

Course Outcome (I Schemes)

1st Semester

Course Name:- CO101 English (22101)

CO101.1	Formulate grammatically correct sentences.
CO101.2	Summarize comprehension of passages
CO101.3	Formulate different types of dialogues.
CO101.4	Use relevant vocabulary to compose paragraphs to express ideas, thoughts and emotions.
CO101.5	Use relevant words in writing and delivering short and long speeches.

Course Name:-CO102 Basic Science (22102)

CO102.1	Estimate errors in measurement of physical quantities.
CO102.2	Apply the principles of electricity and magnetism to solve engineering problems.
CO102.3	Use the basic principles of heat and optics in related engineering applications.
CO102.4	Apply the catalysis process in industries.
CO102.5	Use corrosion preventive measures in industry.
CO102.6	Use relevant engineering materials in industry.

Course Name:-CO103 Basic Mathematics (22103)

CO103.1	Apply the concept of algebra to solve engineering related problems.
CO103.2	Utilize basic concept of trigonometry to solve elementary engineering problems.
CO103.3	Solve basic engineering problems under given conditions of straight lines.
CO103.4	Solve the problems based on measurements of regular closed figure and regular solids.
CO103.5	Use basic concepts of statistics to solve engineering related problems.

Course Name:-CO104 Fundamental of ICT (22001)

CO104.1	Use computer system and its peripherals.
CO104.2	Prepare business document using word processing tool.
CO104.3	Interpret data and represent it graphically using spreadsheet.
CO104.4	Prepare professional presentations.
CO104.5	Use different types of web browsers.

Course Name:- CO105 Engineering Graphics(22002)

CO105.1	Student can draw geometrical figures and engineering curves
CO105.2	Student can draw the views of given object using principles of orthographic projection
CO105.3	Student can draw isometric views of given component or from orthographic projections
CO105.4	Student can use drawing codes, conventions and symbols as per IS SP-46 in engineering drawing.
CO105.5	Draw free hand sketches of engineering elements.

Course Name:- CO106 Workshop Practice (22004)

CO106.1	Select tools and machinery according to job.
CO106.2	Use hand tools in different shops for performing different operation
CO106.3	Operate equipment and machinery in different shops
CO106.4	Prepare job according to drawing
CO106.5	Maintain workshop related tools, equipment and machinery

2nd Semester

Course Name:-CO201 Applied Mathematics (22210)

CO201.1	Calculate the equation of tangent, maxima, minima, radius of curvature by differentiation.
CO201.2	Solve the given problems of integration by suitable method.
CO201.3	Apply the concept of integration to find the area and volume
CO201.4	Solve the differentiation equation for first order and first degree using suitable methods.
CO201.5	Use Laplace transform to solve first order first degree differential equation.

Course Name:-CO202 Applied Science Physics (22211)

CO202.1	Use the relevant capacitors in electrical circuit
CO202.2	Use equipment /instrument based on the radioactive and ultrasonic principles
CO202.3	Use equipment /instrument based on photoelectric effect, X-ray and laser.
CO202.4	Select relevant water treatment process for various applications.
CO202.5	Use relevant electrolyte in batteries for different applications.
CO202.6	Use relevant metals, alloys and insulating material in various applications.

Course Name:-CO203 Fundamental of Electrical Engineering (22212)

CO203.1	Determine various parameters used in electric circuit
CO203.2	Use of basis laws of electrical engineering
CO203.3	Make use of capacitor in different conditions
CO203.4	Use principles of magnetism
CO203.5	Use principles of electromagnetism
CO203.6	Determine various parameters used in electric circuit

Course Name:-CO204 Elements of Electrical Engineering (22213)

CO204.1	Use relevant diode I different electronics circuits
CO204.2	Use diode in rectifiers and filters
CO204.3	Use BJT and FET in electronics circuits
CO204.4	Use DC regulated power supply
CO204.5	Use Transistor as an oscillator
CO204.6	Use of logic gates in electronics circuits

Course Name:-CO205 Basic Mechanical Engineering (22214)

CO205.1	Check the broad based working of various types of boilers and steam turbines
CO205.2	Check the broad based working of diesel engines and gas turbines
CO205.3	Check the broad based working of peloton replace replace Francis turbines.
CO205.4	Check the broad based working of air compressors
CO205.5	Check the broad based working of refrigeration and air-conditioning systems
CO205.6	Check the broad based working of various types of boilers and steam turbines

Course Name:-CO206 Business Communication using computer (22009)

CO206.1	Communicate effectively by avoiding barriers in various formal and informal situations
CO206.2	Communicate skillfully using non-verbal method of communication
CO206.3	Give presentations by audio visual aids.
CO206.4	Write reports using correct guidelines.
CO206.5	Compose emails and formal business letters.
CO206.6	Communicate effectively by avoiding barriers in various formal and informal situations

3rd Semester

Course Name:-CO301 Electrical Circuits (22324)

CO301.1	Troubleshoot problems related to single phase A.C. series circuits
CO301.2	Troubleshoot problems related to single phase A.C. parallel circuits
CO301.3	Troubleshoot problems related to three phase circuit
CO301.4	Use principles of circuit analysis to troubleshoot problems related to electric circuits
CO301.5	Apply network theorems to troubleshoot problems related to electric circuits

Course Name:-CO302 Electric And Electronics Measurement(22325)

CO302.1	Identify electrical measuring instrument
CO302.2	Students should have to Use voltmeter and ammeter for electrical measurement.
CO302.3	Students should have to Use wattmeter for electrical power measurement
CO302.4	Students should have to Use energy meter for electrical energy measurement
CO302.5	Students should have to Use measuring instruments

Course Name:-CO303 Fundamental of Power Electronics (22326)

CO303.1	Select power electronics devices for specific application
CO303.2	Maintain the performance of Thyristor
CO303.3	Troubleshoot turn-on and turn-off circuits of Thyristor.
CO303.4	Maintain phase controlled rectifiers
CO303.5	Maintain industrial control circuits.

Course Name :- CO304 Electrical Power Generation (22327)

C304.1	Maintain optimized working of the thermal power plants
C304.2	Maintain the optimized working of large and micro hydro power plants.
C304.3	Maintain the optimized working of solar and biomass-based power plants
C304.4	Maintain the optimized working of wind power plants
C304.5	Select the adequate mix of power generation based on economic operation

Course Name :- CO305 Electrical Material Wiring (22328)

CO305.1	Follow same practices when undertaking electrical works
CO305.2	Select relevant conductor and electromagnetic / Magnetic material
CO305.3	Select relevant insulating material
CO305.4	Perform different types of electrical wiring / cabling activities.
CO305.5	Implement relevant earthing systems.

4th Semester

Course Name :- CO401 Electric Motors & Transformer(22418)

C401.1	Able to know the constructional details, principle of operation of Electric Motors
C401.2	To understand the constructional features, principle of operation, characteristics, control the speed of DC machines and necessity of DC starter.
C401.3	Acquire knowledge about the constructional details, principle of operation, types, equivalent circuit of transformer and also know the test on single phase transformer
C401.4	Able to know the different parts, polarity, phases, parallel operation and different test on three phase transformer
C401.5	To understand the use of various special transformers for particular applications

Course Name:- CO402 Electrical Power Transmission and Distribution(22419)

C402.1	Interpret the normal operation of the electric transmission and distribution systems
C402.2	Maintain the functioning of the medium and high voltage transmission systems
C402.3	Interpret the parameter of the extra high voltage transmission systems
C402.4	Maintain the functioning of the low voltage AC distribution systems
C402.5	Maintain the component of the transmission and distribution Lines

Course Name:-CO403 Industrial Measurement (IME) (22420)

CO403.1	Select the relevant transducers for measuring various parameters
CO403.2	Maintain the different types of pressure transducers
CO403.3	Maintain the different types of flow transducers
CO403.4	Maintain the different types of level transducers
CO403.5	Maintain the different types of temperature transducers

Course Name :- CO404 Digital Electronics and Microcontroller (22421)

CO404.1	Use Boolean expressions to realize logic circuits.
CO404.2	Build simple combinational and sequential circuits.
CO404.3	Analyze the architecture of microcontroller ICs.
CO404.4	Write program in assembly language for micro controller.
CO404.5	Interface the memory and I/O devices to microcontrollers.

Course Name :- CO405 Environmental Studies (22447)

CO405.1	Develop public awareness about environment.
CO405.2	Select alternative energy resources for engineering practice.
CO405.3	Conserve ecosystem and biodiversity
CO405.4	Apply techniques to reduce Environmental pollution.
CO405.5	Manage social issues and environmental ethics as lifelong learning.

Course Name :- CO406 Electrical Drawing And CAD(22033)

CO406.1	Draw symbolic representation of electrical components manually.
CO406.2	Draw free hand sketches, isometric and orthographic views of electrical machines and components.
CO406.3	Use CAD tools to draw simple electrical components and machines.
CO406.4	Use CAD to create electrical circuits with components.
CO406.5	Edit electrical line drawings and control panel layouts in CAD.

5th Semester

Course Name:- CO501 Management (22509)

CO501.1	Use basic management principle to execute daily activities
CO501.2	Use principle of planning and organizing for accomplishment of tasks
CO501.3	Use principle of directing and controlling for implementation the plans
CO501.4	Apply principles of safety management in all activities
CO501.5	Understand various provisions of industrial acts

Course Name:- CO502 Industrial AC Machines (22523)

CO502.1	Use the relevant three phase induction motor (IM) for different applications.
CO502.2	Use the relevant single phase induction motors in different applications.
CO502.3	Use the relevant three phase alternator for different load conditions.
CO502.4	Use suitable synchronous motors in different applications.
CO502.5	Use suitable fractional HP motors for different applications.

Course Name :- CO503 Switchgear and Protection (22524)

CO503.1	Identify Various types of faults in Power System
CO503.2	Select Suitable Switchgears for different Applications
CO503.3	Test the Performance of Different Protective Relay
CO503.4	Maintain Protection system for alternators & Transformers
CO503.5	Maintain Protection schemes for Motors & Transmission lines

Course Name:- CO504 Energy Conservation & Audit (22525)

C504.1	Interpret energy conservation policies in India
C504.2	Implement Energy conservation techniques in electrical machines
C504.3	Apply energy conservation techniques in electrical installation
C504.4	Use cogeneration and relevant tariff for reduces losses in facilities
C504.5	Carryout energy audit for electrical systems

Course Name:- CO505 Wind Power Technologies (WPT)(22528)

CO505.1	Identify the various types of wind power plants and their auxiliaries
CO505.2	Maintain normal working of large wind turbines
CO505.3	Optimize the aerodynamic and electric control of large wind power plants
CO505.4	Troubleshoot the common faults of large wind power plants
CO505.5	Maintain the normal working of small wind turbines
CO505.6	Troubleshoot small wind turbines

Course Name:- CO506 Entrepreneurship Development (22032)

CO506.1	Identify your entrepreneurial traits.
CO506.2	Identify the business opportunities that suits you.
CO506.3	Use the support system to zero down to your business idea.
CO506.4	Develop Comprehensive business plans.
CO506.5	Prepare plans to manage the enterprises effectively.

Course Name:- CO507 ITR (22057)

Sr.No.	Course Outcome(CO's)
C507.1	Capability to acquire and apply fundamental principles of engineering.
C507.2	Become master in one's specialized technology.
C507.3	Become updated with all the latest changes in technological world.
C507.4	Ability to communicate efficiently.
C507.5	Ability to gain practical knowledge

Course Name :- CO508 Capstone Project Planning (CPP)(22058)

CO508.1	Write the problem/task specification in existing systems related to the occupation
CO508.2	Select, collect and use required information/knowledge to solve the problem/complete the task
CO508.3	Logically choose relevant possible solution(s)
CO508.4	Consider the ethical issues related to the project (if there are any)
CO508.5	Assess the impact of the project on society (if there are any)
CO508.6	Prepare 'project proposals' with action plan and time duration scientifically before beginning of project
CO508.7	Communicate effectively and confidently as a member and leader of team

Course Name :- CO601 Maintenance of Electrical Equipment's (22625)

Sr. No.	Course Outcome(CO's)
CO601.1	Follow safe practices to prevent accidents while using electrical equipment's.
CO601.2	Prepare maintenance schedules for electrical equipment.
CO601.3	Maintain rotating electrical machines.
CO601.4	Maintain single phase and three phase transformers.
CO601.5	Maintain insulation systems of electrical equipment's.

Course Name:- CO602 Utilization of Electrical Engineering (22626)

C602.1	Maintain the functioning of different types of lamps and fittings.
C602.2	Maintain different electric heating and welding equipment.
C602.3	Maintain different electric drives and elevators.
C602.4	Use different electric traction systems.
C602.5	Use equipment for economic operation.

Course Name:- CO603 EEC(Electrical Estimation & Contacting) (22627)

C603.1	Interpret Various Electrical wiring Diagram
C603.2	Prepared estimate of domestic and commercial installation
C603.3	Prepared estimate industrial electrical installation
C603.4	Prepared estimate of overhead and underground distribution line
C603.5	Prepared estimate public lighting installation

Course Name:- CO604 (Emerging trained in Electrical engineering (22628))


Sr. No.	Course Outcome(CO's)
CO604.1	Select the relevant IOT Technologies for Electrical system.
CO604.2	Select the relevant components for implementing a small grid.
CO604.3	Suggest different electrical system for a small city.
CO604.4	Suggest the relevant MCC or IMCC for the given applications.
CO604.5	Propose the relevant improved tariff and metering for the specified type of consumer.
CO604.1	Select the relevant IOT Technologies for Electrical system.

Course Name:- CO605 Electrical Substation Practice (22633)

Sr. No.	Course Outcome(CO's)
C605.1	Follow Safety rules for substation
C605.2	Maintain Substation Earthling and Neutral Grounding
C605.3	Maintain the substation equipment and bus layout
C605.4	Interpret single line diagram of substation
C605.5	Maintain Gas insulated substation

Course Name:- CO606 CPE (22060)

Sr. No.	Course Outcome(CO's)
C606.1	Implement the planed activity individually and /or as team.
C606.2	Select, collect and use required information/ knowledge to solve the identified problem.
C606.3	Take appropriate decision based on collected and analyzed information
C606.4	Ensure quality in product.
C606.5	Incorporate energy and enrollment conservation principles
C606.6	Consider the ethical issueies related to project.
C606.7	Assess the impact of the project on society
C606.8	Communicate effectively and confidently as a member leader of team.


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