



New Prince Shri Bhavani
College of Engineering and Technology



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Department of Electrical and Electronics Engineering

REGULATION

2023

I YEAR



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Department of Electrical and Electronics Engineering

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C101

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23EN101- TECHNICAL ENGLISH I

COS	STATEMENT
C101.1	WRITE ESSAYS AND E-MAILS.
C101.2	DESCRIBE ANY PROCESS, INTERPRETATION OF CHARTS AND GRAPHS BOTH GENERAL AND TECHNICALLY.
C101.3	WRITE LETTERS AND RESPONSES TO COMPLAINTS.
C101.4	WRITE RECOMMENDATIONS. MINUTES AND REPORTS OF EVENTS.
C101.5	WRITE JOB APPLICATION WITH RESUME.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C102

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23MA101- ENGINEERING MATHEMATICS

CO	STATEMENT
C102.1	APPLY CAYLEY- HAMILTON THEOREM AND ORTHOGONAL TRANSFORMATION FOR DIFFERENT PROCESS OF MATRICES.
C102.2	ANALYZE THE DIFFERENTIATION RULES TO FIND THE EXTREME VALUES OF FUNCTIONS.
C102.3	APPLY THE CONCEPTS OF PARTIAL DERIVATIVES AND TOTAL DERIVATIVES IN TAYLOR'S SERIES, JACOBIANS AND MAXIMA AND MINIMA OF FUNCTIONS.
C102.4	EVALUATE DEFINITE AND IMPROPER INTEGRALS USING TECHNIQUES OF INTEGRATION.
C102.5	EVALUATE AREA AND VOLUME USING DOUBLE AND TRIPLE INTEGRALS.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C103

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23PH101- ENGINEERING PHYSICS

CO	STATEMENT
C103.1	COMPREHEND THE BASIC OF MECHANICS AND ELASTIC PROPERTIES OF MATERIALS.
C103.2	EXPLAIN THERMAL PHYSICS CONCEPT, PRODUCTION AND APPLICATION OF ULTRASONIC WAVES.
C103.3	APPLY THE BASIC CONCEPTS OF LASERS AND OPTICAL FIBER IN VARIOUS FIELDS.
C103.4	DESCRIBE THE BASICS OF QUANTUM MECHANICAL PHENOMENON AND ELECTRONS MICROSCOPES.
C103.5	EXPLAIN THE FUNDAMENTAL OF CRYSTAL STRUCTURE AND IMPERFECTION.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C103

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23PH101- ENGINEERING PHYSICS

CO	STATEMENT
C103.1	COMPREHEND THE BASIC OF MECHANICS AND ELASTIC PROPERTIES OF MATERIALS.
C103.2	EXPLAIN THERMAL PHYSICS CONCEPT, PRODUCTION AND APPLICATION OF ULTRASONIC WAVES.
C103.3	APPLY THE BASIC CONCEPTS OF LASERS AND OPTICAL FIBER IN VARIOUS FIELDS.
C103.4	DESCRIBE THE BASICS OF QUANTUM MECHANICAL PHENOMENON AND ELECTRONS MICROSCOPES.
C103.5	EXPLAIN THE FUNDAMENTAL OF CRYSTAL STRUCTURE AND IMPERFECTION.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C104

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23CY101- ENGINEERING CHEMISTRY

CO	STATEMENT
C104.1	DESCRIBE THE TYPES OF FACTORS PRESENT IN BOILERS AND THE METHOD USED TO TREAT HARD WATER.
C104.2	APPLY THE PRINCIPLES OF ELECTROCHEMISTRY TO CORROSION PROCESS AND THE APPLICATIONS OF PROTECTIVE COATINGS TO OVERCOME THE CORROSION.
C104.3	SUMMARIZE THE VARIOUS SOLID, LIQUID AND GASEOUS FUELS MANUFACTURING METHODS AND BASIC REACTIONS INVOLVED IN COMBUSTION REACTIONS.
C104.4	DESCRIBE THE TYPE OF BATTERIES THEIR REACTIONS AND THE SIGNIFICANCE OF STORAGE RENEWABLE ENERGY RESOURCE.
C104.5	APPLY THE BASIC CONCEPTS OF NANOMATERIAL'S AND ITS APPLICATION IN VARIOUS SECTORS.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C105

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23TA101- தமிழர் மரபு / HERITAGE OF TAMILS

CO	STATEMENT
C105.1	SUMMARIZE ABOUT LANGUAGE, LITERATURES AND SCRIPTS.
C105.2	EXPLAIN MIDDLE STONE, MODERN SCULPTURES, PANCHALOGA IDOLS AND MUSICAL INSTRUMENTS..
C105.3	EXPLAIN ABOUT THE FOLK GODS, ARTS AND HEROIC SPORTS
C105.4	SUMMARIZE THE POLITICAL THEORIES OF TAMILS
C105.5	SUMMARIZE INDIAN NATIONAL MOVEMENT CONTRIBUTION OF TAMILS TO INDIAN CULTURE.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C106

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23CP101- PROGRAMMING IN C

CO	STATEMENT
C106.1	DESCRIBE KNOWLEDGE ON C PROGRAMMING CONSTRUCTS.
C106.2	APPLY THE SIMPLE APPLICATIONS IN C USING DECISION MAKING AND LOOPING.
C106.3	DESIGN THE VARIOUS APPLICATIONS USING ARRAYS AND STRINGS.
C106.4	WRITE AND IMPLEMENT MODULAR APPLICATIONS IN C USING FUNCTIONS AND POINTERS.
C106.5	APPLY THE USER DEFINED CONCEPT IN C USING STRUCTURES AND UNIONS.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C109

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23BE101- BASIC CIVIL AND MECHANICAL ENGINEERING

CO	STATEMENT
C109.1	SUMMARISE THE SPECIALIZED SUB-DISCIPLINES IN CIVIL AND MECHANICAL ENGINEERING AND THEIR CONTRIBUTION TO THE WELFARE OF SOCIETY.
C109.2	EXPLAIN THE BASICS OF SURVEYING AND THE CIVIL ENGINEERING MATERIALS USED IN CONSTRUCTION.
C109.3	SUMMARISE THE COMPONENTS OF THE BUILDING AND THE INFRASTRUCTURE FACILITIES.
C109.4	DESCRIBE THE WORKING PRINCIPLES AND COMPONENTS USED IN POWER PLANT CYCLE, PETROL AND DIESEL ENGINES, BOILERS AND PUMPS
C109.5	EXPLAIN THE REFRIGERATION AND AIR-CONDITIONING SYSTEM.



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COURSE OUTCOME

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COURSE NAME: C111

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23EG101- ENGINEERING GRAPHICS

CO	STATEMENT
C111.1	DRAW THE CURVES USED IN ENGINEERING PRACTICES.
C111.2	DRAW THE PROJECTIONS OF STRAIGHT LINES WHICH ARE INCLINED TO BOTH THE PLANES.
C111.3	DRAW PROJECTION OF SOLIDS INCLINED TO ONE PLANE AND PARALLEL TO OTHER PLANE.
C111.4	DRAW THE PROJECTIONS OF SECTIONAL SOLIDS AND DRAW THE DEVELOPMENT OF LATERAL SURFACE OF A SOLID.
C111.5	DRAW THE ISOMETRIC PROJECTIONS AND PERSPECTIVE PROJECTIONS OF SIMPLE SOLIDS.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C112

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23EG101- ENGINEERING PRACTICES LABORATORY

CO	STATEMENT
C112.1	APPLY THE BASIC CONCEPTS OF PLUMBING AND CARPENTRY IN VARIOUS RESIDENTIAL BUILDINGS.
C112.2	APPLY THE CONCEPTS OF ARC WELDING IN WELDING OF STEEL PLATE.
C112.3	ANALYZE THE BASICS OF MACHINING OPERATIONS AND SHEET METAL WORKS.
C112.4	APPLY VARIOUS ELECTRICAL JOINTS IN COMMON HOUSEHOLD ELECTRICAL WIREWORK.
C112.5	APPLY THE BASIC CONCEPT OF ASSEMBLE AND TESTING OF SIMPLE ELECTRONICS COMPONENTS ON PCB.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C114

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23EN102- PROFESSIONAL COMMUNICATION
LABORATORY

CO	STATEMENT
C114.1	APPLY COMMUNICATION PROFICIENCY BY MASTERING EMPATHETIC LISTENING AND SPEAKING SKILLS.
C114.2	APPLY SOFT SKILLS FOSTERING COMPREHENSIVE COMPETENCE.
C114.3	APPLY EFFECTIVE TECHNIQUES TO DELIVER PRESENTATIONS IN ALL ASPECTS.
C114.4	APPLY EFFECTIVE STRATEGIES FOR ACTIVE PARTICIPATION IN GROUP DISCUSSION.
C114.5	APPLY INTERVIEW ETIQUETTE TO NAVIGATE VARIOUS INTERVIEW FORMATS FOR JOB INTERVIEWS.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C115

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23EN201- TECHNICAL ENGLISH-I

CO	STATEMENT
C115.1	APPLY THE CONCEPTS OF WRITING IN AN EFFECTIVE WAY.
C115.2	WRITE CONCISE REPORTS IN A PROFESSIONAL CONTEXT.
C115.3	WRITE DIFFERENT KINDS OF PARAGRAPHS AND ESSAYS.
C115.4	WRITE EMAIL, FORMAL / INFORMAL LETTERS WITHOUT GRAMMATICAL ERRORS.
C115.5	ANALYZE COLLABORATIVE WORK THROUGH WRITING PROCESS.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C116

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U2MA201- VECTOR CALCULUS AND COMPLEX FUNCTIONS

CO	STATEMENT
C116.1	SOLVE HIGHER ORDER DIFFERENTIAL EQUATIONS OF DIFFERENT TYPES FOR ENGINEERING APPLICATION.
C116.2	EXPLAINS THE CONCEPTS OF VECTOR CALCULUS.
C116.3	EVALUATE LINE, SURFACE AND VOLUME INTEGRALS IN VARIOUS VECTOR FIELDS USING GREENS, STOKES AND GAUSS THEOREMS.
C116.4	ANALYZE THE PROPERTIES AND MAPPINGS FOR CONSTRUCTING ANALYTIC FUNCTION.
C116.5	EVALUATE THE COMPLEX AND CONTOUR INTEGRAL USING CAUCHY'S THEOREM.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C117

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23PH201- PHYSICS FOR ELECTRICAL AND ELECTRONICS ENGINEERING

CO	STATEMENT
C117.1	EXPLAIN THE ELECTRICAL PROPERTIES OF MATERIALS BASED ON CLASSICAL, QUANTUM FREE ELECTRON THEORIES.
C117.2	DESCRIBE THE FUNDAMENTALS OF SEMICONDUCTOR PHYSICS..
C117.3	SUMMARIZE THE MAGNETIC AND SUPERCONDUCTING PROPERTIES OF MATERIALS AND ITS APPLICATIONS
C117.4	APPLY THE VARIOUS OPTICAL PHENOMENA IN OPTOELECTRONIC DEVICES.
C117.5	EXPLAIN THE VARIOUS NEW ENGINEERING MATERIALS, NANO ELECTRONIC DEVICES AND ITS APPLICATIONS.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C120

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23TA201- தமிழரும் தொழில்நுட்பமும்
/TAMILS AND TECHNOLOGY

CO	STATEMENT
C120.1	SUMMARIES THE ANCIENT HISTORY AND TECHNOLOGY OF TAMIL.
C120.2	EXPLAIN THE LIFESTYLE AND ARCHITECTURAL TECHNIQUES OF THE SANGAM PERIOD.
C120.3	EXPLAIN THE BUSINESS PRACTICES AND CURRENCY EXCHANGE OF ANCIENT TAMIL PEOPLE.
C120.4	SUMMARIES THE AGRICULTURE AND IRRIGATION TECHNOLOGY IN SANGAM PERIOD.
C120.5	EXPLAIN THE COMPUTER APPLICATION IN TAMIL TECHNOLOGICAL DEVELOPMENT.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C121

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23PY201- PROBLEM SOLVING AND PYTHON PROGRAMMING

CO	STATEMENT
C121.1	SOLVE SIMPLE COMPUTATIONAL PROBLEMS USING NOTATIONS.
C121.2	WRITE PYTHON PROGRAMS USING STATEMENTS AND EXPRESSIONS.
C121.3	APPLY CONTROL FLOW AND FUNCTIONAL CONCEPTS IN A USER DEFINE PROBLEMS.
C121.4	APPLY PYTHON DATA STRUCTURE - LISTS, TUPLES AND DICTIONARIES FOR COMPOUND DATA.
C121.5	DESCRIBE THE HANDLING AND EXCEPTIONAL HANDLING IN PYTHON FOR PROBLEM SOLVING.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C123

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23EE201- ELECTRIC CIRCUIT ANALYSIS

CO	STATEMENT
C123.1	ANALYZE DC CIRCUITS USING BASIC CIRCUIT LAWS.
C123.2	APPLY NETWORK THEOREMS TO DETERMINE THE BEHAVIOUR OF THE GIVEN DC AND AC CIRCUIT.
C13.3	ANALYZE TRANSIENT RESPONSE OF RL,RC AND RLC CIRCUITS TO STEP AND SINUSOIDAL INPUT. D
C123.4	.DESCRIBE THE BEHAVIOR OF RESONANCE & MAGNETICALLY CIRCUITS.
C123.5	ANALYZE THE POWER ,LINE/PHASE VOLTAGE AND CURRENTS OF THREE PHASE CIRCUITS

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C128

YEAR OF STUDY: 2023-24

SEMESTER: I

SUBJECT CODE & SUBJECT NAME: U23EE202- ELECTRIC CIRCUITS LABORATORY

CO	STATEMENT
C128.1	EVALUATE OUTPUT CURRENT AND VOLTAGE FOR ELECTRIC CIRCUITS USING FUNDAMENTAL ELECTRICAL LAWS.& NETWORK THEOREMS WITH EXPERIMENTAL SET UP & SIMULATION OF PN DIODE, ZENER DIODE, BIT, IFET AND SCR.
C128.2	DESIGN SERIES AND PARALLEL RLC CIRCUIT AND OBTAIN ITS FREQUENCY RESPONSE.
C128.3	ANALYZE TRANSIENT BEHAVIOR OF THE GIVEN RL. & RC CIRCUITS USING SIMULATION ANDEXPERIMENTAL METHODS.
C128.4	DEMONSTRATE THE MEASUREMENT OF SINUSOIDAL VOLTAGE, FREQUENCY & POWER FACTOR USINGANALOG & DIGITAL OSCILLOSCOPE.
C128.5	ANALYZE THE PERFORMANCE OF THE GIVEN THREE-PHASE CIRCUIT USING SIMULATION AND EXPERIMENTAL METHODS.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C201

YEAR OF STUDY: 2024-25

SEMESTER: III

SUBJECT CODE & SUBJECT NAME: U23MA301- TRANSFORMS AND PARTIAL
DIFFERENTIAL EQUATIONS

CO	STATEMENT
C201.1	SOLVE THE VARIOUS TYPES OF PARTIAL DIFFERENTIAL EQUATIONS.
C201.2	SOLVE DIFFERENTIAL EQUATIONS USING FOURIER SERIES.
C201.3	APPLY FOURIER SERIES TECHNIQUES TO SOLVE ONE AND TWO-DIMENSIONAL HEAT FLOW AND WAVE PHENOMENA.
C201.4	SOLVE THE MATHEMATICAL PRINCIPLES OF FOURIER TRANSFORMS.
C201.5	APPLY Z-TRANSFORM TECHNIQUES IN PARTIAL DIFFERENTIAL EQUATIONS.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C202

YEAR OF STUDY: 2024-25

SEMESTER: III

SUBJECT CODE & SUBJECT NAME: U23EE301- ELECTROMAGNETIC FIELDS

CO	STATEMENT
C202.1	APPLY THE VECTOR OPERATORS ON ELECTRIC FIELD AND MAGNETIC FIELD IN A THREE DIMENSIONAL COORDINATE SYSTEM.
C202.2	APPLY THE ELECTROSTATIC LAWS AND THEOREMS TO OBTAIN ELECTRIC FIELD INTENSITY & ELECTRIC FORCE WITH DISCRETE AND CONTINUOUS CHARGES.
C202.3	APPLY THE CONCEPTS OF ELECTROSTATICS TO OBTAIN THE ELECTRIC FIELD, ELECTRIC POTENTIAL, BOUNDARY CONDITIONS & CAPACITANCE IN DIFFERENT MEDIUMS.
C202.4	APPLY THE MAGNETO STATIC LAWS TO OBTAIN MAGNETIC FIELD INTENSITY, FLUX DENSITY, FORCE POTENTIAL, ENERGY DENSITY & TORQUE.
C202.5	EXPLAIN THE DIFFERENT METHODS OF EMF GENERATION, MAXWELL'S EQUATIONS & ITS APPLICATIONS



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C203

YEAR OF STUDY: 2024-25

SEMESTER: III

SUBJECT CODE & SUBJECT NAME: U23EE302- ELECTRON DEVICES AND CIRCUITS

CO	STATEMENT
C203.1	EVALUATE THE CHARACTERISTICS OF PN JUNCTION DEVICES (DIODE, ZENER DIODE, LED AND LASER DIODE)
C203.2	ANALYZE THE STRUCTURE AND CHARACTERISTICS BJT, FET, MOSFET, UJT, THYRISTOR AND IGBT
C203.3	ANALYZE THE PERFORMANCE OF VARIOUS CONFIGURATIONS OF BJT AND MOSFET BASED AMPLIFIER
C203.4	EXPLAIN THE CHARACTERISTICS OF MOS BASED CASCADE AND DIFFERENTIAL AMPLIFIER
C203.5	EXPLAIN THE OPERATION OF VARIOUS FEEDBACK AMPLIFIERS AND OSCILLATORS

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C204

YEAR OF STUDY: 2024-25

SEMESTER: III

SUBJECT CODE & SUBJECT NAME: U23EE303- ELECTRICAL MACHINES-I

CO	STATEMENT
C204.1	APPLY THE LAWS OF GOVERNING ELECTRO MECHANICAL ENERGY CONVERSION FOR SINGLE AND MULTIPLE EXCITED SYSTEM
C204.2	EXPLAIN THE CONSTRUCTION AND WORKING PRINCIPLE OF THE DC GENERATORS.
C204.3	DESCRIBE THE VARIOUS PERFORMANCE CHARACTERISTICS OF DC MOTORS.
C204.4	DESCRIBE THE WORKING PRINCIPLE OF SINGLE PHASE TRANSFORMERS, THREE PHASE TRANSFORMER AND AUTO TRANSFORMER
C204.5	SOLVE THE VARIOUS PERFORMANCE MEASURES D.C. MACHINES AND TRANSFORMERS BY CONDUCTING SUITABLE TESTS.



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REGULATION 2023

COURSE NAME: C205

YEAR OF STUDY: 2024-25

SEMESTER: III

SUBJECT CODE & SUBJECT NAME: U23EE304- MEASUREMENTS AND INSTRUMENTATION

CO	STATEMENT
C205.1	EXPLAIN THE CLASSIFICATION STATIC AND DYNAMIC CHARACTERISTICS AND ERROR OF INSTRUMENTS
C205.2	DESCRIBE THE TYPES OF MOVING IRON AND MOVING COIL INSTRUMENTS.
C205.3	SUMMARIZE THE TYPES OF AC/DC BRIDGES AND INSTRUMENTATION AMPLIFIERS.
C205.4	EXPLAIN THE CLASSIFICATION OF TRANSDUCERS AND SMART SENSORS
C205.5	DESCRIBE A/D CONVERTERS, D/A CONVERTERS AND BASICS OF PLC PROGRAMMING.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C206

YEAR OF STUDY: 2024-25

SEMESTER: III

SUBJECT CODE & SUBJECT NAME: U23EE305- DIGITAL LOGIC CIRCUITS

CO	STATEMENT
C206.1	APPLY BOOLEAN ALGEBRA AND GATE LEVEL MINIMIZATION TO DESIGN DIGITAL CIRCUITS.
C206.2	DESIGN COMBINATIONAL LOGIC CIRCUITS.
C206.3	DESIGN VARIOUS SYNCHRONOUS CIRCUITS USING FLIP FLOPS.
C206.4	DESIGN ASYNCHRONOUS SEQUENTIAL CIRCUITS AND PROGRAMMABLE LOGIC DEVICES.
C206.5	WRITE VHDL CODE FOR SIMULATING RTL, COMBINATION AND SEQUENTIAL CIRCUITS.



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REGULATION 2023

COURSE NAME: C207

YEAR OF STUDY: 2024-25

SEMESTER: III

SUBJECT CODE & SUBJECT NAME: U23EE306- ELECTRICAL MACHINES I LABORATORY

CO	STATEMENT
C207.1	EVALUATE THE CIRCUIT WITH APPROPRIATE CONNECTIONS FOR DC MACHINE/ TRANSFORMER.
C207.2	ANALYSE EXPERIMENTALLY THE CHARACTERISTICS OF DIFFERENT TYPES OF DC MACHINES.
C207.3	ANALYSE THE SPEED CONTROL TECHNIQUES FOR A DC MOTOR FOR INDUSTRIAL APPLICATIONS.
C207.4	ANALYSE EXPERIMENTALLY THE PERFORMANCE PARAMETERS OF TRANSFORMERS AND DC MOTOR.
C207.5	EXPLAIN ABOUT DC MOTOR STARTERS AND 3-PHASE TRANSFORMER CONNECTIONS.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C209

YEAR OF STUDY: 2024-25

SEMESTER: IV

SUBJECT CODE & SUBJECT NAME: U23MA401- NUMERICAL METHODS

CO	STATEMENT
C209.1	SOLVE THE ALGEBRAIC AND TRANSCENDENTAL EQUATIONS USING DIFFERENT METHODS.
C209.2	CALCULATE UNKNOWN VALUES IN INTERPOLATION AND APPROXIMATION USING VARIOUS METHODS.
C209.3	EVALUATE THE NUMERICAL INTEGRATION AND DIFFERENTIATION USING THE NUMERICAL TECHNIQUES.
C209.4	APPLY THE VARIOUS TECHNIQUES AND METHODS FOR SOLVING FIRST AND SECOND ORDER ORDINARY DIFFERENTIAL EQUATIONS.
C209.5	SOLVE THE PARTIAL AND ORDINARY DIFFERENTIAL EQUATIONS WITH INITIAL AND BOUNDARY CONDITIONS USING CERTAIN TECHNIQUES WITH ENGINEERING APPLICATIONS.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C210

YEAR OF STUDY: 2024-25

SEMESTER: IV

SUBJECT CODE & SUBJECT NAME: U23EE401- TRANSMISSION AND DISTRIBUTION

CO	STATEMENT
C210.1	SUMMARIZE THE STRUCTURE OF THE POWER SYSTEM, COMPUTATION OF TRANSMISSION LINE PARAMETERS FOR DIFFERENT CONFIGURATIONS.
C210.2	APPLY THE TRANSMISSION LINE CONCEPTS TO DETERMINE THE LINE PERFORMANCE AND THE IMPACT OF FERRANTI EFFECT AND CORONA.
C210.3	DESCRIBE A MECHANICAL DESIGN OF TRANSMISSION LINES, GROUNDING AND TO UNDERSTAND ABOUT THE INSULATORS IN THE TRANSMISSION SYSTEM.
C210.4	EXPLAIN THE UNDERGROUND CABLES AND UNDERSTAND THE PERFORMANCE ANALYSIS OF UG CABLE.
C210.5	APPLY THE MODELLING, PERFORMANCE ANALYSIS AND MODERN TRENDS IN THE DISTRIBUTION SYSTEM.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C211

YEAR OF STUDY: 2024-25

SEMESTER: IV

SUBJECT CODE & SUBJECT NAME: U23EE402- ELECTRICAL MACHINES-II

CO	STATEMENT
C211.1	SUMMARISE THE THEORY OF SYNCHRONOUS MACHINES AND WILL BE ABLE TO CALCULATE THE REGULATION OF NON- SALIENT POLE ALTERNATORS BY DIFFERENT METHODS
C211.2	ANALYSE THE PARALLEL OPERATION OF ALTERNATORS AND WILL BE ABLE TO CALCULATE THE REGULATION OF SALIENT POLE ALTERNATORS BY TWO REACTION THEORY.
C211.3	COMPREHEND THE PRINCIPLE OF OPERATION AND PERFORMANCE OF SYNCHRONOUS MOTORS UNDER VARYING EXCITATION AND LOAD CONDITION.
C211.4	EXPLAIN THE CONSTRUCTION AND COMPLETE WORKING OF THREE PHASE INDUCTION MACHINES, INCLUDING ITS PERFORMANCE AS INDUCTION GENERATORS.
C211.5	SUMMARISE THE METHODS OF STARTING AND SPEED CONTROL OF SINGLE PHASE INDUCTION MOTORS.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C212

YEAR OF STUDY: 2024-25

SEMESTER: IV

SUBJECT CODE & SUBJECT NAME: U23EE403- LINEAR INTEGRATED CIRCUITS

CO	STATEMENT
C212.1	EXPLAIN MONOLITHIC IC FABRICATION PROCESS.
C212.2	ANALYSE THE AC AND DC CHARACTERISTICS AND BASIC OP-AMP CONFIGURATIONS.
C212.3	DESIGN OP-AMP BASED INSTRUMENTATION AMPLIFIER, LOG/ANTILOG AMPLIFIER, ANALOG MULTIPLIER /DIVIDER, ACTIVE FILTERS, COMPARATORS, WAVEFORM GENERATORS, A/D AND D/A CONVERTERS.
C212.4	DESIGN OF TIMER, PLL, ANALOG MULTIPLIER ICS.
C212.5	ANALYZE THE APPLICATIONS OF ICS IN INSTRUMENTATION AMPLIFIER, FIXED AND VARIABLE VOLTAGE REGULATORS, SMPS AND FUNCTION GENERATORS.

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C213

YEAR OF STUDY: 2024-25

SEMESTER: IV

SUBJECT CODE & SUBJECT NAME: U23EE404- MICROPROCESSORS AND MICRO CONTROLLERS

CO	STATEMENT
C213.1	DESCRIBE THE ARCHITECTURE, MEMORY ORGANIZATION, I/O PORTS, INTERRUPTS AND TIMING DIAGRAM OF 8085.
C213.2	WRITE AN ASSEMBLY LANGUAGE PROGRAM FOR 8085 PROCESSOR WITH LOOP STRUCTURE, COUNTING AND INDEXING
C213.3	EXPLAIN THE ARCHITECTURE, MEMORY ORGANIZATION, I/O PORTS, INTERRUPTS AND TIMERS OF 8051.
C213.4	ANALYSE THE CONFIGURATION & INTERFACING OF INTERFACING ICS WITH 8085 & 8051
C213.5	DESIGN THE MICROPROCESSOR AND MICROCONTROLLER BASED APPLICATION SYSTEMS.



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COURSE OUTCOME

REGULATION 2023

COURSE NAME: C214

YEAR OF STUDY: 2024-25

SEMESTER: IV

SUBJECT CODE & SUBJECT NAME: U23CS306- OBJECT ORIENTED PROGRAMMING
WITH DATA STRUCTURES

CO	STATEMENT
C214.1	COMPREHEND THE BASIC CONCEPTS OF JAVA PROGRAMMING
C214.2	SUMMARIZE THE INTERFACES, PACKAGES, MULTITHREADING AND EXCEPTION
C214.3	APPLY FEATURES OF EXCEPTION HANDLING AND MULTITHREADING IN JAVA PROGRAMMING
C214.4	APPLY BASIC DATA STRUCTURE CONCEPTS AND THEIR ALGORITHMS
C214.5	EXPLAIN DATA STRUCTURE CONCEPTS TREES FOR MODELLING GIVEN PROBLEM

COURSE OUTCOME

REGULATION 2023

COURSE NAME: C216

YEAR OF STUDY: 2024-25

SEMESTER: IV

SUBJECT CODE & SUBJECT NAME: U23EE405- ELECTRICAL MACHINES II LABORATORY

CO	STATEMENT
C216.1	ANALYSE EMF AND MMF METHODS.
C216.2	EVALUATE V AND INVERTED V CHARACTERISTICS CURVES.
C216.3	EVALUATE VARIOUS TESTS ON SYNCHRONOUS MACHINES AND OBTAIN THEIR PERFORMANCE INDICES.
C216.4	ANALYSE THE SINGLE AND THREE-PHASE INDUCTION MOTORS BY CONDUCTING VARIOUS TESTS.
C216.5	ANALYSE THE SEPARATION OF LOSSES.