristics
C307.4	Measure the various parameters such as R, L and C using bridge circuits and also measure the power and energy of electrical circuits
C307.5	Illustrate the concept of sensors/transducers and signal conditioning elements
C307.6	Model and simulate the characteristics, response and stability of the given system

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C307.1	3	1	1	1	-	-	1	-	2	2	2	2	2	1	1
C307.2	3	1	1	1	-	-	1	-	2	2	2	2	2	1	1
C307.3	3	1	1	1	-	-	1	-	2	2	2	2	2	1	1
C307.4	3	1	1	1	-	-	1	-	2	2	2	2	2	1	1
C307.5	3	1	1	1	-	-	1	-	2	2	2	2	2	1	1
C307.6	3	1	1	1	-	-	1	-	2	2	2	2	2	1	1
C307	3	1	1	1	-	-	1	-	2	2	2	2	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
PALAIVASAL (TK), SALEM (DT).

**Course code &Name: GE6563 (C308) & COMMUNICATION SKILLS – LABORATORY
BASED**


Semester : V

COURSE OUTCOMES:

CO	Course Outcomes
C308.1	Demonstrate to communicate confidently, fluently and effectively in English
C308.2	Motivate to familiarise with different types of reading strategies with a clear awareness of purpose
C308.3	Adapt for the corporate environment
C308.4	Utilize the English language in the official context
C308.5	Listing out various vocabularies and inferring the meanings through listening
C308.6	Formulating with all the skills needed for academic and workplace situations

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C308.1	2	2	-	-	-	-	-	-	2	2	-	1	1	2	1
C308.2	2	2	-	-	-	-	-	-	2	2	-	1	1	2	1
C308.3	2	2	-	-	-	-	-	-	2	2	-	1	1	2	1
C308.4	2	2	-	-	-	-	-	-	2	2	-	1	1	2	1
C308.5	2	2	-	-	-	-	-	-	2	2	-	1	1	2	1
C308.6	2	2	-	-	-	-	-	-	2	2	-	1	1	2	1
C308	2	2	-	-	-	-	-	-	2	2	-	1	1	2	1


Dr. R. PUNDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAN INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHU - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : EE6512 (C309) & ELECTRICAL MACHINES LABORATORY II

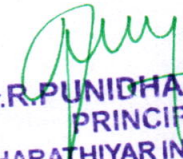
Semester : V

COURSE OUTCOMES:

CO	Course Outcomes
C309.1	Compare the different indirect testing methods to predetermine the voltage regulation of three phase salient and non-salient pole alternator
C309.2	Determine the positive, negative and zero sequence impedance of alternators
C309.3	Analyze the operation of synchronous motor on infinite bus for different excitation condition
C309.4	Assess the performance of three phase induction motor by conducting direct and indirect testing
C309.5	Assess the performance of single phase induction motor by conducting direct and indirect testing
C309.6	Choose the appropriate induction motor starter for various industrial and commercial applications

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C309.1	2	2	2	2	-	-	-	-	1	-	-	-	2	1	1
C309.2	2	2	2	2	-	-	-	-	1	-	-	-	2	1	1
C309.3	2	2	2	2	1	-	-	-	1	-	-	-	2	1	-
C309.4	2	2	2	2	1	-	-	-	1	-	-	-	2	1	1
C309.5	2	2	2	2	1	-	-	-	1	-	-	-	2	1	-
C309.6	2	2	2	2	1	-	-	-	1	-	-	-	2	1	1
C309	2	2	2	2	1	-	-	-	1	-	-	-	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : EC6651 (C310) & COMMUNICATION ENGINEERING

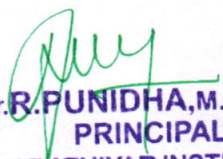
Semester : VI

COURSE OUTCOMES:

CO	Course Outcomes
C310.1	Design and analyze Analog transmission systems
C310.2	Design and analyze Digital transmission systems for high bit bit rate transmission
C310.3	Analyze Coding techniques to minimize the transmission errors
C310.4	Analyze MAC protocols and its implementation in various Access techniques
C310.5	Analyze the digital communication techniques in satellite and optical systems
C310.6	Analyze the communication technique using SCADA systems

MAPPING WITH PROGRAM OUTCOMES :

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C310.1	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C310.2	2	2	1	1	1	-	-	-	-	-	1	-	2	1	1
C310.3	2	2	1	1	1	-	-	-	-	-	-	1	2	1	1
C310.4	2	2	1	1	1	-	-	-	-	-	-	-	2	1	1
C310.5	2	2	1	1	1	-	-	-	-	-	1	1	2	1	1
C310.6	2	2	1	1	1	-	-	-	-	-	-	-	2	1	1
C310	2	2	1	1	1	-	-	-	-	-	1	1	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : EE6601 (C311) & SOLID STATE DRIVES


Semester : VI (EVEN)

COURSE OUTCOMES:

CO	Course Outcomes
C311.1	Analyze the Classification of the various types of drives and load torque characteristics and Apply the multi quadrant dynamics in hoist load system.
C311.2	Analyze the operation of steady state analysis of single phase and three phase fully controlled converter and Chopper fed separately excited dc motor drives and discuss the various control strategies of converter.
C311.3	Analyze the operation and characteristics of various methods of solid state speed control of induction motor.
C311.4	Analyze the operation of various modes of V/f control of synchronous motor drives and different types of permanent magnet synchronous motor drives.
C311.5	Analyze and design a current and speed controller and develop the transfer function for DC motor, load and converter, closed loop control with current and speed feedback.
C311.6	Design the speed and current controller for various electrical drives system

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C311.1	3	2	2	1	-	-	-	-	-	-	-	-	1	1	1
C311.2	3	2	2	1	-	-	-	-	-	-	-	-	1	1	1
C311.3	3	2	2	1	-	-	-	-	-	-	-	-	1	1	1
C311.4	3	2	2	1	-	-	-	-	-	-	-	-	1	1	1
C311.5	3	2	2	1	-	-	-	-	-	-	-	-	1	1	1
C311.6	3	2	2	1	-	-	-	-	-	-	-	-	1	1	1
C311	3	2	2	1	-	-	-	-	-	-	-	-	1	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: EE6602 (C312) & EMBEDDED SYSTEMS

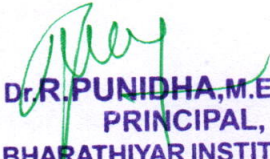
Semester : VI

COURSE OUTCOMES:

CO	Course Outcomes
C312.1	Illustrate the functional blocks of embedded systems
C312.2	Explain bus communication involved in processors, and input/output interfacing
C312.3	Compare various embedded development strategies for designing an embedded system
C312.4	Relate the basics of real time operating system and its tools as a part of product development
C312.5	Summarize various processor scheduling algorithms implemented in embedded systems.
C312.6	Interpret the development of embedded systems used in real time applications

MAPPING WITH PROGRAM OUTCOMES :

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C312.1	2	2	1	1	1	-	-	-	-	-	-	1	1	2	1
C312.2	2	2	1	1	1	-	-	-	-	-	-	1	1	2	1
C312.3	2	2	1	1	1	1	-	-	-	-	-	1	1	2	-
C312.4	2	2	1	1	1	1	-	-	-	-	-	-	1	2	-
C312.5	2	2	1	1	1	-	-	-	-	-	-	1	1	2	1
C312.6	2	2	1	1	1	1	1	-	-	-	-	1	1	2	-
C312	2	2	1	1	1	1	1	-	-	-	-	1	1	2	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : EE6603 (C313) & POWER SYSTEM OPERATION AND CONTROL


Semester : VI (EVEN)

COURSE OUTCOMES:

CO	Course Outcomes
C313.1	Illustrate the concept of day-to-day operation of power system on varying system load demand
C313.2	Infer the control actions on the power system to meet the minute-to-minute variation of system load demand
C313.3	Explain the basic concepts and methods of reactive power control
C313.4	Interpret the basic concepts, types and modelling of excitation systems
C313.5	Formulate the mathematical model of economic load dispatch for any power system
C313.6	Explain the role of computers in the power system operation and control

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C313.1	3	2	2	-	-	-	-	-	-	-	-	-	2	1	1
C313.2	3	2	2	-	-	-	-	-	-	-	-	-	2	1	1
C313.3	3	2	2	-	-	-	-	-	-	-	-	-	2	1	1
C313.4	3	2	2	-	-	-	-	-	-	-	-	-	2	1	1
C313.5	3	2	2	-	-	-	-	-	-	-	-	-	2	1	1
C313.6	3	2	2	-	-	-	-	-	-	-	-	-	2	1	1
C313	3	2	2	-	-	-	-	-	-	-	-	-	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : EE6604 (C314) & DESIGN OF ELECTRICAL MACHINES

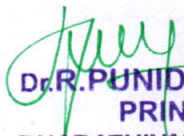
Semester : VI

COURSE OUTCOMES:

CO	Course Outcomes
C314.1	Select the proper engineering materials with electrical properties for the effective and efficient machine design
C314.2	Analyse the temperature rise in electrical (Rotating and Static) machine and to follow the standard specifications for system design
C314.3	Develop the design parameters of DC machines (motor and generator) as per the industry standard
C314.4	Predict the performance of transformer both single and three phase using design parameters
C314.5	Develop the design parameters for stator and rotor core, winding structure for squirrel cage and wound rotor induction motor and analyse the performance of the motor
C314.6	Develop the design parameters for the core, field and armature winding, damper winding for synchronous motor and analyse the thermal behaviour of the motor

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C314.1	3	3	2	-	-	-	-	-	-	-	-	-	2	1	1
C314.2	3	3	2	-	-	-	-	-	-	-	-	-	2	1	1
C314.3	3	3	2	-	-	-	-	-	-	-	-	-	2	1	1
C314.4	3	3	2	-	-	-	-	-	-	-	-	-	2	1	1
C314.5	3	3	2	-	-	-	-	-	-	-	-	-	2	1	1
C314.6	3	3	2	-	-	-	-	-	-	-	-	-	2	1	1
C314	3	3	2	-	-	-	-	-	-	-	-	-	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : EE6002 (C315) & POWER SYSTEM TRANSIENTS

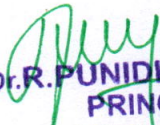
Semester : VI

COURSE OUTCOMES:

CO	Course Outcomes
C315.1	Summarize the basic concepts and effects of transients in power system
C315.2	Discuss the generation of switching transients and their control circuits
C315.3	Analyze the mechanism of lightning strokes and the production of lightning surges
C315.4	Analyze the propagation, reflection and refraction of travelling waves with lattice diagrams.
C315.5	Interpret the transients in integrated power system during overvoltage induced by faults
C315.6	Summarize the advanced simulation tools for the study of transient analysis in power systems

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C315.1	3	3	2	-	-	-	-	-	-	-	-	-	1	1	2
C315.2	3	3	2	-	-	-	-	-	-	-	-	-	1	1	2
C315.3	3	3	2	-	-	-	-	-	-	-	-	-	1	1	2
C315.4	3	3	2	-	-	-	-	-	-	-	-	-	1	1	2
C315.5	3	3	2	-	-	-	-	-	-	-	-	-	1	1	2
C315.6	3	3	2	-	-	-	-	-	-	-	-	-	1	1	2
C315	3	3	2	-	-	-	-	-	-	-	-	-	1	1	2


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : EE6611 (C316) & POWER ELECTRONICS AND DRIVES LABORATORY

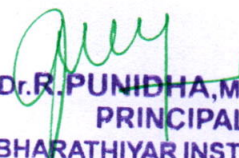
Semester : VI

COURSE OUTCOMES:

CO	Course Outcomes
C316.1	Design the triggering circuits for Thyristor and can analyze the static and dynamic switching behavior of power semiconductor devices
C316.2	Classify the different configurations of power converters according to the power application
C316.3	Analyze the working and characteristics of step up and step down choppers
C316.4	Evaluate the performance of IGBT based single phase and three phase inverter with resistive load
C316.5	Analyze the working of different configurations three phase AC voltage controller with resistive load
C316.6	Analyze the simulation results for 1 Φ & 3 Φ semiconverter, 1 Φ & 3 Φ fullconverter, dc-dc Converters, ac voltage controllers for various load condition

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C316.1	3	2	2	1	1	-	-	1	1	1	-	1	2	1	1
C316.2	3	2	2	1	1	-	-	1	1	-	-	1	2	1	1
C316.3	3	2	2	1	1	-	-	1	1	1	-	1	2	1	1
C316.4	3	2	2	1	1	-	-	1	1	-	-	1	2	1	1
C316.5	3	2	2	1	1	-	-	1	1	1	-	1	2	1	1
C316.6	3	2	2	1	1	-	-	1	1	-	-	1	2	1	1
C316	3	2	2	1	1	-	-	1	1	1	-	1	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: EE6612 (C317) & MICROPROCESSORS AND MICROCONTROLLERS

LABORATORY


Semester : VI

COURSE OUTCOMES:

CO	Course Outcomes
C317.1	Apply the basic arithmetic and logical operations using 8085 microprocessor with the help of assembly language programming
C317.2	Analyze the performance of different weighted and non weighted codes, its conversions with logic diagram using 8085 microprocessor
C317.3	Illustrate the interfacing of 8085 with various peripheral devices for serial and parallel communication of data
C317.4	Demonstrate the basic instructions with 8051 microcontroller execution including conditional jumps, looping and calling subroutines
C317.5	Make use of the basic conversion techniques of ADC and DAC to interface it with 8085 processor and 8051 microcontroller
C317.6	Develop a model using processor to apply computing platform and software for engineering problems

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C317.1	3	2	2	1	1	-	-	1	1	1	-	-	1	2	1
C317.2	3	2	2	1	1	-	-	1	1	-	-	-	1	2	1
C317.3	3	2	2	1	1	-	-	-	1	1	-	-	1	2	1
C317.4	3	2	2	1	1	-	-	1	1	-	-	-	1	2	1
C317.5	3	2	2	1	1	-	-	1	1	1	-	-	1	2	1
C317.6	3	2	2	2	1	-	-	-	1	-	-	-	1	2	1
C317	3	2	2	2	1	-	-	1	1	1	-	-	1	2	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: EE6613 (C318) & PRESENTATION SKILLS AND TECHNICAL SEMINAR

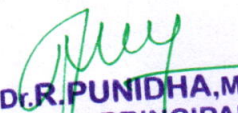
Semester : VI

COURSE OUTCOMES:

CO	Course Outcomes
C318.1	Develop presentation skills to deliver the right content to the interactor
C318.2	Discuss the technological advancements and present technical topics
C318.3	Develop the pre-requisites for recruitment process
C318.4	Make use of the technical resources available
C318.5	Write technical documents and give oral presentations related to the course completed
C318.6	Develop interactive platform for technical and non- technical discussion

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C318.1	-	-	-	-	3	-	-	3	3	2	-	2	1	2	1
C318.2	-	-	-	-	3	-	-	3	3	2	-	2	1	2	1
C318.3	-	-	-	-	3	-	-	3	3	2	-	2	1	2	1
C318.4	-	-	-	-	3	-	-	3	3	2	-	2	1	2	1
C318.5	-	-	-	-	3	-	-	3	3	2	-	2	1	2	1
C318.6	-	-	-	-	3	-	-	3	3	2	-	2	1	2	1
C318	-	-	-	-	3	-	-	3	3	2	-	2	1	2	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : EE6701 (C401)& HIGH VOLTAGE ENGINEERING

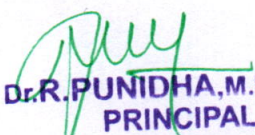
Semester : VII

COURSE OUTCOMES:

CO	Course Outcomes
C401.1	An ability to apply the knowledge of over voltages and its protective methods in power system.
C401.2	Skilled to understand the behaviour of travelling wave on different load condition using Bewleys lattice diagram.
C401.3	An ability to use the concepts and methods of electrical breakdown in different medium.
C401.4	An ability to design various AC and DC high voltage generating techniques for testing the power apparatus.
C401.5	An ability to apply the various AC and DC high voltage and current measuring techniques in power system.
C401.6	An ability to apply the knowledge of testing the various power apparatus to provide safety and protection for the individual.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C401.1	3	2	2	-	1	-	1	-	-	-	-	-	1	-	-
C401.2	3	2	2	-	1	-	-	-	-	-	-	-	1	-	-
C401.3	3	2	2	-	1	-	-	-	-	-	-	-	1	-	-
C401.4	3	2	2	-	1	-	1	-	-	-	-	-	1	-	-
C401.5	3	2	2	-	1	-	1	-	-	-	-	-	1	-	-
C401.6	3	2	2	-	1	-	1	-	-	-	-	-	1	-	-
C401	3	2	2	-	1	-	1	-	-	-	-	-	1	-	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : EE6702 (C402) & PROTECTION AND SWITCHGEAR


Semester : VII

COURSE OUTCOMES:

CO	Course Outcomes
C402.1	Interpret the principles of protection schemes for various natures of faults
C402.2	Infer the various types of relays to detect the presence of faults, its location and to initiate the action for quick removal of the faults in power systems
C402.3	Examine the protection schemes for various electrical apparatus using electromagnetic relays
C402.4	Examine and apply the static and numerical relays for power system protection
C402.5	Inspect the arc quenching phenomena for fault condition and illustrates various current zero interruption theories
C402.6	Summarize, compare and select the types of circuit breakers according to the various occurrences of faults

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C402.1	3	2	1	-	-	-	-	-	-	-	-	-	2	-	1
C402.2	3	2	1	-	-	-	-	-	-	-	-	-	2	-	1
C402.3	3	2	1	-	-	-	-	-	-	-	-	-	2	-	1
C402.4	3	2	1	-	-	-	-	-	-	-	-	-	2	-	1
C402.5	3	2	1	-	-	-	-	-	-	-	-	-	2	-	1
C402.6	3	2	1	-	-	-	-	-	-	-	-	-	2	-	1
C402	3	2	1	-	-	-	-	-	-	-	-	-	2	-	1


Dr. R. PUNIBHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : EE6703 (C403)& SPECIAL ELECTRICAL MACHINES


Semester : VII

COURSE OUTCOMES:

CO	Course Outcomes
C403.1	Explain the construction, operating principle and performance characteristics of synchronous reluctance motors and its applications
C403.2	Discuss the constructional features, modes of excitation for different configuration and narrate the torque equations, closed control operation and its applications
C403.3	Describe the constructional features, principle of operation, performance analysis and applications of SRMs and develop control circuits for power converters
C403.4	Describe the constructional features, principle of operation, performance analysis and applications of PMBLDC motor and discuss the power converter and controller circuits
C403.5	Explain the principle and operational characteristics of ideal PMSM
C403.6	Discuss VA requirements and power converter for PMSM and its applications

MAPPING WITH PROGRAM OUTCOMES.

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C403.1	3	2	1	-	-	-	-	-	-	-	-	-	2	1	1
C403.2	3	2	1	-	-	-	-	-	-	-	-	-	2	1	1
C403.3	3	2	1	-	-	-	-	-	-	-	-	-	2	1	1
C403.4	3	2	1	-	-	-	-	-	-	-	-	-	2	1	1
C403.5	3	2	1	-	-	-	-	-	-	-	-	-	2	1	1
C403.6	3	2	1	-	-	-	-	-	-	-	-	-	2	1	1
C403	3	2	1	-	-	-	-	-	-	-	-	-	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : MG6851 (C404) & PRINCIPLES OF MANAGEMENT


Semester : VII

COURSE OUTCOMES:

CO	Course Outcomes
C404.1	Summarize the principles of Management including planning, organizing and controlling
C404.2	Illustrate the role of managers and relate it to the strategies of international business
C404.3	Interpret the nature and purpose of planning and to gain knowledge about decision making
C404.4	Illustrate the need for human resource management which can be used for management effectiveness
C404.5	Compare various motivation theories and relate it to leadership and innovation
C404.6	Explain the controlling techniques and apply it for cost control operation management

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C404.1	-	-	-	-	-	1	-	2	2	1	2	2	-	1	-
C404.2	-	-	-	-	-	1	-	2	2	1	2	2	-	1	-
C404.3	-	-	-	-	-	1	-	2	2	1	2	2	-	1	-
C404.4	-	-	-	-	-	1	-	2	2	1	2	2	-	1	-
C404.5	-	-	-	-	-	1	-	2	2	1	2	2	-	1	-
C404.6	-	-	-	-	-	1	-	2	2	1	2	2	-	1	-
C404	-	-	-	-	-	1	-	2	2	1	2	2	-	1	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name: EI6704 (C405) & BIOMEDICAL INSTRUMENTATION

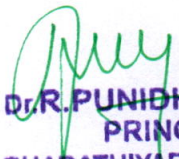
Semester : VII

COURSE OUTCOMES:

CO	Course Outcomes
C405.1	Identify the functions of human nervous system and describe the basic components of biomedical system.
C405.2	Illustrate the measurement of non-electrical parameters in human body system.
C405.3	Illustrate the measurement of important electrical parameters in human body system.
C405.4	Apply different electrodes and amplifiers in physiological measurements (EEG,ECG, EMG etc.)
C405.5	Explain the basic principles of imaging techniques and patient monitoring system.
C405.6	Describe the functions of life assisting and therapeutic equipments.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C405.1	2	2	1	-	-	-	-	-	-	-	-	-	2	-	-
C405.2	2	2	1	-	-	-	-	-	-	-	-	-	2	-	-
C405.3	2	2	1	-	-	-	-	-	-	-	-	-	2	1	-
C405.4	2	2	1	-	-	-	-	-	-	-	-	-	2	1	-
C405.5	2	2	1	-	-	-	-	-	-	-	-	-	2	-	-
C405.6	2	2	1	-	-	-	-	-	-	-	-	-	2	1	-
C405	2	2	1	-	-	-	-	-	-	-	-	-	2	1	-


Dr. R. PUNISHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICH! - 636 112,
THALAIVASAL (TK), SALEM (DT).

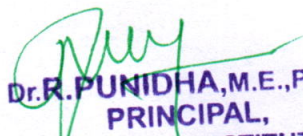
Course code & Name : EE6008 (C406) & MICROCONTROLLER BASED SYSTEM DESIGN
Semester : VII

COURSE OUTCOMES:

CO	Course Outcomes
C406.1	Explain the architecture and instruction set of PIC Microcontroller
C406.2	Develop simple program in assembly language using interrupts and timers
C406.3	Outline the process for data communication using I2C, SPI and USART
C406.4	Illustrate the methods for interfacing PIC with real world using ADC, DAC and sensors
C406.5	Explain the different functional blocks of ARM processor
C406.6	Understand and apply computing platform and software for engineering problems

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C406.1	2	1	-	-	-	-	-	-	-	-	-	-	2	1	-
C406.2	2	1	1	-	-	-	-	-	-	-	-	-	2	1	-
C406.3	2	1	1	-	-	-	-	-	-	-	-	-	2	1	1
C406.4	2	1	1	-	-	-	-	-	-	-	-	-	2	1	1
C406.5	2	1	1	-	-	-	-	-	-	-	-	-	2	1	-
C406.6	2	1	1	-	-	-	-	-	-	-	-	-	2	1	-
C406	2	1	1	-	-	-	-	-	-	-	-	-	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code &Name : EE6711 (C407) & POWER SYSTEM SIMULATION LABORATORY

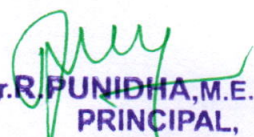
Semester : VII

COURSE OUTCOMES:

CO	Course Outcomes
C407.1	Analyze the various parameters and model a transmission line networks
C407.2	Apply load flow analysis to an electrical power network and interpret the results using Gauss-Seidel and Newton Raphson Methods
C407.3	Analyze a network under balanced, unbalanced fault conditions and interpret the results
C407.4	Explain the transient stability analysis of single and multi machine infinite bus system
C407.5	Examine the electromagnetic transients and its impact in power system studies
C407.6	Evaluate the frequency dynamics, economic dispatch of single and two area power systems

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C407.1	3	2	2	1	1	-	-	-	1	-	-	1	2	1	1
C407.2	3	2	2	1	1	-	-	-	1	-	-	1	2	1	1
C407.3	3	2	2	1	1	-	-	-	1	-	-	1	2	1	1
C407.4	3	2	2	1	1	-	-	-	1	-	-	1	2	1	1
C407.5	3	2	2	1	1	-	-	-	1	-	-	1	2	1	1
C407.6	3	2	2	1	1	-	-	-	1	-	-	1	2	1	1
C407	3	2	2	1	1	-	-	-	1	-	-	1	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112.
THALAIYASAL (TK), SALEM (DT).

Course code &Name : EE6712 (C408) & COMPREHENSION


Semester : VII

COURSE OUTCOMES:

CO	Course Outcomes
C408.1	Recall and summarize the subject related topics in the field of electrical engineering
C408.2	Asses their presentation skill by themselves through periodical exercise
C408.3	Develop the communication skill through sharing of ideas and interaction
C408.4	Extend knowledge on recent technologies by discusion and presentation
C408.5	Inhibit the knowledge of effective class room speaking and presentation
C408.6	Plan and adhere to deadlines while completing the task.

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C408.1	-	-	-	-	-	-	-	3	2	2	-	3	1	2	2
C408.2	-	-	-	-	-	-	-	3	2	2	-	3	1	2	2
C408.3	-	-	-	-	-	-	-	3	2	2	-	3	1	2	2
C408.4	-	-	-	-	-	-	-	3	2	2	-	3	1	2	2
C408.5	-	-	-	-	-	-	-	3	2	2	-	3	1	2	2
C408.6	-	-	-	-	-	-	-	3	2	2	-	3	1	2	2
C408	-	-	-	-	-	-	-	3	2	2	-	3	1	2	2


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
THALAIYASAL (TK), SALEM (DT).

**Course code &Name : EE6801 (C409) & ELECTRIC ENERGY GENERATION ,UTILIZATION
CONSERVATION**


Semester : VIII

COURSE OUTCOMES:

CO	Course Outcomes
C409.1	Interpret the basics of electric traction and their performance
C409.2	Explain the types of lamps and design the illumination systems for various lighting schemes
C409.3	Discuss the types of electric heating and welding
C409.4	Infer the phenomenon of solar radiation and explain the types of solar energy collectors
C409.5	Explain the basic principles, components of wind energy conversion systems
C409.6	Discuss the types of wind turbines and analyze the aerodynamic force acting on the blades

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C409.1	2	2	-	-	1	-	-	-	-	-	-	-	1	-	-
C409.2	2	2	-	-	1	-	-	-	-	-	-	-	1	-	-
C409.3	2	2	-	-	1	-	-	-	-	-	-	-	1	-	-
C409.4	2	2	-	-	1	-	1	-	-	-	-	-	1	-	-
C409.5	2	2	-	-	1	-	1	-	-	-	-	-	1	-	-
C409.6	2	2	-	-	1	-	1	-	-	-	-	-	1	-	-
C409	2	2	-	-	1	-	1	-	-	-	-	-	1	-	-


D.R.PUNIDHA,M.E.,Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL,(TK), SALEM (DT).

**Course code &Name : EE6010 (C410) & HIGH VOLTAGE DIRECT CURRENT
TRANSMISSION**


Semester : VIII

COURSE OUTCOMES:

CO	Course Outcomes
C410.1	Discuss the planning of DC power transmission and compare with AC power transmission
C410.2	Analyze the effect of various HVDC converters in transmission lines
C410.3	Evaluate the various types of compounding and regulation methods for power system stability
C410.4	Explain the effects of harmonics and design suitable filters for power system control and protection
C410.5	Infer the basic physical phenomenon arising in DC insulation and dielectric stress consideration
C410.6	Interpret the modeling of HVDC Systems for digital dynamic simulation by using suitable philosophy and tools

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C410.1	3	2	1	-	1	-	-	-	-	-	-	-	2	1	1
C410.2	3	2	1	-	1	-	-	-	-	-	-	-	2	1	1
C410.3	3	2	1	-	1	-	-	-	-	-	-	-	2	1	1
C410.4	3	2	1	-	1	-	-	-	-	-	-	-	2	1	1
C410.5	3	2	1	-	1	-	-	-	-	-	-	-	2	1	1
C410.6	3	2	1	-	1	-	-	-	-	-	-	-	2	1	1
C410	3	2	1	-	1	-	-	-	-	-	-	-	2	1	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVIYAKURICHI - 636 112,
THALAIVASAL (TK), SALEM (DT).

Course code & Name : GE6075 (C411) & PROFESSIONAL ETHICS IN ENGINEERING

Semester : VIII

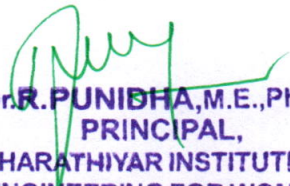
COURSE OUTCOMES:

After the course, the student should be able to:

CO	Course Outcomes
C411.1	Create an awareness on Engineering ethics and human values
C411.2	Develop a professional ethical identity to carry forward in their working life
C411.3	Realize the responsibilities and rights in the society
C411.4	Infer the nature of professional responsibility and apply ethics in the society
C411.5	Interpret the moral and social values and appreciate the rights of others
C411.6	Illustrate and resolve problems arising from questionable practice

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C411.1	-	-	-	-	-	-	-	3	3	2	-	-	2	1	-
C411.2	-	-	-	-	-	-	-	3	3	2	-	-	2	1	-
C411.3	-	-	-	-	-	-	-	3	3	2	-	-	2	1	-
C411.4	-	-	-	-	-	-	-	3	3	2	-	-	2	1	-
C411.5	-	-	-	-	-	-	-	3	3	2	-	-	2	1	-
C411.6	-	-	-	-	-	-	-	3	3	2	-	-	2	1	-
C411	-	-	-	-	-	-	-	3	3	2	-	-	2	1	-


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112.
TIRUPALAVASAL (TK), SALEM (DT).

Course code & Name : EE6811 (C412) & PROJECT WORK

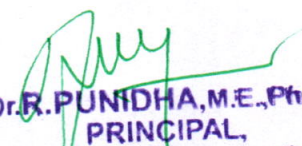
Semester : VIII

COURSE OUTCOMES:

CO	Course Outcomes
C412.1	Develop the ability to solve a specific problem right from its identification
C412.2	Plan the project work schedule and prepare budget for experimentation
C412.3	Design the circuits with necessary components, simulation tools and accessories for the specific problem
C412.4	Demonstrate the system model and also analyze the parameters in various parts of the system using simulation tools
C412.5	Explain the project work orally among the team members and also in review presentation
C412.6	Write the project report and face viva voce examination

MAPPING WITH PROGRAM OUTCOMES:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C412.1	3	2	2	1	1	1	1	-	3	2	2	2	2	2	1
C412.2	3	2	2	1	1	1	1	-	3	2	2	2	2	2	1
C412.3	3	2	2	1	1	1	1	-	3	2	2	2	2	2	1
C412.4	3	2	2	1	1	1	1	-	3	2	2	2	2	2	1
C412.5	3	2	2	1	1	1	1	-	3	2	2	2	2	2	1
C412.6	3	2	2	1	1	1	1	-	3	2	2	2	2	2	1
C412	3	2	2	1	1	1	1	-	3	2	2	2	2	2	1


Dr. R. PUNIDHA, M.E., Ph.D.,
PRINCIPAL,
BHARATHIYAR INSTITUTE OF
ENGINEERING FOR WOMEN,
DEVYAKURICHI - 636 112,
T. N. LAIVASAL (TK), SALEM (DT).