



TEEGALA KRISHNA REDDY ENGINEERING COLLEGE

(UGC-Autonomous)

Approved by AICTE, Affiliated by JNTUH, Accredited by NAAC- 'A' Grade

Medbowli, Meerpet, Balapur, Hyderabad, Telangana- 500097

Mob: 9393959597. Email: info@tkrec.ac.in, deanacademics@tkrec.ac.in



Department of CIVIL Engineering

I B.Tech I Semester Course Outcomes

Course Name: ORDINARY DIFFERENTIAL EQUATIONS AND VECTOR CALCULUS

CO1	Identify whether the given differential equation of first order is exact or not.
CO2	Apply the concept of differential equation to real world problem
CO3	Calculate the line, surface and volume integrals and converting them from one to another.
CO4	Use the Laplace transforms techniques for solving ODE's.

Course Name: ENGINEERING CHEMISTRY

CO1	Apply the principle of potable water for industrial and domestic purposes.
CO2	Identify the electrolytic and electrochemical cells with different types of batteries and make use of corrosion control methods in industry.
CO3	Explore the fundamental properties of polymers and other materials in engineering field.
CO4	Distinguish various types of fuels and their applications in day-to-day life
CO5	Develop understanding of engineering materials like cement, smart materials and Lubricants.

Course Name: COMPUTER AIDED ENGINEERING GRAPHICS

CO1	Apply the principles of Engineering Graphics to create Engineering Drawings of various geometric constructions, conic sections, curves and scales as per BIS standards.
CO2	Construct orthographic projections for points, lines and planes in different quadrants and Auxiliary views.

CO3	Draw the sectional views and true shape of sections of solids, by applying principles of projections.
CO4	Draw the development of surfaces in real time situations
CO5	Develop isometric and orthographic views of the objects.

Course Name: APPLIED MECHANICS

CO1	Determine resultant of forces acting on a body and analyse equilibrium of a body subjected to a system of forces.
CO2	Solve problem of bodies subjected to friction.
CO3	Find the location of centroid and calculate moment of inertia of a given section.
CO4	Understand the kinetics and kinematics of a body undergoing rectilinear, curvilinear, rotatory motion and rigid body motion.
CO5	Understands about Energy and Momentum Principle.

Course Name: SURVEYING

CO1	Calculate angles, distances, and levels
CO2	Do levelling, contouring and computation of areas.
CO3	Understand theodolite surveying and traversing.
CO4	Understand Tacheometric surveying.
CO5	Understand Total Station and GPS System.

Course Name: PYTHON PROGRAMMING LAB

CO1	Develop the application specific codes using python
CO2	Understand Strings, Lists, Tuples and Dictionaries in Python
CO3	Verify programs using modular approach, file I/O, Python standard library
CO4	Implement Digital Systems using Python

Course Name: ENGINEERING CHEMISTRY LAB

CO1	Determination of parameters like hardness of water and rate of corrosion of mild steel in various conditions.
CO2	Performing experimental methods such as conductometry, potentiometry and pH metry in order to find out the concentrations or equivalence points of acids and bases.
CO3	Preparation of polymers like Bakelite and nylon-6.
CO4	Estimation of saponification value, surface tension and viscosity of lubricant oils.
CO5	Estimation of different types of qualitative and quantitative measurements of a given compound.

Course Name: SURVEYING LABORATORY - I

CO1	Student will be able to prepare Map and Plan for required site with suitable scale.
CO2	Student will be able to prepare contour Map and Estimate the Quantity of earthwork required for formation level for Road and Railway Alignment.
CO3	Student will be able to judge which type of instrument to be used for carrying out survey for a Particular Area and estimate the area.
CO4	Student will be able to judge the profile of ground by observing the available existing contour map.

Coordinator

IQAC Coordinator

HOD



TEEGALA KRISHNA REDDY ENGINEERING COLLEGE

(UGC-Autonomous)

Approved by AICTE, Affiliated by JNTUH, Accredited by NAAC- 'A' Grade

Medbowli, Meerpet, Balapur, Hyderabad, Telangana- 500097

Mob: 9393959597. Email: info@tkrec.ac.in, deanacademics@tkrec.ac.in



Department of CIVIL Engineering

I B.Tech II Semester Course Outcomes

Course Name:

CO1	
CO2	
CO3	
CO4	
CO5	

Course Name:CHEMISTRY

Course Code: BS05		Academic Year: 2019-20
CO1	Analyze microscopic chemistry in terms of atomic and molecular orbitals and intermolecular forces	
CO2	Measure various parameters of water and its significance in industrial and domestic purpose	
CO3	Make use of essential aspects of Electro chemistry and Corrosion in industry.	
CO4	Explain stereochemistry and synthetic aspects useful for understanding reaction pathways	
CO5	Apply the basic principles of various Spectroscopic techniques in chemical industry and medical field.	

Course Name: ENGINEERING MECHANICS

Course Code: ES05		Academic Year: 2019-20
CO1	Solve problems related to resultant of forces acting on a body and equilibrium of a body subjected to a system of forces.	
CO2	Solve problem of bodies subjected to friction and find Centre of Gravity	
CO3	Calculate moment of inertia of a given section.	
CO4	Solve problem on Particle dynamics and work kinetic energy	
CO5	Solve problem of D'Alembert's principle and its applications, work energy principle and kinetics of rigid body rotation	

Course Name:ENGINEERING WORKSHOP

Course Code: ES06		Academic Year: 2019-20
CO1	Apply different workshop trades like fitting,carpentry, foundry and welding.	
CO2	Practice workshop trades like Tim smithy, Blacksmithy.	
CO3	Apply suitable tools for different trades of engineering processes including drilling, material removing, measuring, chiseling.	
CO4	Apply basic electrical engineering knowledge for house wiring practice	
CO5	Demonstrate various machines, tools and their operations.	

Course Name: ENGLISH

Course Code: HS01		Academic Year: 2019-20
CO1	Use English Language effectively in spoken and written communication	
CO2	Comprehend the given texts and respond appropriately.	
CO3	Communicate confidently in various contexts and different cultures.	
CO4	Demonstrate basic proficiency in English including reading and listening comprehension, writing and speaking skills.	
CO5	Improve language proficiency to meet their academic and professional needs	

Course Name: ENGINEERING CHEMISTRY LAB

Course Code: BS06		Academic Year: 2019-20
CO1	An ability to analyze the quality of water by determining its chemical parameters.	
CO2	The synthesis of common drugs like Paracetamol and Aspirin	
CO3	Determination of rate constant of a reaction from concentration – time relationships.	
CO4	Determination of physical properties like adsorption and viscosity of lubricants	
CO5	Estimation of different types of qualitative and quantitative measurements of a given compound.	

Course Name: ENGLISH LANGUAGE AND COMMUNICATION SKILLS LAB

Course Code: HS02		Academic Year: 2019-20
CO1	Employ the nuances of English language through audio-visual experience and group activities	
CO2	Articulate a neutral accent of English for intelligibility by overcoming mother tongue influence.	
CO3	Develop the skill of using appropriate language in various speaking contexts	
CO4	Take part in oral presentations using formal language.	
CO5	Improve speaking skills with clarity and confidence which in turn enhance their interpersonal skills.	

Coordinator

IQAC Coordinator

HOD



TEEGALA KRISHNA REDDY ENGINEERING COLLEGE

(UGC-Autonomous)

Approved by AICTE, Affiliated by JNTUH, Accredited by NAAC- 'A' Grade

Medbowli, Meerpet, Balapur, Hyderabad, Telangana- 500097

Mob: 9393959597. Email: info@tkrec.ac.in, deanacademics@tkrec.ac.in



Department of CIVIL Engineering

II B.Tech I Semester Course Outcomes

Course Name: PROBABILITY AND STATISTICS

CO1	Apply the concepts of probability and distributions to some case studies.
CO2	Correlate the concepts of one unit to the concepts in other units.

Course Name: BUILDING MATERIALS, CONSTRUCTION AND PLANNING

CO1	Understand the different construction material.
CO2	Understand the different component parts of building and their construction practices and techniques
CO3	Understand the functional requirements to be considered for design and construction of building
CO4	Identify the factors to be considered in planning and construction of buildings
CO5	Plan a building based on the factors and principles of planning.

Course Name: ENGINEERING GEOLOGY

CO1	Understand importance of Geology and weathering of Rocks.
CO2	Understand Mineralogy and Petrology.
CO3	Understand about Earthquakes and importance Geophysical Studies.
CO4	Understand Geology Dams, Reservoir and Tunnels.

CO5	. Understand Structural Geology.
------------	----------------------------------

Course Name: STRENGTH OF MATERIALS – I

CO1	Describe the concepts and principles, understand the theory of elasticity including strain/displacement and Hooke's law relationships; and perform calculations, related to the strength of structured and mechanical components.
CO2	Recognize various types loads applied on structural components of simple framing geometries and understand the nature of internal stresses that will develop within the components.
CO3	To evaluate the strains and deformation that will result due to the elastic stresses developed within the materials for simple types of loading.
CO4	Analyze various situations involving structural members subjected to plane stresses by application of Mohr's circle of stress.

Course Name: FLUID MECHANICS

CO1	Understand the broad principles of fluid statics, kinematics and dynamics
CO2	Understand definitions of the basic terms used in fluid mechanics and characteristics of fluids and its flow.
CO3	Understand classifications of fluid flow.
CO4	Be able to apply the continuity, momentum and energy principles.

Course Name: SURVEYING LABORATORY – II

CO1	Prepare Map and Plan for required site with suitable scale.
CO2	Prepare contour Map and Estimate the Quantity of earthwork required for formation level for Road and Railway Alignment.
CO3	Judge which type of instrument to be used for carrying out survey for a Particular Area and estimate the area.
CO4	Judge the profile of ground by observing the available existing contour map.

Course Name: STRENGTH OF MATERIALS LABORATORY

CO1	Determine the yield stress, ultimate tensile stress, percentage elongation of steel, compressive strength of brick and concrete
CO2	Determine the ultimate shear stress, modulus of elasticity of steel

CO3	Determine the stiffness of the close coiled helical spring and hardness number of mild steel, brass, copper and aluminium.
CO4	Determine the modulus of rigidity and impact strength of steel.

Course Name: COMPUTER AIDED DRAFTING LABORATORY

CO1	Use different Commands of selected drafting software to draw Conventional signs and brick bonds, Plan, Section and Elevation of buildings.
CO2	Draw section and elevation of panelled doors and trusses.
CO3	Develop and draw single /two storey residential building and public building as per the building by-laws.
CO4	Draw Electrical layout, Plumbing layout for residential buildings.
CO5	Draw section and elevation of panelled doors and trusses.

Course Name: CONSTITUTION OF INDIA

CO1	Discuss the growth of the demand for civil rights in India for the bulk of Indians before the arrival of Gandhi in Indian politics.
CO2	Discuss the intellectual origins of the framework of argument that informed the conceptualization of social reforms leading to revolution in India
CO3	Discuss the circumstances surrounding the foundation of the Congress Socialist Party [CSP] under the leadership of Jawaharlal Nehru and the eventual failure of the proposal of direct elections through adult suffrage in the Indian Constitution
CO4	Discuss the passage of the Hindu Code Bill of 1956.

Coordinator

IQAC Coordinator

HOD



TEEGALA KRISHNA REDDY ENGINEERING COLLEGE

(UGC-Autonomous)

Approved by AICTE, Affiliated by JNTUH, Accredited by NAAC- 'A' Grade

Medbowli, Meerpet, Balapur, Hyderabad, Telangana- 500097

Mob: 9393959597. Email: info@tkrec.ac.in, deanacademics@tkrec.ac.in



Department of CIVIL Engineering

II B.Tech II Semester Course Outcomes

Course Name: BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

CO1	To analyze and solve electrical circuits using network laws and theorems
CO2	To understand and analyze basic Electric and Magnetic circuits
CO3	To study the working principles of Electrical Machines
CO4	To introduce components of Low Voltage Electrical Installations
CO5	To identify and characterize diodes and various types of transistor

Course Name: CONCRETE TECHNOLOGY

CO1	Determine the properties of concrete ingredients i.e., cement, sand, coarse aggregate by conducting different tests. Recognize the effects of the rheology and early age properties of concrete on its long-term behavior.
CO2	Apply the use of various chemical admixtures and mineral additives to design cement-based materials with tailor-made properties
CO3	Use advanced laboratory techniques to characterize cement-based materials
CO4	Perform mix design and engineering properties of special concretes such as high-performance concrete, self-compacting concrete, and fiber reinforced concrete.

Course Name: STRENGTH OF MATERIALS – II

CO1	Describe the concepts and principles, understand the theory of elasticity, and perform calculations, relative to the strength of structures and mechanical components in particular to torsion and direct compression.
CO2	To evaluate the strains and deformation that will result due to the elastic stresses developed within the materials for simple types of loading.
CO3	Analyze strength and stability of structural members subjected to Direct, and Direct and Bending stresses.
CO4	Understand and evaluate the shear center and unsymmetrical bending

Course Name HYDRAULICS AND HYDRAULIC MACHINERY

CO1	Apply their knowledge of fluid mechanics in addressing problems in open channels and hydraulic machinery.
CO2	Understand and solve problems in uniform, gradually and rapidly varied flows in open channel in steady state conditions.
CO3	Apply dimensional analysis and to differentiate the model, prototype and similitude conditions for practical problems.
CO4	Get the knowledge on different hydraulic machinery devices and its principles that will be utilized in hydropower development and for other practical usages.

Course Name: STRUCTURAL ANALYSIS – I

CO1	An ability to apply knowledge of mathematics, science, and engineering
CO2	Analyse the statically indeterminate bars and continuous beams
CO3	Draw strength behaviour of members for static and dynamic loading
CO4	Identify, formulate, and solve engineering problems with real time loading
CO5	Understand the indeterminacy aspects to consider for a total structural system.

Course Name: HYDRAULICS AND HYDRAULIC MACHINERY LABORATORY

CO1	Describe the basic measurement techniques of fluid mechanics and its appropriate application
CO2	Interpret the results obtained in the laboratory for various experiments.
CO3	Discover the practical working of Hydraulic machines- different types of Turbines, Pumps, and other miscellaneous hydraulics machines.
CO4	Compare the results of analytical models introduced in lecture to the actual behavior of real fluid flows and draw correct and sustainable conclusions.
CO5	Write a technical laboratory report

Course Name : BASIC ELECTRICAL AND ELECTRONICS ENGINEERING LABORATORY

CO1	To analyze and solve electrical circuits using network laws and theorems.
CO2	To understand and analyze basic Electric and Magnetic circuits
CO3	To study the working principles of Electrical Machines

CO4	To introduce components of Low Voltage Electrical Installations
CO5	To identify and characterize diodes and various types of transistors

Course Name: CONCRETE TECHNOLOGY LABORATORY

CO1	Perform various tests required to assess the characteristics of cement
CO2	Test and evaluate the properties of fine and coarse aggregates and determine its suitability for construction
CO3	Evaluate the fresh and hardened properties of concrete
CO4	Design the concrete mix for required strength and test its performance characteristics

Course Name: GENDER SENSITIZATION LAB

CO1	Students will have developed a better understanding of important issues related to gender in contemporary india.
CO2	Students will be sensitized to basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through discussion of materials derived from research, facts, everyday life, literature and film.
CO3	Students will attain a finer grasp of how gender discrimination works in our society and how to counter it.
CO4	Students will acquire insight into the gendered division of labour and its relation to politics and economics.
CO5	Students will develop a sense of appreciation of women in all walks of life.

Coordinator

IQAC Coordinator

HOD