

Course Outcomes(CO)

Course Title	: BASIC MATHEMATICS
Course Code	: 311302

- CO1 - Apply The Concepts Of Algebra To Solve Engineering (Discipline) Related Problems.
- CO2 - Utilize Trigonometry To Solve Branch Specific Engineering Problems.
- CO3 - Solve Area Specific Engineering Problems Under Given Conditions Of Straight Lines.
- CO4 - Apply Differential Calculus To Solve Discipline Specific Problems.
- CO5 - Use Techniques And Methods Of Statistics To Crack Discipline Specific Problems.

Course Title	: COMMUNICATION SKILLS (ENGLISH)
Course Code	: 311303

- CO1 - Construct Grammatically Correct Sentences In English.
- CO2 - Compose Paragraphs And Dialogues On Given Situations
- CO3 - Comprehend Passages Correctly.
- CO4 - Use Contextual Words In English Appropriately
- CO5 - Deliver Effective Presentations In English Using Appropriate Body Language

Course Title	: BASIC SCIENCE
Course Code	: 311305

- CO1 - Use Basic Instruments To Measure The Physical Quantities In Various Engineering Situations.
- CO2 - Apply The Basic Principles Of Electromagnetics To Solve Given Engineering Problems.
- CO3 - Apply Basic Principles Of Thermometry And Fibre Optics To Solve Engineering Problems.
- CO4 - Predict The Structure, Properties And Behaviour Of Molecules And Compounds Based On The Types Of Chemical Bond.
- CO5 - Apply The Concepts Of Electrochemistry And Corrosion Preventive Measures In Industry.
- CO6 - Use The Appropriate Engineering Material And Catalyst Appropriately.

Course Title	: FUNDAMENTALS OF ICT
Course Code	: 311001

- CO1 - Use Computer System And Its Peripherals For Given Purpose
- CO2 - Prepare Business Document Using Word Processing Tool
- CO3 - Analyze Data And Represent It Graphically Using Spreadsheet
- CO4 - Prepare Professional Slide Show Presentations

CO5 - Use Different Types Of Web Browsers And Apps

CO6 - Explain Concept And Applications Of Emerging Technologies

Course Title : YOGA AND MEDITATION

Course Code : 311003

- CO1 - Practice Basic Yoga And Pranayama In Daily Life To Maintain Physical And Mental Fitness.
- CO2 - Practice Meditation Regularly For Improving Concentration And Better Handling Of Stress And Anxiety.
- CO3 - Follow Healthy Diet And Hygienic Practices For Maintaining Good Health.

Course Title : ENGINEERING WORKSHOP PRACTICES
(Mechanical, Electrical And Allied Branches)

Course Code : 311005

- CO1 - Use Firefighting Tools And Equipment.
- CO2 - Prepare Job Using Different Tools In Fitting Shop.
- CO3 - Perform Various Operations Using Plumbing And Carpentry Tools.
- CO4 - Prepare Various Welding Joints.
- CO5 - Produce Simple Job Using Different Sheet Metal Operations.

Course Title : ENGINEERING GRAPHICS (Civil, Electrical,
Mechanical And Allied Branches)

Course Code : 311006

- CO1 - Draw Geometrical Figures And Engineering Curves.
- CO2 - Apply Principles Of Orthographic Projections For Drawing Given Pictorial Views.
- CO3 - Draw Isometric Views Of Given Component Or From Orthographic Projections.
- CO4 - Use Various Drawing Codes, Conventions And Symbols As Per IS SP-46 In Engineering Drawing.
- CO5 - Draw Free Hand Sketches Of Given Engineering Elements.

Course Title : APPLIED MATHEMATICS

Course Code : 312301

- CO1 - Solve The Broad-Based Engineering Problems Of Integration Using Suitable Methods.
- CO2 - Use Definite Integration To Solve Given Engineering Related Problems.
- CO3 - Apply The Concept Of Differential Equation To Find The Solutions Of Given Engineering Problems.
- CO4 - Employ Numerical Methods To Solve Programme Specific Problems.
- CO5 - Use Probability Distributions To Solve Elementary Engineering Problems.

Course Title : APPLIED SCIENCE

Course Code : 312308

- CO1 - Select Relevant Material In Industries By Analyzing Its Physical Properties .
- CO2 - Apply The Concept Of Simple Harmonic Motion , Resonance And Ultrasonic Sound For Various Engineering Applications.
- CO3 - Apply The Concept Of Modern Physics (X-Rays, LASER, Photosensors And Nanotechnology) For Various Engineering Applications.
- CO4 - Use The Relevant Metallurgical Processes In Different Engineering Applications.
- CO5 - Use Relevant Water Treatment Processes To Solve Industrial Problems.
- CO6 - Use Appropriate Fuel And Electrolyte For Engineering Applications.

Course Title : ELEMENTS OF ELECTRONICS

Course Code : 312309

- CO1 - Identify Various Electronic Components
- CO2 - Use Semiconductor Diodes In Different Applications.
- CO3 - Use Semiconductor Transistors In Different Applications.
- CO4 - Use Different Types Of Oscillators As Per Requirement
- CO5 - Test Operation Of Regulated Power Supply

Course Title : FUNDAMENTAL OF ELECTRICAL ENGINEERING

Course Code : 312310

- CO1 - Determine Various Parameters Used In Electric Circuit.
- CO2 - Use Basic Laws Of Electrical Engineering In D.C. Circuits.
- CO3 - Use Capacitor And Battery In Electrical Circuits.
- CO4 - Use Principles Of Magnetism In Magnetic Circuits.
- CO5 - Apply Laws Of Electromagnetism In Electrical Circuit And Systems.

Course Title : PROFESSIONAL COMMUNICATION

Course Code : 312002

- CO1 - Communicate Effectively (Oral / Spoken And Written) In Various Formal And Informal Situations Minimizing The Barriers.
- CO2 - Develop Listening Skills Through Active Listening And Note Taking.
- CO3 - Write Circulars, Notices And Minutes Of The Meeting.
- CO4 - Draft Inquiry Letter, Complaint Letter , Job Application With Resume / CV, Compose Effective E - Mails .
- CO5 - Write Industrial Reports.

Course Title : SOCIAL AND LIFE SKILLS

Course Code : 312003

- CO1 - Enhance The Ability To Be Fully Self-Aware And Take Challenges By Overcoming All Fears And Insecurities And Grow Fully.

- CO2 - Increase Self-Knowledge And Awareness Of Emotional Skills And Emotional Intelligence At The Place Of Study/Work.
- CO3 - Provide The Opportunity To Realizing Self-Potential Through Practical Experience While Working Individually Or In Group.
- CO4 - Develop Interpersonal Skills And Adopt Good Leadership Behaviour For Self-Empowerment And Empowerment Of Others.
- CO5 - Set Appropriate Life Goals With Managing Stress And Time Effectively.

Course Title : BASIC MECHANICAL ENGINEERING

Course Code : 312006

- CO1 - Find Faults In Thermal Power Plant Using Acquired Knowledge And Skills In A Given Situation.
- CO2 - Diagnose Faults Of Material Handling System Using Acquired Knowledge And Skills.
- CO3 - Identify Faults Of Hydraulic Turbines And Hydraulic Pumps In A Given Situation.
- CO4 - Diagnose Faults Of Given Air Compressor And Refrigeration System Using Acquired Knowledge And Skills.

Course Title : ELECTRICAL CIRCUITS AND NETWORK

Course Code : 313332

- CO1 - Analyze The Parameters Of Single-Phase AC Series Circuits.
- CO2 - Analyze The Parameters Of Single-Phase AC Parallel Circuits.
- CO3 - Analyze The Parameters Of Polyphase AC Circuits.
- CO4 - Apply Network Reduction Methods To Solve DC Circuits.
- CO5 - Apply Network Theorems To Solve Basic Electrical Circuits.

Course Title : ELECTRICAL POWER GENERATION, TRANSMISSION AND DISTRIBUTION

Course Code : 313333

- CO1 - Maintain The Optimised Working Of The Thermal Power Plant And Hydro Power Plant.
- CO2 - Select The Relevant Power Generation Technology Based On Economic Operation.
- CO3 - Interpret The Normal Operation And Parameters Of The Electric Transmission System.
- CO4 - Interpret The Parameters Of The Extra High Voltage Transmission System.
- CO5 - Maintain The Functioning And Operation Of Electric Power Distribution System.

Course Title : ELECTRICAL AND ELECTRONIC MEASUREMENT

Course Code : 313334

- CO1 - Apply The Basics Of Measurement To The Measuring Instruments.
- CO2 - Measure Precisely Electrical Power And Energy Using Appropriate Meters.
- CO3 - Use Digital Measuring Instruments For Different Applications.
- CO4 - Maintain Required Pressure For Given Application Using Pressure Transducer.
- CO5 - Use Appropriate Transducer For Maintaining Required Flow, Level And Temperature In Given Application.

Course Title : FUNDAMENTALS OF POWER ELECTRONICS

Course Code : 313335

- CO1 - Test The Functionality Of A Given Power Electronic Device.
- CO2 - Test The Switching Performance Of A Thyristor.
- CO3 - Test The Performance Of Given Controlled Converter.
- CO4 - Test The Performance Of Given Chopper.
- CO5 - Use Suitable Power Electronic Circuit For Given Application.

Course Title : ESSENCE OF INDIAN CONSTITUTION

Course Code : 313002

- CO1 - List Salient Features And Characteristics Of The Constitution Of India.
- CO2 - Follow Fundamental Rights And Duties As Responsible Citizen Of The Country.
- CO3 - Analyze Major Constitutional Amendments In The Constitution.
- CO4 - Follow Procedure To Cast Vote Using Voter-Id.

Course Title : ELECTRICAL MATERIAL AND WIRING PRACTICE

Course Code : 313015

- CO1 - Follow Safe Working Practices When Undertaking Electrical Work.
- CO2 - Select Relevant Conducting, Electromagnetic And Magnetic Materials.
- CO3 - Select Relevant Insulating Materials.
- CO4 - Perform Different Types Of Electrical Wiring And Cabling Activities.
- CO5 - Implement Relevant Earthing Systems.

Course Title : ENVIRONMENTAL EDUCATION AND SUSTAINABILITY

Course Code : 314301

- CO1 - Identify The Relevant Environmental Issues In Specified Locality.
- CO2 - Provide The Green Solution To The Relevant Environmental Problems.
- CO3 - Conduct SWOT Analysis Of Biodiversity Hotspot
- CO4 - Apply The Relevant Measures To Mitigate The Environmental Pollution.
- CO5 - Implement The Environmental Policies Under The Relevant Legal Framework.

Course Title : D.C. MACHINES AND TRANSFORMERS

Course Code : 314322

- CO1 - Test The Performance Of D.C. Generators.
- CO2 - Test The Performance Of D.C. Motors
- CO3 - Test The Performance Of Single Phase Transformers

- CO4 - Use Three Phase Transformer For Different Applications.
- CO5 - Use Relevant Special Purpose Transformers For Different Applications.

Course Title : UTILIZATION OF ELECTRICAL ENERGY

Course Code : 314323

- CO1 - Design Simple Lighting Scheme..
- CO2 - Select Type Of Electric Furnaces According To Applications
- CO3 - Operate The Different Electric Welding System
- CO4 - Select Suitable Electric Drive For A Particular Application
- CO5 - Maintain Different Electric Traction System.

Course Title : DIGITAL ELECTRONICS AND MICROCONTROLLER APPLICATIONS

Course Code : 314324

- CO1 - Apply Knowledge Of Number System And Logic Circuits In Working Of Digital System.
- CO2 - Build Simple Combinational And Sequential Circuits.
- CO3 - Access Various Registers In 8051 Microcontroller.
- CO4 - Develop And Execute Programs In Assembly Language For Microcontroller.
- CO5 - Use Microcontroller In Various Applications.

Course Title : ELECTRICAL ESTIMATING AND CONTRACTING

Course Code : 314325

- CO1 - Prepare Generic Tender Document, Quotation, Comparative Statement, And Supply Order.
- CO2 - Prepare Estimate Of Domestic And Commercial Electrical Installations.
- CO3 - Prepare Estimate Of Industrial Electrical Installations.
- CO4 - Prepare Estimate Of Public Lighting Installations.

Course Title : COMPUTER AIDED DRAWING AND SIMULATION

Course Code : 314008

- CO1 - Comprehend Electrical Drawings.
- CO2 - Locate Various Components Of CAD Software.
- CO3 - Use Relevant CAD Tools And Commands For Electrical Drawings.
- CO4 - Draw Different Electrical Drawings Using CAD Software.
- CO5 - Simulate Basic Electrical And Electronic Circuits.