

ACADEMIC YEAR 2021-2022

DEPARTMENT OF CIVIL ENGINEERING

S3 CE (2020-2024 Batch)

Sl no	Course code	Subject name	Staff handled
1	MAT201	PARTIAL DIFFERENTIAL EQUATION AND COMPLEX ANALYSIS	Ambilimol V P
2	CET201	MECHANICS OF SOLIDS	Reshma S
3	CET203	FLUID MECHANICS AND HYDRAULICS	Ajay V
4	CET205	SURVEYING & GEOMATICS	Adarsh R Nair
5	MCN201	SUSTAINABLE ENGINEERING	Kevin Sebastian
6	HUT200	PROFESSIONAL ETHICS	Lekshmi M G
7	CEL201	CIVIL ENGINEERING PLANNING & DRAFTING LAB	Kevin Sebastian
8	CEL203	SURVEY LAB	Lekshmi M G

S5 CE (2019-2023 Batch)

Sl no	Course code	Subject name	Staff handled
1	CET301	STRUCTURAL ANALYSIS – I	Gayathri Thampi
2	CET303	DESIGN OF CONCRETE STRUCTURES	Suji P
3	CET305	GEOTECHNICAL ENGINEERING – II	Kevin Sebastian
4	CET307	HYDROLOGY & WATER RESOURCES ENGINEERING	Athira Raj
5	CET309	CONSTRUCTION TECHNOLOGY & MANAGEMENT	Adarsh R Nair
6	MCN301	DISASTER MANAGEMENT	NEERAJA CHANDRASEKHAR
7	CEL331	MATERIAL TESTING LAB – II	Adarsh R Nair
8	CEL333	GEOTECHNICAL ENGINEERING LAB	Athira Raj

S7CE (2018-2022 Batch 2015 scheme)

Sl no	Course code	Subject name	Staff handled
1	CE401	DESIGN OF STEEL STRUCTURES	ATHIRA RAJ
2	CE403	STRUCTURAL ANALYSIS III	SUJI P
3	CE405	ENVIRONMENTAL ENGINEERING I	LEKSHMI M G
4	CE407	TRANSPORTATION ENGINEERING 2	NEERAJA CHANDRASEKHAR
5	CE409	QUANTITY SURVEYING & VALUATION	AJAY V
6	CE431	ENVIRONMENTAL ENGINEERING LAB	NEERAJACHANDRASEKHAR
7	CE469	ENVIRONMENTAL IMPACT ASSESSMENT	GAYATHRI THAMPI
8	CE451	SEMINAR & PROJECT PRELIMINARY	GAYATHRI THAMPI

EVEN SEMESTER**S4 CE (2020-2024 Batch)**

Sl no	Course code	Subject name	Staff Handled
1	MAT204	PROBABILITY, RANDOM PROCESS AND NUMERICAL METHODS	AMPADY V K
2	CET202	ENGINEERING GEOLOGY	KEVIN SEBASTIAN
3	CET204	GEOTECHNICAL ENGINEERING - I	ATHIRA RAJ
4	CET206	TRANSPORTATION ENGINEERING	NEERAJA CHANDRASEKHAR
5	EST200	DESIGN & ENGINEERING	AJAY V
6	MCN202	CONSTITUTION OF INDIA	LEKSHMI M G
7	CEL202	MATERIAL TESTING LAB - I	LEKSHMI M G
8	CEL204	FLUID MECHANICS LAB	YADHUKRISHNAN

S6 CE (2019-2023 Batch)

Sl no	Course code	Subject name	Staff handled
1	CET302	STRUCTURAL ANALYSIS – II	Suji P
2	CET304	ENVIRONMENTAL ENGINEERING	Adarsh R Nair
3	CET306	DESIGN OF HYDRAULIC STRUCTURES	Gayathri Thampi
4	CET362	ENVIRONMENTAL IMPACT ASSESSMENT	Athira Raj
5	HUT300	INDUSTRIAL ECONOMICS & FOREIGN TRADE	Geetha Vimal
6	CET308	COMPREHENSIVE COURSE WORK	Athira Raj
7	CEL332	TRANSPORTATION ENGINEERING LAB	Athira Raj
8	CEL334	CIVIL ENGINEERING SOFTWARE LAB	Kevin Sebastian

S8 CE (2018-2022 Batch 2015 scheme)

Sl no	Course code	Subject name	Staff handled
1	CE402	ENVIRONMENTAL ENGINEERING II	ADARSH R NAIR
2	CE404	CIVIL ENGINEERING PROJECT MANAGEMENT	AJAY V
3	CE474	MUNICIPAL SOLID WASTE MANAGEMENT	GAYATHRI THAMPI
4	BT362	SUSTAINABLE ENERGY PROCESS	SUJI P
5	CE492	PROJECT	AJAY V

S3 CE (2020-2024 Batch)

Sl no	Course code	Subject name	Staff handled
1	MAT201	Partial Differential Equation And Complex Analysis	Ambilimol V P
2	CET201	MECHANICS OF SOLIDS	Reshma S
3	CET203	Fluid Mechanics and Hydraulics	Ajay V
4	CET205	SURVEYING & GEOMATICS	Adarsh R Nair
5	MCN201	SUSTAINABLE ENGINEERING	Kevin Sebastian
6	HUT200	Professional Ethics	Lekshmi M G
7	CEL201	CIVIL ENGINEERING PLANNING & DRAFTING LAB	Kevin Sebastian
8	CEL203	SURVEY LAB	Lekshmi M G

**COURSE OUTCOME FOR
MAT201: Partial Differential Equation And Complex Analysis**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Understand the concept and the solution of partial differential equation.
2	Analyse and solve one dimensional wave equation and heat equation
3	Understand complex functions, its continuity differentiability with the use of CauchyRiemann equations.
4	Evaluate complex integrals using Cauchy's integral theorem and Cauchy's integral formula, understand the series expansion of analytic function
5	Understand the series expansion of complex function about a singularity and Apply residue theorem to compute several kinds of real integrals.

**COURSE OUTCOME FOR
CET201:MECHANICS OF SOLIDS**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Recall the fundamental terms and theorems associated with mechanics of linear elastic deformable bodies.
2	Explain the behavior and response of various structural elements under various loading conditions.
3	Apply the principles of solid mechanics to calculate internal stresses/strains, stress resultants and strain energies in structural elements subjected to axial/transverse loads and bending/twisting moments.
4	Choose appropriate principles or formula to find the elastic constants of materials making use of the information available.
5	Perform stress transformations, identify principal planes stresses and maximum shear stress at a point in a structural member
6	Analyse the given structural member to calculate the safe load or proportion the cross section to carry the load safely.

**COURSE OUTCOME FOR
CET203:FluidMechanics and Hydraulics**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Recall the relevant principles of hydrostatics and hydraulics of pipes and open channels
2	Identify or describe the type, characteristics or properties of fluid flow
3	Estimate the fluid pressure, perform the stability check of bodies under hydrostatic condition
4	Compute discharge through pipes or estimate the forces on pipe bends by applying hydraulic principles of continuity, energy and/or momentum
5	Analyze or compute the flow through open channels, perform the design of prismatic channels

COURSE OUTCOME FOR

CET205:SURVEYING & GEOMATICS

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Apply surveying techniques and principles of leveling for the preparation of contour maps, computation of area-volume and sketching mass diagram
2	Apply the principles of surveying for triangulation
3	Apply different methods of traverse surveying and traverse balancing
4	Identify the possible errors in surveying and apply the corrections in field measurements
5	Apply the basic knowledge of setting out of different types of curves
6	Employ surveying techniques using advanced surveying equipments

COURSE OUTCOME FOR

MCN201:SUSTAINABLE ENGINEERING

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Understand the relevance and the concept of sustainability and the global initiatives in this direction
2	Explain the different types of environmental pollution problems and their sustainable solutions
3	Discuss the environmental regulations and standards
4	Outline the concepts related to conventional and non-conventional energy
5	Demonstrate the broad perspective of sustainable practices by utilizing engineering knowledge and principles

COURSE OUTCOME FOR

HUT200:PROFESSIONAL ETHICS

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Understand the core values that shape the ethical behaviour of a professional.
2	Adopt a good character and follow an ethical life.
3	Explain the role and responsibility in technological development by keeping personal ethics and legal ethics.
4	Solve moral and ethical problems through exploration and assessment by established experiments.
5	Apply the knowledge of human values and social values to contemporary ethical values and global issues

**COURSE OUTCOME FOR
CEL201:CIVIL ENGINEERING PLANNING &DRAFTING LAB**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Illustrate ability to organise civil engineering drawings systematically and professionally
2	Prepare building drawings as per the specified guidelines.
3	Assess a complete building drawing to include all necessary information
4	Create a digital formof the building plan using any drafting software

**COURSE OUTCOME FOR
CEL203:SURVEY LAB**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Use conventional surveying tools such as chain/tape and compass for plotting and area determination.
2	Apply levelling principles in field
3	Solve triangulation problems using theodolite
4	Employ total station for field surveying
5	Demonstrate the use of distomat and handheld GPS

S5 CE (2019-2023 Batch)

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1	CET301	STRUCTURAL ANALYSIS – I	Gayathri Thampi
2	CET303	DESIGN OF CONCRETE STRUCTURES	Suji P
3	CET305	GEOTECHNICAL ENGINEERING – II	Kevin Sebastian
4	CET307	HYDROLOGY & WATER RESOURCES ENGINEERING	Athira Raj
5	CET309	CONSTRUCTION TECHNOLOGY & MANAGEMENT	Adarsh R Nair
6	MCN301	DISASTER MANAGEMENT	NEERAJA CHANDRASEKHAR
7	CEL331	MATERIAL TESTING LAB – II	Adarsh R Nair
8	CEL333	GEOTECHNICAL ENGINEERING LAB	Athira Raj

**COURSE OUTCOME FOR
CET301:STRUCTURAL ANALYSIS – I**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Apply the principles of solid mechanics to analyse trusses. Applying
2	Apply various methods to determine deflections in statically determinate structures.
3	Identify the problems with static indeterminacy and tackling such problems by means of the method of consistent deformations and energy principles
4	Apply specific methods such as slope deflection and moment distribution methods of structural analysis for typical structures with different characteristics
5	Apply suitable methods of analysis for various types of structures including cables, suspension bridges and arches.
6	Analyse the effects of moving loads on structures using influence lines.

**COURSE OUTCOME FOR
CET303:DESIGN OF CONCRETE STRUCTURES**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Recall the fundamental concepts of limit state design and code provisions for design of concrete members under bending, shear, compression and torsion.
2	Analyse reinforced concrete sections to determine the ultimate capacity in bending, shear and compression.
3	Design and detail beams, slab, stairs and footings using IS code provisions
4	Design and detail columns using IS code and SP 16 design charts
5	Explain the criteria for earthquake resistant design of structures and ductile detailing of concrete structures subjected to seismic forces

**COURSE OUTCOME FOR
CET305:GEOTECHNICAL ENGINEERING II**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Understand soil exploration methods
2	Explain the basic concepts, theories and methods of analysis in foundation engineering
3	Calculate bearing capacity, pile capacity, foundation settlement and earth pressure
4	Analyze shallow and deep foundations
5	Solve the field problems related to geotechnical engineering

**COURSE OUTCOME FOR
CET307:HYDROLOGY & WATER RESOURCES ENGINEERING**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Describe and estimate the different components of hydrologic cycle by processing hydrometeorological data
2	Determine the crop water requirements for the design of irrigation canals by recollecting the principles of irrigation engineering
3	Perform the estimation of streamflow and/or describe the river behaviour and control structures
4	Describe and apply the principles of reservoir engineering to estimate the capacity of reservoirs and their useful life
5	Demonstrate the principles of groundwater engineering and apply them for computing the yield of aquifers and wells

**COURSE OUTCOME FOR
CET309:CONSTRUCTION TECHNOLOGY& MANAGEMENT**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Describe the properties of materials used in construction Understand
2	Explain the properties of concrete and its determination Understand
3	Describe the various elements of building construction Understand
4	Explain the technologies for construction Understand
5	Describe the procedure for planning and executing public works Understand
6	Apply scheduling techniques in project planning and control

COURSE OUTCOMES FOR:

MCN301 DISASTERMANAGEMENT

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Define and use various terminologies in use in disaster management parlance and organise each of these terms in relation to the disaster management cycle.
2	Distinguish between different hazard types and vulnerability types and do vulnerability assessment.
3	Identify the components and describe the process of risk assessment, and apply appropriate methodologies to assess risk.
4	Explain the core elements and phases of Disaster Risk Management and develop possible measures to reduce disaster risks across sector and community.
5	Identify factors that determine the nature of disaster response and discuss the various disaster response actions.
6	Explain the various legislations and best practices for disaster management and risk reduction at national and international level.

**COURSE OUTCOME FOR
CEL331:MATERIAL TESTING LAB II**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	To describe the basic properties of various construction materials
2	Characterize the physical and mechanical properties of various construction materials
3	Interpret the quality of various construction materials as per IS Codal provisions

**COURSE OUTCOME FOR
CEL333:GEOTECHNICAL ENGINEERING LAB**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Identify and classify soil based on standard geotechnical experimental methods.
2	Perform and analyse permeability tests
3	Interpret engineering behaviour of soils based on test results
4	Perform laboratory compaction, CBR and in-place density test for fill quality control in the field.
5	Evaluate the strength of soil by performing various tests viz. direct shear test, unconfined compressive strength test and triaxial shear test
6	Evaluate settlement characteristics of soils.

S7 CE (2018-2022 Batch 2015 scheme)

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4	CE407	TRANSPORTATION ENGINEERING 2	NEERAJA CHANDRASEKHAR
5	CE409	QUANTITY SURVEYING & VALUATION	AJAY V
6	CE431	ENVIRONMENTAL ENGINEERING LAB	NEERAJA CHANDRASEKHAR
7	CE469	ENVIRONMENTAL IMPACT ASSESSMENT	GAYATHRI THAMPI
8	CE451	SEMINAR & PROJECT PRELIMINARY	GAYATHRI THAMPI

**COURSE OUTCOME FOR
CE401:DESIGN OF STEEL STRUCTURES**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	design bolted and welded connections
2	design tension members and beams using the IS specifications
3	design columns under axial loads using IS specifications
4	design beams and plate girders
5	assess loads on truss and design purlins
6	design structural components using timber

**COURSE OUTCOME FOR
CE403:STRUCTURAL ANALYSIS III**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	analyse structures using approximate method
2	analyse trusses, continuous beams and rigid frames using flexibility method
3	analyse trusses, continuous beams and rigid frames by stiffness method
4	conceive Finite element procedures by direct stiffness method
5	use the basics of structural dynamics and analyse the response of SDOF systems

**COURSE OUTCOME FOR
CE405:ENVIRONMENTAL ENGINEERING I**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	become aware of the various pollutants affecting water quality
2	know about the different treatment units available in a water treatment plant and their design procedures

**COURSE OUTCOME FOR
CE407:TRANSPORTATION ENGINEERING**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	This course will enable students to gain knowledge in railway and water transportation.

**COURSE OUTCOME FOR
CE409:QUANTITY SURVEYING & VALUATION**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	work out the quantities of materials and labour required for different types of civil works
2	prepare schedule of rates for various items of work

**COURSE OUTCOME FOR
CE469:ENVIRONMENTAL IMPACT ASSESSMENT**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	The students will gain basic knowledge of various pollution sources and their impacts

**COURSE OUTCOME FOR
CE431:ENVIRONMENTAL ENGINEERING LAB**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	The students will be able to assess quality of water for various purposes

**COURSE OUTCOME FOR
CE 451:SEMINAR & PROJECT PRELIMINARY**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	To analyse a current topic of professional interest and present it before an audience
2	Identify an engineering problem, analyse it and propose a work plan to solve it.

EVEN SEMESTER**S4 CE (2020-2024 Batch)**

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2	CET202	ENGINEERING GEOLOGY	KEVIN SEBASTIAN
3	CET204	GEOTECHNICAL ENGINEERING - I	ATHIRA RAJ
4	CET206	TRANSPORTATION ENGINEERING	NEERAJA CHANDRASEKHAR
5	EST200	DESIGN & ENGINEERING	AJAY V
6	MCN202	CONSTITUTION OF INDIA	LEKSHMI M G
7	CEL202	MATERIAL TESTING LAB - I	LEKSHMI M G
8	CEL204	FLUID MECHANICS LAB	YADHUKRISHNAN

COURSE OUTCOMES FOR:

MAT 204 PROBABILITY, RANDOM PROCESSES AND NUMERICAL METHODS

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Understand the concept, properties and important models of discrete random variables and, using them, analyse suitable random phenomena.
2	Understand the concept, properties and important models of continuous random variables and, using them, analyse suitable random phenomena.
3	Analyse random processes using autocorrelation, power spectrum and Poisson process model as appropriate.
4	Compute roots of equations, evaluate definite integrals and perform interpolation on given numerical data using standard numerical techniques
5	Apply standard numerical techniques for solving systems of equations, fitting curves on given numerical data and solving ordinary differential equations.

COURSE OUTCOME FOR

CET202:ENGINEERING GEOLOGY

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Recall the fundamental concepts of surface processes, subsurface process, minerals, rocks, groundwater and geological factors in civil engineering constructions.
2	Identify and describe the surface processes, subsurface process, earth materials, groundwater and geological factors in civil engineering constructions.
3	Apply the basic concepts of surface and subsurface processes, minerals, rocks, groundwater and geological characteristics in civil engineering constructions
4	Analyse and classify geological processes, earth materials and groundwater
5	Evaluation of geological factors in civil engineering constructions

**COURSE OUTCOME FOR
CET204:GEOTECHNICAL ENGINEERING - I**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Explain the fundamental concepts of basic and engineering properties of soil
2	Describe the laboratory testing methods for determining soil parameters
3	Solve the basic properties of soil by applying functional relationships
4	Calculate the engineering properties of soil by applying the laboratory test results and the fundamental concepts of soil mechanics
5	Analyse the soil properties to identify and classify the soil

**COURSE OUTCOME FOR
CET 206:TRANSPORTATION ENGINEERING**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Apply the basic principles of Highway planning and design highway geometric elements
2	Apply standard code specifications in judging the quality of highway materials; designing of flexible pavements
3	Explain phenomena in road traffic by collection, analysis and interpretation of traffic data through surveys; creative design of traffic control facilities
4	Understand about railway systems, tunnel, harbour and docks
5	Express basics of airport engineering and design airport elements

**COURSE OUTCOMES FOR:
EST 200 DESIGN AND ENGINEERING**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Explain the different concepts and principles involved in design engineering.
2	Apply design thinking while learning and practicing engineering.
3	Develop innovative, reliable, sustainable and economically viable designs incorporating knowledge in engineering.

COURSE OUTCOMES FOR:

MCN202CONSTITUTION OF INDIA

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Explain the background of the present constitution of India and features.
2	Utilize the fundamental rights and duties.
3	Understand the working of the union executive, parliament and judiciary.
4	Understand the working of the state executive, legislature and judiciary.
5	Utilize the special provisions and statutory institutions.
6	Show national and patriotic spirit as responsible citizens of the country.

COURSE OUTCOMES FOR:

CEL 202:MATERIAL TESTING LAB - I

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	The understand the behaviour of engineering materials under various forms and stages of loading.
2	Characterize the elastic properties of various materials.
3	Evaluate the strength and stiffness properties of engineering materials under various loading conditions

**COURSE OUTCOMES FOR:
CEL 204:FLUID MECHANICS LAB**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Apply fundamental knowledge of Fluid Mechanics to corresponding experiments
2	Apply theoretical concepts in Fluid Mechanics to respective experiments
3	Analyse experimental data and interpret the results
4	Document the experimentation in prescribed manner

S6 CE (2019-2023 Batch)

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3	CET306	DESIGN OF HYDRAULIC STRUCTURES	Gayathri Thampi
4	CET362	ENVIRONMENTAL IMPACT ASSESSMENT	Athira Raj
5	HUT300	INDUSTRIAL ECONOMICS & FOREIGN TRADE	Geetha Vimal
6	CET308	COMPREHENSIVE COURSE WORK	Athira Raj
7	CEL332	TRANSPORTATION ENGINEERING LAB	Athira Raj
8	CEL334	CIVIL ENGINEERING SOFTWARE LAB	Kevin Sebastian

**COURSE OUTCOME FOR
CET302:STRUCTURAL ANALYSIS – II**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Understand the principles of plastic theory and its applications in structural analysis.
2	Examine the type of structure and decide on the method of analysis.
3	Apply approximate methods of analysis for framed structures to ascertain stress resultants approximately but quickly.
4	Apply the force method to analyse framed structures.
5	Apply the displacement methods to analyse framed structures.
6	Remember basic dynamics, understand the basic principles of structural dynamics and apply the same to simple structures.

**COURSE OUTCOME FOR
CET304:ENVIRONMENTAL ENGINEERING**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	To appreciate the role of environmental engineering in improving the quality of environment
2	To plan for collection and conveyance of water and waste water
3	To enhance natural water purification processes in an engineered environment
4	To decide on appropriate technology for water and waste water treatment

**COURSE OUTCOME FOR
CET306:DESIGN OF HYDRAULIC STRUCTURES**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Elucidate the causes of failure, principles of design of different components of hydraulic structures
2	Describe the features of canal structures and perform the design of alluvial canals
3	Perform the hydraulic design of minor irrigation structures such as cross drainage works, canal falls, cross regulator
4	Prepare the scaled drawings of different minor irrigation structures
5	Describe the design principles and features of dams and perform the stability analysis of gravity dams

**COURSE OUTCOME FOR
CET362:ENVIRONMENTAL IMPACT ASSESSMENT**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	To appreciate the need for minimizing the environmental impacts of developmental activities Understanding
2	To understand environmental legislation & clearance procedure in the country
3	To apply various methodologies for assessing the environmental impacts of any developmental activity
4	To prepare an environmental impact assessment report
5	To conduct an environmental audit

**COURSE OUTCOME FOR
CET308:COMPREHENSIVE COURSE WORK**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Learn to prepare for a competitive examination
2	Comprehend the questions in Civil Engineering field and answer them with confidence
3	Communicate effectively with faculty in scholarly environments
4	Analyse the comprehensive knowledge gained in basic courses in the field of Civil Engineering

COURSE OUTCOMES FOR:

HUT300 INDUSTRIAL ECONOMICS & FOREIGN TRADE

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Explain the problem of scarcity of resources and consumer behaviour, and to evaluate the impact of government policies on the general economic welfare.
2	Take appropriate decisions regarding volume of output and to evaluate the social cost of production.
3	Determine the functional requirement of a firm under various competitive conditions.
4	Examine the overall performance of the economy, and the regulation of economic fluctuations and its impact on various sections in the society.
5	Determine the impact of changes in global economic policies on the business opportunities of a firm.

**COURSE OUTCOME FOR
CEL332:TRANSPORTATION ENGINEERING LAB**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Analyse the suitability of soil as a pavement subgrade material
2	Assess the suitability of aggregates as a pavement construction material
3	Characterize bitumen based on its properties so as to recommend it as a pavement construction material.
4	Design bituminous mixes for pavement layers
5	Assess functional adequacy of pavements based on roughness of pavement surface.

**COURSE OUTCOME FOR
CEL334:CIVIL ENGINEERING SOFTWARE LAB**

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	To undertake analysis and design of multi-storeyed framed structure, schedule a given set of project activities using a software.
2	To prepare design details of different structural components, implementation plan for a project
3	To prepare a technical document on engineering activities like surveying , structural design and project planning.

S8 CE (2018-2022 Batch 2015 scheme)

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3	CE474	MUNICIPAL SOLID WASTE MANAGEMENT	GAYATHRI THAMPI
4	BT362	SUSTAINABLE ENERGY PROCESS	SUJI P
5	CE492	PROJECT	AJAY V

COURSE OUTCOMES FOR:

CE 402:ENVIRONMENTAL ENGINEERING II

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	have an understanding of the various types of treatment methods for wastewater
2	know the design aspects of various treatment units in a wastewater treatment plant.

COURSE OUTCOMES FOR:

CE 404:CIVIL ENGINEERING PROJECT MANAGEMENT

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Plan and schedule a construction project.
2	Select an appropriate construction equipment for a specific job
3	Familiarise the legal procedures in construction contracts
4	Formulate suitable quality management plan for construction
5	Familiarise the safety practices and procedures.
6	Apply principles of ethics in decision making

COURSE OUTCOMES FOR:

CE 474: MUNICIPAL SOLID WASTE MANAGEMENT

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Students will have an awareness of the ill effects of increasing solid wastes
2	Students will be able to understand the various methods available for managing solid wastes generated

COURSE OUTCOMES FOR:

BT362: SUSTAINABLE ENERGY PROCESS

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Identify global and Indian energy sources.
2	Explain capture, conversion and application of solar and wind energy
3	Explain conversion of biomass to energy.
4	Explain the capture of energy from oceans.
5	Explain fuel cells and energy storage routes.

COURSE OUTCOMES FOR:

CE 492: PROJECT

Sl. No.	Subject Learning Outcomes or Course Outcomes
	On completion of course the students will be able to:
1	Think innovatively on the development of components, products, processes or technologies in the engineering field
2	Apply knowledge gained in solving real life engineering problems