





CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307

COs OF CIVIL ENGINEERING DEPARTMENT





CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307

DEPARTMENT OF CIVIL ENGINEERING

SUBJECT CODE	SUBJECT NAME	CO		
			SEMESTER I & II	
		COI	solve systems of linear equations, diagonalize matrices and characterise quadratic forms	
		CO II	compute the partial and total derivatives and maxima and minima of multivariable functions	
MAT 101	LINEAR ALGEBRA AND CALCULUS	COIII	compute multiple integrals and apply them to find areas and volumes of geometrical shapes,mass and centre of gravity of plane laminas	
		CO IV	perform various tests to determine whether a given series is convergent, absolutely convergent or conditionally convergent	
		co v	determine the Taylor and Fourier series expansion of functions and learn their applications.	
	ENGINEERING CHEMISTRY	COI	Apply The Basic Concepts Of Electrochemistry And Corrosion To Explore Its Possible Applications In Various Engineering Fields.	
CYT100		CO II	Understand Various Spectrocopic Techniques Like Uv-Visible, Ir, Nmr And Its Applications	
		сош	Apply The Knowledge Of Analytical Method For Characterising A Chemical Mixture Or A Compound. Understand The Basic Concept Of Sem For Surface Characterisation Of Nanomaterials.	
		CO IV	Learn About The Basic Of Stereochemistry And Its Application. Apply The Knowledge Of Conducting Polymers And Advanced Polymers In Engineering.	
		cov	Study Various Types Of Water Treatment Methods To Develop Skills For Treating Wastewater	
1.	and the second	COI	CO1: Compute the quantitative aspects of waves and oscillations in engineering systems.	
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		and the second se	
		CO II	CO2: Apply the interaction of light with matter through interference, diffraction and identify these phenomena in different natural optical processes and optical instruments.
PHT 1	00 ENGINEERING PHYSICS	COIII	CO3:Analyze the behaviour of matter in the atomic and subatomic level through the principles of quantum mechanics to perceive the microscopic processes in electronic devices.
		CO IV	CO4: Classify the properties of magnetic materials and apply vector calculus to static magnetic fields and use Maxwell's equations to diverse engineering problems
		cov	CO5:Analyze the principles behind various superconducting applications, explain the working of solid state lighting devices and fibre optic communication system
		COI	Draw the projection of points and lines located in different quadrants
		CO II	Prepare multiview orthographic projections of objects by visualizing them in different positions
ECT	ENGINEERING	COIII	Draw sectional views and develop surfaces of a given object
ESII	GRAPHICS	CO IV	Prepare pictorial drawings using the principles of isometric and perspective projections to visualize objects in three dimensions.
		co v	Convert 3D views to orthographic views
		CO VI	Obtain multiview projections and solid models of objects using CAD tools
		CO I	Construct free body diagram and calculate the reactions necessary to ensure static equilibrium.
		CO II	Study the effect of friction in static and dynamic conditions.
EST1	00 ENGINEERING MECHANICS	COIII	Understand the different properties of surfaces in relation to moment of inertia
		CO IV	Analyse and solve different problems of kinematics and kinetics.
,		cov	Analyse and solve with and without damping of SODF.
New		COI	Analyze a computational problem and develop an algorithm/flowchart to find its solution
Dr. LEEN PRINC	A A.V. DIPAL STRAL SY, PAYYANUR		HOD

	EST 102 PI	PROGRAMING IN C	CO II	Develop readable* C programs with branching and looping statements, which uses Arithmetic, Logical, Relational or Bitwise operators.		
			COIII	Write readable C programs with arrays, structure or union for storing the data to be processed		
			CO IV	Divide a given computational problem into a number of modules and develop a readable multi- function C program by using recursion if required, to find the solution to the computational problem		
			co v	Write readable C programs which use pointers for array processing and parameter passing		
			COVI	Develop readable C programs with files for reading input and storing output		
			CO I	Demonstrate safety measures against electric shocks.		
			CO II	Identify the tools used for electrical wiring, electrical accessories, wires, cables, batteries and standard symbols.		
		BASICS OF CIVIL & MECHANICAL ENGINEERING	COIII	Develop the connection diagram, identify the suitable accessories and materials necessary for wiring simple lighting circuits for domestic buildings.		
×			CO IV	Identify and test various electronic components		
			co v	Draw circuit schematics with EDA tools		
	EST 120		CO VI	Assemble and test electronic circuits on boards		
			CO VII	Work in a team with good interpersonal skills		
			CO VIII	Explain the basic principles of Refrigeration and Air Conditioning		
			CO IX	Describe the working of hydraulic machines		
			со х	Explain the working of power transmission elements		
			CO XI	Describe the basic manufacturing, metal joining and machining processes		
Dr I SREE NAI ENGINEERIM	Dr. LEENA A. V. PRINCIPAL SREE NARAYANA CUPU COLLEGE OF KGINEERING & TEGY, PAYYANUR K A ANALLE					

		CO I	Apply fundamental concepts and circuit laws to solve simple DC electric circuits
		со п	Develop and solve models of magnetic circuits
DOT	BASICS OF ELECTRICAL AND	COIII	Apply the fundamental laws of electrical engineering to solve simple ac circuits in steady state
ES1130	ELECTRONICS ENGINEERING	CO IV	Describe working of a voltage amplifier
		co v	Outline the principle of an electronic instrumentation system
		CO VI	Explain the principle of radio and cellular communication
		СО І	Define and Identify different life skills required in personal and professional life.
	LIFE SKILLS	СО ІІ	Develop an awareness of the self and apply well-defined techniques to cope with emotions and stress.
		COIII	Explain the basic mechanics of effective communication and demonstrate these through presentations.
HUN 101		CO IV	Take part in group discussion.
		cov	Use appropriate thinking and problem solving techniques to solve new problem.
		CO VI	Understanding the basics of teamwork and leadership.
		СО І	Compute the derivatives and line integrals of vector functions and learn their applications
	VECTOR CALCULUS	СО ІІ	Evaluate surface and volume integrals and learn their inter-relations and applications.
MAT 102	DIFFERENTIAL EOUATIONS AND	COIII	Solve homogeneous and non-homogeneous linear differential equation with constant coefficient
Num	TRANSFORMS	co iv	Compute Laplace transform and apply them to solve ODEs arising in engineering
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		CO V	Determine the Fourier transforms of functions and apply them to solve problems arising in engineering
		COI	Develop vocabulary and language skills relevant to engineering as a profession.
		CO II	Analyze, interpret and effectively summarize a variety of textual content.
	Professional	COIII	Create effective technical presentations.
HUN 102	Communication	CO IV	Discuss a given technical/non-technical topic ina group setting and arrive at generalizations/consensus.
		CO V	Identify drawbacks in listening patterns and apply listening techniques for specific needs.
		CO VI	Create professional and technical documents
	CIVIL AND MECHANICAL WORKSHOP	COI	Name different devices and tools used for civil engineering measurements
		CO II	Explain the use of various tools and devices for various field measurements
		COIII	Demonstrate the steps involved in basic civil engineering activities like plot measurement, setting out operation, evaluating the natural profile of land, plumbing and undertaking simple
		COIV	Choose materials and methods required for basic civil engineering activities like field measurements, masonry work and plumbing.
ESL 120		co v	Compare different techniques and devices used in civil engineering measurements
		CO VI	Identify Basic Mechanical workshop operations in accordance with the material and objects
		CO VII	Apply appropriate Tools and Instruments with respect to the mechanical workshop trades
		CO VIII	Apply appropriate safety measures with respect to the mechanical workshop trades
1		COI	Demonstrate safety measures against electric shocks.
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	ELECTRICAL AND ELECTRONICS	CO II	Identify the tools used for electrical wiring, electrical accessories, wires, cables, batteries and standard symbols.
ESL130		COIII	Develop the connection diagram, identify the suitable accessories and materials necessary for wiring simple lighting circuits for domestic buildings.
	WORKSHOP	CO IV	Identify and test various electronic components
×		CO V	Draw circuit schematics with EDA tools
		CO VI	Assemble and test electronic circuits on boards
		CO VII	Work in a team with good interpersonal skills
		COI	Understand and practice different techniques of quantitative chemical analysis to generate experimental skills and apply these skills to various analyses
		CO II	Develop skills relevant to synthesize organic polymers and acquire the practical skill to use TLC for the identification of drugs
CYL 100	ENGINEERING CHEMISTRY LAB	COIII	Develop the ability to understand and explain the use of modern spectroscopic techniques for analysing and interpreting the IR spectra and NMR spectra of some organic compounds
		COIV	Acquire the ability to understand, explain and use instrumental techniques for chemical analys
		cov	Learn to design and carry out scientific experiments as well as accurately record and analyze th results of such experiments
		CO VI	Function as a member of a team, communicate effectively and engage in further learning. Also understand how chemistry addresses social, economical and environmental problems and why is an integral part of curriculum
		COI	Develop analytical/experimental skills and impart prerequisite hands on experience for engineering laboratories
		CO II	Understand the need for precise measurement practices for data recording
PHL 100	ENGINEERING PHYSICS LAB	COIII	Understand the principle, concept, working and applications of relevant technologies and comparison of results with theoretical calculations
		COIV	Analyze the techniques and skills associated with modern scientific tools such as lasers and fib optics
Xun	-	cov	Develop basic communication skills through working in groups in performing the laboratory experiments and by interpreting the results
LEENA A PRINCIPA RAYANA GURU C ING & TECHNOLO KANNUR	. V. LL OLLEGE OF GY, PAYYANUR	CO V	Develop basic communication skills through working in groups in performing the laborate experiments and by interpreting the results





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DEPARTMENT OF CIVIL ENGINEERING

SUBJECT CODE	SUBJECT NAME	СО			
			SEMESTER III		
		COI	Understand the concept and the solution of partial differential equation.		
	PARTIAL	CO II	Analyse and solve one dimensional wave equation and heat equation.		
MAT 201	DIFFERENTIAL EQUATIONS AND	CO III	Understand complex functions, its continuity differentiability with the use of Cauchy-Riemann equations.		
	COMPLEX ANALYSIS	CO IV	Evaluate complex integrals using Cauchy's integral theorem and Cauchy's integralformula, understand the series expansion of analytic function		
		CO V	Evaluate complex integrals using Cauchy's integral theorem and Cauchy's integralformula, understand the series expansion of analytic function		
	MECHANICS OF SOLIDS	CO I	Recall the fundamental terms and theorems associated with mechanics of linear elastic deformable bodies		
		CO II	Explain the behavior and response of various structural elements under various loading conditions		
CET 201		CO III	Apply the principles of solid mechanics to calculate internal stresses/strains, stress resultants and strain energies in structural elements subjected to axial/transverse loadsand bending/twisting moments.		
		COIV	Choose appropriate principles or formula to find the elastic constants of materials making use of the information available.		
		CO V	Perform stress transformations, identify principal planes/ stresses and maximum shear stress at a point in a structural member		
line		CO VI	Analyse the given structural member to calculate the safe load or proportion the cross section to carry the load safely.		
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		CO I	Recall the relevant principles of hydrostatics and hydraulics of pipes and open channels
		CO II	Identify or describe the type, characteristics or properties of fluid flow
CET 203	FLUID MECHANICS AND HYDRAULICS	CO III	Estimate the fluid pressure, perform the stability check of bodies under hydrostatic condition
		CO IV	Compute discharge through pipes or estimate the forces on pipe bends by applying hydraulic principles of continuity, energy and/or momentum
		co v	Analyze or compute the flow through open channels, perform the design of prismatic channels
		CO I	Apply surveying techniques and principles of leveling for the preparation of contour maps, computation of area-volume and sketching mass diagram
		CO II	Apply the principles of surveying for triangulation
CETaor	SURVEYING AND GEOMATIICS	CO III	Apply different methods of traverse surveying and traverse balancing
CE1205		CO IV	Identify the possible errors in surveying and apply the corrections in field measurements
		co v	Apply the basic knowledge of setting out of different types of curves
		CO VI	Employ surveying techniques using advanced surveying equipments
		CO I	Understand the core values that shape the ethical behaviour of a professional.
	PROFESSIONAL ETHICS	COII	Adopt a good character and follow an ethical life.
HUT 200		CO III	Explain the role and responsibility in technological development by keeping personal ethics and legal ethics.
		CO IV	Solve moral and ethical problems through exploration and assessment by established experiments.
		cov	Apply the knowledge of human values and social values to contemporary ethical values and global issues.
Ken		CO I	Understand the relevance and the concept of sustainability and the global initiatives in this direction

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		CO II	Explain the different types of environmental pollution problems and their sustainable solutions
MCN 201	SUSTAINABLE ENGINEERING	CO III	Discuss the environmental regulations and standards
		CO IV	Outline the concepts related to conventional and non-conventional energy
		CO V	Demonstrate the broad perspective of sustainable practices by utilizing engineering knowledge and principles
		COI	Use conventional surveying tools such as chain/tape and compass for plotting and area determination.
		CO II	Apply levelling principles in field
CEL203	SURVEY LAB	COIII	Solve triangulation problems using theodolite
		CO IV	Employ total station for field surveying
		CO V	Demonstrate the use of distomat and handheld GPS
		CO I	Illustrate ability to organise civil engineering drawings systematically and professionally
CEL201	CIVIL ENGINEERING	COII	Prepare building drawings as per the specified guidelines.
	DRAFTING LAB	CO III	Assess a complete building drawing to include all necessary information
		CO IV	Create a digital formof the building plan using any drafting software

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DEPARTMENT OF CIVIL ENGINEERING

SUBJECT CODE	SUBJECT NAME	СО			
			SEMESTER IV		
		COI	Understand the concept, properties and important models of discrete random variables and,using them, analyse suitable random phenomena.		
	PARTIAL	CO II	Understand the concept, properties and important models of continuous random variables and,using them, analyse suitable random phenomena		
MAT 202	DIFFERENTIAL EQUATIONS AND COMPLEX ANALYSIS	CO III	Perform statistical inferences concerning characteristics of a population based on attributes of samples drawn from the population		
		CO IV	Compute roots of equations, evaluate definite integrals and perform interpolation on given numerical data using standard numerical techniques		
		cov	Apply standard numerical techniques for solving systems of equations, fitting curves on given numerical data and solving ordinary differential equations.		
	ENGINEERING GEOLOGY	CO I	Recall the fundamental concepts of surface processes, subsurface process, minerals, rocks, groundwater and geological factors in civil engineering constructions.		
		CO II	Identify and describe the surface processes, subsurface process, earth materials,groundwater and geological factors in civil engineering constructions.		
CET 202		CO III	Apply the basic concepts of surface and subsurface processes, minerals, rocks, groundwater and geological characteristics in civil engineering constructions.		
		CO IV	Analyze and classify geological processes, earth materials and groundwater.		
		co v	Evaluation of geological factors in civil engineering constructions.		
New		CO I	Explain the fundamental concepts of basic and engineering properties of soil		
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CET204	GEOTECHNICAL ENGINEERING I	CO II	Describe the laboratory testing methods for determining soil parameters
		CO III	Solve the basic properties of soil by applying functional relationships
		CO IV	Calculate the engineering properties of soil by applying the laboratory test results and the fundamental concepts of soil mechanics
		cov	Analyze the soil properties to identify and classify the soil
		CO I	Apply the basic principles of Highway planning and design highway geometric elements
		CO II	Apply standard code specifications in judging the quality of highway materials; designing of flexible pavements
CET 206	TRANSPORTATION ENGINEERING	CO III	Explain phenomena in road traffic by collection, analysis and interpretation of traffic data through surveys; creative design of traffic control facilities
		CO IV	Understand about railway systems, tunnel, harbour and docks
		co v	Express basics of airport engineering and design airport elements
	DESIGN & ENGINEERING	COI	Explain the different concepts and principles involved in design engineering.
EST 200		COII	Apply design thinking while learning and practicing engineering.
		CO III	Develop innovative, reliable, sustainable and economically viable designs incorporating knowledge in engineering.
	CONSTITUTION OF INDIA	CO I	Understand the core values that shapes the ethical behaviour of a professional.
		CO II	Adopt a good character and follow an ethical life.
MCN 202		CO III	Explain the role and responsibility in technological development by keeping personal ethics legal ethics
		CO IV	Solve moral and ethical problems through exploration and assessment by established experiments.
1 .		cov	Apply the knowledge of human values and social values to contemporary ethical values and global issues.
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CEL202		CO I	The understand the behaviour of engineering materials under various forms and stages of loading.
	MATERIAL TESTING LAB - I	CO II	Characterize the elastic properties of various materials.
		CO III	Evaluate the strength and stiffness properties of engineering materials under various loading conditions.
CEL 204	FLUID MECHANICS LAB	CO I	Apply fundamental knowledge of Fluid Mechanics to corresponding experiments
		CO II	Apply theoretical concepts in Fluid Mechanics to respective experiments
		CO III	Analyse experimental data and interpret the results
		CO IV	Document the experimentation in prescribed manner
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DEPARTMENT OF CIVIL ENGINEERING

SUBJECT CODE	SUBJECT NAME		СО	
			SEMESTER V	
		CO I	Apply the principles of solid mechanics to analyse trusses	
		CO II	Apply energy principles to analyse statically determinate structures.	
CET 201	STRUCTURAL	COIII	Identify the problems with static indeterminacy and understand the basic concepts of tackling such problems by means of the method of consistent deformations.	
011 301	ANALYSIS - I	SIS - I CO IV Apply suitable methods of analysis for various types of structures including cables, suspension bridges and arches.	Apply suitable methods of analysis for various types of structures including cables, suspension bridges and arches.	
		co v	Analyse the effects of moving loads on structures using influence lines.	
		CO VI	Apply specific methods such as slope deflection and moment distribution methods of structural analysis for typical structures with different characteristics.	
		CO I	Recall the fundamental concepts of limit state design and code provisions for design of concrete members under bending	
		CO II	Recall the fundamental concepts of limit state design and code provisions for design of concrete members under bending	
CET 303	Design of Concrete Structures	COIII	Design and detail slab and stairs using IS code provisions	
		CO IV	Design and detail columns using IS code and SP 16 design charts.	
1 .		cov	earthquake resistant design of structures and ductile detailing of concrete structures subjected to seismic forces	
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			CO I	Analyze shallow and deep foundations, Calculate earth pressure
			CO II	Calculate bearing capacity
	CET305	GEOTECHNICAL ENGINEERING II	COIII	Calculate foundation settlement pile capacity, Explain the basic concepts,theories and methods of analysis in foundation Engineering
			CO IV	Calculate pile capacity
			CO V	Solve the field problems related to geotechnical engineering Understand soil exploration methods
² x			COI	Describe and estimate the different components of hydrologic cycle by processing hydrometeorological data
	CET 007	HYDROLOGY & WATER	CO II	Determine the crop water requirements for the design of irrigation canals by recollecting the principles of irrigation engineering
	CE1 307	ENGINEERING	COIII	Perform the estimation of streamflow and/or describe the river behavior and control structures
			CO IV	Describe and apply the principles of reservoir engineering to estimate the capacity of reservoirs and their useful life
			COI	Describe the properties of materials used in construction
			CO II	Explain the properties of concrete and its determination
	CFT 200	CONSTRUCTION TECHNOLOGY AND	CO III	Describe the various elements of building construction
	011 309	MANAGEMENT	CO IV	Explain the technologies for construction
			co v	Describe the procedure for planning and executing public works
			CO VI	Apply scheduling techniques in project planning and control
12	,		COI	each of these terms in relation to the disaster management cycle (Cognitive knowledge level: Understand).
	Kun	-	CO II	Distinguish between different hazard types and vulnerability types and do vulnerability assessment (Cognitive knowledge level: Understand).
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		COIII	Identify the components and describe the process of risk assessment, and apply appropriate methodologies to assess risk (Cognitive knowledge level: Understand).
MCN301	DISASTER MANAGEMENT	CO IV	Explain the core elements and phases of Disaster Risk Management and develop possible measures to reduce disaster risks across sector and community (Cognitive knowledge level: Apply)
		CO V	Identify factors that determine the nature of disaster response and discuss the various disaster response actions (Cognitive knowledge level: Understand).
		CO VI	Explain the various legislations and best practices for disaster management and risk reduction at national and international level (Cognitive knowledge level: Understand).
		COI	To describe the basic properties of various construction materials
CEL331	CEL331 MATERIAL TESTING LAB – II	CO II	Characterize the physical and mechanical properties of various construction materials.
		CO III	Interpret the quality of various construction materials as per IS Codal provisions.
		CO I	Identify and classify soil based on standard geotechnical experimental methods.
		CO II	Perform and analyze permeability tests
	GEOTECHNICAL	CO III	Interpret engineering behavior of soils based on test results.
CEL 333	ENGINEERING LAB	CO IV	Perform laboratory compaction, CBR and in-place density test for fill quality control in the field.
		cov	Evaluate the strength of soil by performing various tests viz. direct shear test, unconfined compressive strength test and triaxial shear test.
		CO VI	Evaluate settlement characteristics of soils.

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			Encloate the causes of failure, principles of design of different components of hydraune structu
	DESIGN OF	COII	Describe the features of canal structures and perform the design of alluvial canals
CET 306	HYDRAULIC STRUCTURES	CO III	Perform the hydraulic design of minor irrigation structures such as cross drainage works, canal t cross regulator.
		CO IV	Prepare the scaled drawings of different minor irrigation structures
		cov	Describe the design principles and features of dams and perform the stability analysis of gravity
		COI	Learn to prepare for a competitive examination
CET308	COMPREHENSIVE	CO II	Comprehend the questions in Civil Engineering field and answer them with confidence
011300	COURSE WORK	COIII	Communicate effectively with faculty in scholarly environments
		CO IV	Analyze the comprehensive knowledge gained in basic courses in the field of Civil Engineering
	INDUSTRIAL ECONOMI	COI	Explain the problem of scarcity of resources and consumer behaviour, and to evaluate the impact government policies on the general economic welfare. (Cognitive knowledge level: Understand)
		CO II	Take appropriate decisions regarding volume of output and to evaluate the social cost of product (Cognitive knowledge level: Apply)
HUT 300		CO III	Determine the functional requirement of a firm under various competitive conditions. (Cognitive knowledge level: Analyse)
		CO IV	Examine the overall performance of the economy, and the regulation of economic fluctuations a impact on various sections in the society. (Cognitive knowledge level: Analyse)
		CO V	Determine the impact of changes in global economic policies on the business opportunities of a f (Cognitive knowledge level: Analyse)
un		COI	To recall the properties and testing procedure of concrete materials as per IS code
LEENA A. PRINCIPAI PRINCURUCO	V. DILLEGE OF		Marth

		CO II	To describe the procedure of determining the properties of fresh and hardened concrete
CET 352	ADVANCED CONCRETE TECHNOLOGY	CO III	To design concrete mix using IS Code Methods.
		CO IV	To explain nondestructive testing of concrete
		cov	To describe the various special types of concretes
		COI	Analyse the suitability of soil as a pavement subgrade material
		CO II	Assess the suitability of aggregates as a pavement construction material
CEL 332	L 332 TRANSPORTATION ENGINEERING LAB	CO III	Characterize bitumen based on its properties so as to recommend it as a pavement construction material.
		CO IV	Design bituminous mixes for pavement layers
		cov	Assess functional adequacy of pavements based on roughness of pavement surface.
		COI	To undertake analysis and design of multi-storeyed framed structure, schedule a given set of project activities using a software.
CEL334	CIVIL ENGINEERING SOFTWARE LAB	COII	To prepare design details of different structural components, implementation plan for a project.
		COIII	To prepare a technical document on engineering activities like surveying , structural design and project planning.

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DEPARTMENT OF CIVIL ENGINEERING

SUBJECT CODE	SUBJECT NAME		CO
			SEMESTER VII
		COI	Explain the behaviour and properties of structural steel members to resist various structural forces and actions and apply the relevant codes of practice for the design of connections.
	DEGICIN OF OWER	CO II	Design and learn behaviour of tension members as per the relevant codes of practice
CET401	STRUCTURES	COIII	Explain the theoretical and design aspects of compression members
		CO IV	Design beams and apply a diverse knowledge of Design of Steel engineering practices applied to rea life problems.
		cov	Demonstrate experience in the implementation of design of structures on engineering concepts which are applied in field Structural Engineering
CEI 411	ENVIRONMENTAL	COI	Analyse various physico-chemical and biological parameters of water
CEL4II	ENGINEERING LAB	CO II	Compare the quality of water with drinking water standards and recommend its suitability for drinking purposes
		COI	Identify academic documents from the literature which are related to her/his areas of interest
		CO II	Read and apprehend an academic document from the literature which is related to her/ his areas of interest
CEQ413	SEMINAR	COIII	Prepare a presentation about an academic document
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		COV	Prepare a technical report
		COI	
		001	Model and solve real world problems by applying knowledge across domains
		CO II	Develop products, processes or technologies for sustainable and socially relevant applications
CED 415		COIII	Function effectively as an individual and as a leader in diverse teams and to comprehend and execute designated tasks
CED 415	I KOJECI I IIADE I	CO IV	Plan and execute tasks utilizing available resources within timelines, following ethical and professional norms
		CO V	Identify technology/research gaps and propose innovative/creative solutions
5		CO VI	Organize and communicate technical and scientific findings effectively in written and oral form
	CONSTRUCTION PLANNING & MANAGEMENT	COI	Apply knowledge of Planning and Management for planning and execution of Construction Pr
		CO II	Explain techniques for Project Planning, Scheduling, Construction Administration and Management
CET453		COIII	Identify the criteria for selecting the appropriate method and tools as per the requirement of e project or site.
		CO IV	Discuss the latest industry standards and technologies used in construction projects for plann and management.
		co v	Explain the financial and legal aspects involved in a construction project.
		COI	Describe the theories of accident causation and preventive measures of industrial accidents
		CO II	Explain about personal protective equipment, its selection, safety performance & indicators an importance of housekeeping
MCN 401	INDUSTRIAL SAFETY ENGINERING	COIII	Explain different issues in construction industries.
,		CO IV	Describe various hazards associated with different machines and mechanical material handling
Lun	-	cov	Utilise different hazard identification tools in different industries with the knowledge of different types of chemical hazards.

		COI	Describe the mobile computing applications, services, design considerations and architectures
		COII	Identify the technology trends for cellular wireless networks
CST 415	INTRODUCTION TO MOBILE COMPUTING	COIII	Summarize the Short Messaging Service and General Packet Radio Service
		CO IV	Outline the LAN technologies used in mobile communication
		co v	Describe the security protocols and apply suitable security algorithm to secure the communication
			Explain the fundamental concepts of next generation mobile networks(

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Sree Narayana Guru College of Engineering & Technology



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DEPARTMENT OF (IVIL ENGINEERING

SUBJECT CODE	SUBJECT NAME	со	COURSE OUTCOMES
			SEMESTER VIII
		COI	Define basic terms related to estimation, quantity surveying and contract document
		CO II	Interpret the item of work from drawings and explain its general specification and unit of measurement.
CET402	QUANTITY SURVEYING & VALUATION	COIII	Make use of given data from CPWD DAR/DSR for calculating the unit rate of different items of work associated with building construction
	VALUATION	CO IV	Develop detailed measurement (including BBS) and BoQ of a various work like buildings, earthwork for road, sanitary and water supply work
		CO V	Explain various basic terms related to valuation of land and building
		CO VI	Develop valuation of buildings using different methods of valuation.
	REPAIR AND REHABILITATION OF BUILDINGS	COI	Recall the basics ideas and theories associated with Concrete technology and Masonry structures
		CO II	Understand the need and methodology of repair and rehabilitation of structures, the various mechanisms used, and tools for diagnosis of structures
CET456		COIII	Identifying the criterions for repairing / maintenance and the types and properties of repair materials used in site. Learn various techniques for repairing dam- aged and corroded structures
		CO IV	Proposing wholesum solutions for maintenance/rehabilitation and applying methodologies for repair- ing structures or demolishing structures.
		CO V	Analyse and asses the damage to structures using various tests
1		COI	Outline the geo-environmental considerations of waste containment
Dr. LEENA PRINCIP	A.V.		Marth

	GEOENVIRONMENTA L ENGINEERING	Explain the contaminant transport mechanism, Choose the suitable system for CO II waste containment and its various components
CET424		COIII Choose the suitable system for landfill and its various components
		CO IV Outline various waste collection system
		CO V Plan suitable remediation method for contaminated site
		Explain the basic principles of planning and design for site selection, Airport components bas on air traffic characteristics
		Explain the basic design principles of Runway orientation, basic runway length and correction required, Geometric design of runways, Design of taxiways and aprons, Terminal area planning
CET 438	AIRPORT, SEAPORT AND HARBOUR ENGINEERING	Explain various aspects such as Airport markings, Lighting of runway approaches, taxiways a aprons, Air traffic control methods.
		Explain the basic principles ,site selection characteristics ,lay out ,break waters, quays, piers, wharves, jetties, transit sheds and warehouses - navigational aids - light houses, signals - type Moorings
		Explain the basics of Docks – Functions and types - dry docks, wet docks arrangement of bas and docks
	PROJECT PHASE II	CO I Model and solve real world problems by applying knowledge across domains
		CO II Develop products, processes or technologies for sustainable and socially relevant applications
CED 416		Function effectively as an individual and as a leader in diverse teams and to comprehend and cOIII execute designated tasks
CED 410		Plan and execute tasks utilizing available resources within timelines, following ethical and professional norms
		CO V Identify technology/research gaps and propose innovative/creative solutions
1		CO VI Organize and communicate technical and scientific findings effectively in written and oral for

HOD