



MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section 2(f) & 12(B) of the UGC act, 1956

DEPARTMENT OF CIVIL ENGINEERING COURSE OUTCOMES R20 - REGULATIONS I YEAR I SEM

Course Title	COURSE CODE	COURSE OUTCOME
Engineering Mathematics - I 2010001	CE111.1	Write the matrix representation of a set of linear equations and to analyse the solution of the system of equations
	CE111.2	Find the Eigen values, Eigen vectors and reduce the quadratic form to canonical form using orthogonal transformations.
	CE111.3	Solve the applications on the mean value theorems.
	CE111.4	Find the extreme values of functions of two variables with/ without constraints.
	CE111.5	Evaluate the multiple integrals and apply the concept to find areas, volumes for cubes, sphere and rectangular parallelepiped
Engineering Physics 2010007	CE112.1	The knowledge of Physics relevant to engineering is critical for converting ideas into technology.
	CE112.2	An understanding of Physics also helps engineers understand the working and limitations of existing devices and techniques, which eventually leads to new innovations and improvements.
	CE112.3	In the present course, the students can gain knowledge on the mechanism of physical bodies upon the action of forces on them, the generation and transmission of the waves.
	CE112.4	Optical Phenomena like Interference, diffraction, the principles of lasers and Fibre Optics.
	CE112.5	Various chapters establish a strong foundation on the different kinds of characters of several materials and pave a way for them to use in at various technical and engineering applications.

Programming for Problem Solving 2010501	CE113.1	To write algorithms and to draw flowcharts for solving problems.
	CE113.2	convert the algorithms/flowcharts to C programs
	CE113.3	code and test a given logic in C programming language.
	CE113.4	decompose a problem into functions and to develop modular reusable code.
	CE113.5	use arrays, pointers, strings and structures to write C programs.
Engineering Physics Lab 2010072	CE114.1	Evaluate the wavelength of white source
	CE114.2	Perform the curvature of plano convex lens on Newton's ring
	CE114.3	Evaluate the resonance and Q factor using LCR circuit
	CE114.4	Understand the characteristics of LED and Laser diode
	CE114.5	Evaluate the rigidity modulus using torsion pendulum
	CE114.6	Perform the diffraction grating using laser
Programming for Problem Solving Lab 2010571	CE115.1	Formulate the algorithms for simple problems
	CE115.2	Able to develop programs based on condition checking
	CE115.3	Implement pyramid programs
	CE115.4	Able to perform matrix applications

	CE115.5	Modularize the code with functions so that they can be reused
	CE115.6	Create, read and write to and from simple text and binary files
Engineering Drawing Practice 2010371	CE116.1	Familiarize with BIS standards and conventions used in engineering graphics.
	CE116.2	Draw various engineering curves e.g., ellipse, parabola, cycloids and involutes etc and construct various reduced scales e.g., plain and diagonal scale.
	CE116.3	Develop the lateral surfaces of simple solids
	CE116.4	Ability to draw orthographic projections and isometric projections of given engineering components.
	CE116.5	Visualize different views like elevation and plan for a given line, plane figures or solid objects.
	CE116.6	Apply drafting techniques and use 2D software e.g., AutoCAD to sketch 2D plane figures.



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DEPARTMENT OF CIVIL ENGINEERING COURSE OUTCOMES R20 - REGULATIONS I YEAR II SEM

Course Title	COURSE CODE	COURSE OUTCOME
Engineering Mathematics - II 2010001	CE111.1	Solve first order differential equation and apply the concept of differential equation to real world problems
	CE111.2	Solve higher differential equation and apply the concept of differential equation to real world problems
	CE111.3	Evaluate the multiple integrals and apply the concept to find areas, volumes, centre of mass and Gravity for cubes, sphere and rectangular parallelopiped
	CE111.4	The basic properties of vector valued functions and their applications to line, surface and volume integrals
	CE111.5	Evaluate the line, surface and volume integrals and converting them from one to another
Engineering Chemistry 2010007	CE112.1	The knowledge of atomic, molecular and electronic changes, band theory related to conductivity.
	CE112.2	Analyze problems associated with hard water - scale and sludge.
	CE112.3	Understand the concepts of electro chemistry, corrosion and

	CE112.4	The knowledge of configurational and conformational analysis of molecules and reaction mechanisms.
	CE112.5	The required skills to get clear concepts on basic spectroscopy and application to medical and other fields.
Engineering Mechanics 2010501	CE113.1	Determine the resultant of coplanar concurrent and special force systems and analyse the bodies for equilibrium to find the unknown forces.
	CE113.2	Analyze the bodies on rough horizontal and inclined planes and connected Bodies
	CE113.3	Determine the centroid of composite areas, centre of gravity of composite bodies
	CE113.4	Determine the moment of inertia of simple areas and mass moment of inertia of simple bodies.
	CE113.5	Apply work-energy principle to solve the rigid body problems
	CE113.6	Appraise the influences of a human factor considerations on engineering design
Communicative English 2010072	CE114.1	Use English Language effectively in spoken and written forms
	CE114.2	Perform the comprehend for the given texts and respond appropriately.
	CE114.3	Perform the communication confidently in formal contexts.
	CE114.4	Perform the appropriate respond to the given comprehend
	CE114.5	Improve the language proficiency
	CE114.6	Ability to guess meanings of words from the context and grasp

Engineering Workshop 2010571	CE115.1	design and model different prototypes in the carpentry trade such as Cross lap joint, Dove tail joint.
	CE115.2	Demonstrate the design and model various basic prototypes in the trade of fitting such as Straight fit, V- fit.
	CE115.3	Understand to make various basic prototypes in the trade of Tin smithy such as rectangular tray, and open Cylinder.
	CE115.4	Demonstrate the design and model various basic prototypes in the trade of Welding.
	CE115.5	Explain to make various basic prototypes in the trade of Black smithy such as J shape, and S shape.
	CE115.6	Understand to perform various basic House Wiring techniques such as connecting one lamp with one switch, connecting two lamps with one switch, connecting a fluorescent tube, Series wiring, Go down wiring
Engineering Chemistry Lab 2010371	CE116.1	Understand the concepts to perform volumetric and instrument method of analysis
	CE116.2	Perform the volumetric analysis for finding ferrous ion and hardness
	CE116.3	Analyse the percentage of purity MnO ₂ , chloride ion in bleaching powder
	CE116.4	Evaluate the ferrous ion and Hcl using various method of instrumental method of analysis
	CE116.5	Analyse the viscosity of an oil by viscometer
	CE116.6	Perform the bakelite and urea formaldehyde resin



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DEPARTMENT OF CIVIL ENGINEERING COURSE OUTCOMES R20 - REGULATIONS II YEAR I SEM

Course Title	COURSE CODE	COURSE OUTCOME
Strength of Materials - I 2030112	CE211.1	Evaluate the strength and deformation of members subjected to axial load.
	CE211.2	Draw the shear force and bending moment diagrams for determinate beams.
	CE211.3	Analyze different flexural and shear stresses in various beam sections
	CE211.4	Assess the slope and deflection of beams by various methods
	CE211.5	Understand and evaluate the stresses on oblique plane and various theories of failures.
Surveying and Geomatics 2030113	CE212.1	Apply the knowledge to calculate angles, distances and levels
	CE212.2	Identify data collection methods and prepare field notes for levels, Interpret survey data and compute areas and volumes
	CE212.3	Understand working principles of survey instruments and apply the knowledge of trigonometric leveling
	CE212.4	Understand and apply the corrective measures on measurement errors and Apply the knowledge on curve alignment by different methods

	CE212.5	Understand & apply the principles and concepts of modern equipment and its methodologies
Probability And Statistics 2030004	CE213.1	Formulate and solve problems involving random variables and apply statistical methods for analysing experimental data
	CE213.2	Apply discrete and continuous probability distributions
	CE213.3	Classify the concepts of data science and its importance.
	CE213.4	Infer the statistical inferential methods based on small and large sampling tests.
	CE213.5	Interpret the association of characteristics through correlation and regression tools.
	Basic Electrical And Electronics Engineering 2030202	CE214.1
CE214.2		understand and analyze basic Electric and Magnetic circuits
CE214.3		understand the working principles of Electrical Machines
CE214.4		understand The components of Low Voltage Electrical Installations
CE214.5		Identify And Characterize Diodes And Various Types Of transistors.
Data Structures 2030502	CE215.1	Understanding the working of different operating systems like DOS, Windows, Linux
	CE215.2	Write, Compile and Debug programs in C language.
	CE215.3	Design programs connecting decision structures, loops.

	CE215.4	Exercise user defined functions to solve real time problems.
	CE215.5	Inscribe C programs using Pointers to access arrays, strings, functions, structures and files
Surveying Laboratory 2030171	CE216.1	Measure the distance, area of the field using the instruments chain, compass, plane table and plot the same.
	CE216.2	concepts of leveling, and perform & plot the cross & longitudinal sectioning.
	CE216.3	Measurement of angles using theodolite, and calculate the distance and elevation of the given point using trigonometric
	CE216.4	Understand the concepts of EDM, and calculate the distance, area of the field
	CE216.5	Perform the traverse and plot the contour map for the obtained data.
	CE216.6	Locate the position of points using stake out method, perform the curve using modern equipment.
Basic Electrical And Electronics Engineering Laboratory 2030272	CE217.1	analyze and solve electrical circuits using network laws and theorems.
	CE217.2	understand and analyze basic Electric and Magnetic circuits
	CE217.3	study the working principles of Electrical Machines
	CE217.4	study the working principles of Electrical Machines
	CE217.5	introduce components of Low Voltage Electrical Installations
	CE217.6	identify and characterize diodes and various types of transistors.

DATA STRUCTURES LABORATORY 2030572	CE218.1	Understand the basic terminologies used and principles of programming in DATA STRUCTURES
	CE218.2	Understand the concepts of Arrays and Strings. Design, develop modular programming skills such as function
	CE218.3	Understand the basic concepts of data structures, pointers, create/update basic data files. Effective utilization of memory using dynamic memory allocations and pointer technology.
	CE218.4	Apply the programming components that effectively solve computing problems in real world
GENDER SENSITIZATION 2030022	CE219.1	Develop students sensibility with regard to issues of gender in contemporary India
	CE219.2	Provide a critical perspective on the socialization of men and women
	CE219.3	Introduce students to information about some key biological aspects of genders
	CE219.4	Expose the students to debates on the politics and economics of work
	CE219.5	Help students reflect critically on gender violence
	CE219.6	Expose students to more egalitarian interactions between men and women



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Course Title	COURSE CODE	COURSE OUTCOME
STRENGTH OF MATERIALS - II 2040114	CE221.1	Apply the torsion theory for analysis of circular shafts and springs
	CE221.2	Analyze columns and struts
	CE221.3	Understand the concept of direct and bending stresses and Analyze the structures under the conditions of sliding, overturning
	CE221.4	Analyze the stress in Thin and thick cylinders.
	CE221.5	Understand the concept of stresses & shear center for symmetrical and unsymmetrical Sections
BUILDING MATERIALS, CONSTRUCTION AND PLANNING 2030113	CE222.1	General knowledge on stones, bricks and its production and masonry. And other type of modern material for construction
	CE222.2	Understand the process involved in the manufacturing of cement, their test, grades of concrete, tests on concrete, NDT, different admixtures used for concrete
	CE222.3	Identify the different building components, their materials and services
	CE222.4	To know the types of form work and where to be utilised, preparation of mortars for finishing work.

	CE222.5	Able to know the bye laws to construct a building
FLUID MECHANICS 2040116	CE223.1	Understand the basic terms used in fluid mechanics and principles of fluid statics.
	CE223.2	Understand the broad principles of fluid kinematics and dynamics
	CE223.3	Apply the bernoulis principle in flow through pipes
	CE223.4	Estimate loss of head through pipes
	CE223.5	Apply the momentum and energy principles in Boundary layer concepts
STRUCTURAL ANALYSIS - I 2040117	CE224.1	Understand determinate and indeterminate structure
	CE224.2	Analyse the statically indeterminate beams and frames and Evaluate bending moment of three hinged arch.
	CE224.3	Analyse the beams and frames using slope and deflection, moment distribution and theorem of three moments method
	CE224.4	Analyse the pin jointed plane frames
	CE224.5	Evaluate the structure under moving loads and draw the SFD
ENGINEERING GEOLOGY 2040118	CE225.1	Understand the role of Geological concepts in Civil Engineering.
	CE225.2	Evaluate different types of minerals and rock compositions.
	CE225.3	Understand different geological structures and its suitability for groundwater and building construction
	CE225.4	Evaluate subsurface information through geophysical investigations

	CE225.5	Apply geological principles in selecting sites for tunnels, dams and reservoirs
PHYTHON 2040172	CE226.1	Understand Python syntax and semantics and be fluent in the use of Python flow control and functions.
	CE226.2	understand Lists, Dictionaries and Regular expressions in Python.
	CE226.3	Demonstrate proficiency in handling Strings and File Systems.
	CE226.4	Understand exceptions, Multi thread programming in Python.
	CE226.5	Apply theGUI of phyton programming to develop applications
STRENGTH OF MATERIALS LABORATORY 2040172	CE227.1	Evaluate properties of steel, Brick and concrete
	CE227.2	Evaluate deflection, bending strength and young's modulus of cantilever and simply supported beam
	CE227.3	analyze the modulus of rigidity of materials
	CE227.4	Determine hardness value of material
	CE227.5	analyse the impact and shear strength of material
	CE227.6	Evaluate the stiffness and modulus of elasticity of material
CIVIL ENGINEERING DRAWING LABORATORY	CE228.1	Understand CAD software and basic functions
	CE228.2	Evaluate plans of Single storied building & multi-storeyed buildings

	CE228.3	Develop different sections at different elevations
	CE228.4	Detailing of building components like doors, windows roof trusses
	CE228.5	Develop section and elevation for single and multi-storeyed buildings using CAD software.
	CE228.6	Understand development concepts in detailing
PYTHON LABORATORY 2040575	CE229.1	Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.
	CE229.2	Express proficiency in the handling of strings and functions
	CE229.3	Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets.
	CE229.4	Identify the commonly used operations involving file systems and regular expressions
	CE229.5	Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python



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Course Title	COURSE CODE	COURSE OUTCOME
HYDRAULICS AND HYDRAULIC MACHINERY 2050119	CE311.1	Understand the fundamental principles of water conveyance in open channels.
	CE311.2	Analyse the problems in uniform, gradually and rapidly varied flows in open channel in steady state conditions.
	CE311.3	Apply dimensional analysis and differentiate the model, prototype and similitude conditions for practical problems.
	CE311.4	Understand classification of turbine and assess the efficiency of different turbines
	CE311.5	Understand classification of pumps and identify its efficiency
STRUCTURAL ANALYSIS - II 2050120	CE312.1	understand the concepts and principles of analysis, calculate and draw the variation of shear force and bending moment of the structure
	CE312.2	Analyse the different types of indeterminate arches.
	CE312.3	Understand the concepts of Muller Breslau principle and draw the influence lines for statically indeterminate beams.
	CE312.4	apply the knowledge of stiffness method on different types of beams and frames

	CE312.5	Understand the concept of Plastic analysis and the method of analyzing beams and rigid frames
STRUCTURAL ENGINEERING – I (RCC) 2050121	CE313.1	Understand the fundamentals of reinforced concrete structural properties and behaviors.
	CE313.2	Analyse and Design RCC beams for different loading conditions.
	CE313.4	Analyse and Design one way and two-way slabs with different end conditions for different loading conditions
	CE313.5	Apply RCC concepts to analyse and design foundations
CONCRETE TECHNOLOGY 2050141	CE314.1	Understand the properties of concrete ingredients i.e. cement, sand, coarse aggregate by conducting different tests.
	CE314.2	Recognize the effects of the rheology and early age properties of concrete on its long-term behavior.
	CE314.3	Apply the use of various chemical admixtures and mineral additives to design cement-based materials with tailor-made properties
	CE314.4	Apply advanced laboratory techniques to characterize cement-based materials.
	CE314.5	Perform mix design and engineering properties of special concretes such as high-performance concrete, self-compacting concrete, and fibre reinforced concrete.
BUSINESS ECONOMICS AND FINANCIAL ANALYSIS 2050010	CE315.1	Recognize financial statements, their importance and usages.
	CE315.2	Analyse the elasticity and Demand
	CE315.3	Analyse demand, supply, production, cost, market structure, pricing aspects are learnt.
	CE315.4	Make optimal engineering investment decisions.

	CE315.5	Understand major principles of financial accounting, cost accounting and financial management.
FLUID MECHANICS AND HYDRAULIC MACHINERY LABORATORY 2050174	CE316.1	Understand calibration of flow measuring devices.
	CE316.2	Apply the practical aspects of Bernoulli's principle
	CE316.3	Evaluate the losses in pipe flows.
	CE316.4	analyse the Manning's and Chezy's constants for Open channel flow
	CE316.5	Analyse the characteristics of turbine
	CE316.6	Analyse the characteristics of pumps
CONCRETE TECHNOLOGY LABORATORY 2050175	CE317.1	Evaluate the strength of cement
	CE317.2	Analyze the characteristics of aggregates
	CE317.3	Perform the tests on fresh concrete
	CE317.4	Evaluate the strength of the hardened concrete
	CE317.5	Evaluate the strength of structure
ENGINEERING GEOLOGY LABORATORY 2050176	CE318.1	Apply different methods to identify important minerals
	CE318.2	Evaluate the megascopic properties of rocks & minerals
	CE318.3	Evaluate the microscopic properties of rocks & minerals

	CE318.4	Analyze different structural geology models
	CE318.5	Evaluate a geological map to identify the strata nature
INTRODUCTION TO ARTIFICIAL INTELLIGENCE 2050177	CE319.1	Understand artificial intelligence concepts/algorithm in construction
	CE319.2	Apply various Algorithms involved in artificial intelligence for Civil applications
	CE319.3	Apply of algorithms in design of structural elements



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DEPARTMENT OF CIVIL ENGINEERING COURSE OUTCOMES R20 - REGULATIONS III YEAR II SEM

Course Title	COURSE CODE	COURSE OUTCOME
HYDROLOGY & WATER RESOURCES ENGINEERING 2060122	CE321.1	Understand various components of hydrologic cycle
	CE321.2	Evaluate various runoff measurements technique
	CE321.3	Apply the concepts of movement of groundwater beneath the earth
	CE321.4	Apply the knowledge of various irrigation techniques
	CE321.5	Use components of designing unlined and lined irrigation canals
TRANSPORTATION ENGINEERING 2060123	CE322.1	Understand highway planning, development and geometric design
	CE322.2	Determine the traffic volume and design of traffic signals
	CE322.3	Design intersections and prepare traffic management plans
	CE322.4	characterization of Highway material and maintenance

	CE322..5	develop Intelligent Transport System Planning and
STRUCTURAL ENGINEERING – II (STEEL) 2060124	CE323.1	Design bolted and welded connections
	CE323.2	design laterally supported and unsupported beams
	CE323.3	Design tension and compression member.
	CE323.4	Design lacings and battens
	CE323.5	Design roof trusses and purlin
GEOTECHNICAL ENGINEERING 2060125	CE324.1	Classify the soil and assess the engineering properties, based on index properties
	CE324.2	Understand the stress concepts in soils
	CE324.3	Analyze stress distribution, consolidation in soil and identify the settlement in soils
	CE324.4	Determine the shear strength of soil
	CE324.5	Design of both finite and infinite slopes.
PRESTRESSED CONCRETE 2060148	CE325.1	Understand principles of prestressing
	CE325.2	Understand the method and system of prestressing and evaluate losses of prestressing
	CE325.3	Analysis of section for flexure and shear

	CE325.4	Understand the Transfer of Prestress in Pretensioned Members
	CE325.5	Analysis of composite beam and deflection
AIR AND NOISE POLLUTION CONTROL 2060101	CE326.1	Understand the nature and characteristics of air pollutants, noise pollution and basic concepts of air quality management
	CE326.2	identify meteorological aspects of air pollution dispersion
	CE326.3	evaluate the ambient air quality samples with standards
	CE216.4	understand the reasons and process for gaseous contaminants
	CE326.5	understand the reasons and process for noise pollution
GEOTECHNICAL ENGINEERING LABORATORY 2060178	CE327.1	Evaluate the behavior of the soils subjected to various loads
	CE327.2	Analyse the atterberg limits
	CE327.3	Analyse specific gravity of soil
	CE217.4	Evaluate permeability of soil
	CE327.5	Analyse coefficient of consolidation
	CE327.6	Apply direct and vane shear test

<p style="text-align: center;">TRANSPOTATION ENGINEERING LABORATORY 2060179</p>	CE328.1	Analyse crushing, abrasion and impact value of Highway materials
	CE328.2	Analyse specific gravity and water absorption of Highway materials
	CE328.3	Analyse Flakiness and elongation Indices of coarse Aggregates
	CE328.4	Assess the ductility value of bitumen and identify Softening Point value of bitumen
	CE328.5	Assess Traffic Volume and parking studies
<p style="text-align: center;">ADVANCED ENGLISH LANGUAGE COMMUNICATION SKILLS LABORATORY 2060075</p>	CE329.1	Self-instructional, learnerfriendly modes of language learning
	CE329.2	Learn better pronunciation through stress on word accent, intonation, and rhythm.
	CE329.3	Train them to use language effectively to face interviews, group discussions, public speaking.
	CE3294	Initiate them into greater use of the computer in resume preparation, report writing, formatmaking etc
	CE329.5	Team building and Leadership qualities through their communicative competence



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COURSE OUTCOMES
R20 - REGULATIONS
IV YEAR I SEM

Course Title	COURSE CODE	COURSE OUTCOME
ENVIRONMENTAL ENGINEERING 2070126	CE411.1	Assess the demand and supply of water
	CE411.2	Understand layout and application of water treatment units.
	CE411.3	Estimate quantities of water and waste water and plan conveyance components
	CE411.4	Estimate quantities of water and waste water and plan conveyance components
	CE411.5	Understand with issues of air pollution and control
ESTIMATION, QUANTITY SURVEYING AND VALUATION 2070127	CE412.1	Understand different types of Estimation and principles of working out quantities of works.
	CE412.2	Analyse and estimation of building and bar-bending schedule
	CE412.3	Analyse and estimation of Roads and Canals.
	CE412.4	Analysis of rate for different item of works in buildings

	CE412..5	Understand contracts and valuation of various construction works
FUNDAMENTALS OF MANAGEMENT 2070011	CE413.1	Assess the Managerial Roles, Levels of Management and the various approaches of Management
	CE413.2	Understand the various Types of Plan, Programmed and Non Programmed Decisions and Decision Making Process
	CE413.3	Interpret the various types of Organization Structures and Organizational Culture
	CE413.4	Understand the Talent Management Models, Recruitment, Selection, Training and Development in Human Resource Management
	CE413.5	Understand Budgetary and Non Budgetary Controls and its Characteristics.
DESIGN OF HYDRAULIC STRUCTURES 2070153	CE415.1	Understand different types of dams design taking into account the suitability of the site and the different type loads that are likely to be encountered.
	CE415.2	illustrate the major forces acting on gravity dams and Analyse the stability concrete gravity dams at reservoir empty and full conditions
	CE415.3	Analyse the stability of earth dams through flow net and know about measures for slopes protection
	CE415.4	Design and analyse the various types spillways and diversion head works followed by IS recommendations.
	CE415.5	Design the cross drainage works used in irrigation channels which include canal falls, regulator works, and canaloutlets.
ENVIRONMENTAL ENGINEERING LABORATORY 2070181	CE416.1	Understand about the equipment used to conduct the test procedures
	CE416.2	Analyse the physical parameters of water for drinking
	CE416.3	Analyse the major elements of water for drinking

	CE416.4	Analyse the minor elements of water for drinking
	CE416.5	Analyse the waste water for different purposes of recycle
COMPUTER AIDED DESIGN LABORATORY 2070182	CE417.1	Analysis & Design of determinate structures using a software
	CE417.2	Analysis & Design of continuous beams and frames
	CE417.3	Analysis & Design of residential building
	CE417.4	Analysis & Design of Roof Trusses
	CE417.5	Design and detailing of RCC and steel elements
Industry Oriented Mini Project /Summer Internship * 2070191	CE418.1	Understand real world problem
	CE418.2	Develop a design solution for a set of requirements
	CE418.3	Enhance effective communication and interpersonal skills
	CE418.4	Build multidisciplinary and leadership approach towards all life tasks
	CE418.5	Hone analytical and logical skills for problem-solving
	CE418.6	Report and present the findings of the study /research work
Project Stage - I 2070192	CE419.1	Undertake problem identification, formulation and solution.
	CE419.2	Design engineering solutions to complex problems utilising a systems approach.

	CE419.3	Design engineering solutions to complex problems utilising a systems approach.
	CE419.4	Integrate information from multiple sources.
	CE419.5	Communicate with engineers and the community at large in written and oral forms.
	CE419.6	Demonstrate the knowledge, skills and attitudes of a professional engineer.



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DEPARTMENT OF CIVIL ENGINEERING **COURSE OUTCOMES** **R20 - REGULATIONS** **IV YEAR II SEM**

Course Title	COURSE CODE	COURSE OUTCOME
CONSTRUCTION PROJECT MANAGEMENT 2080157	CE421.1	Apply the project management techniques in solving the constructional problems efficiently.
	CE421.2	Apply Different PMT to be applied in respective areas
	CE421.3	Understand principles of cost control and bill of quantities
	CE421.4	Understand the concept of network techniques
	CE421.5	understand about Department works, contract system
FOUNDATION ENGINEERING 2080161	CE422.1	Understand the principles and methods of Geotechnical Exploration
	CE422.2	Stability analysis by various methods
	CE422.3	Analyse the lateral earth pressures and design retaining walls
	CE422.4	Analyse and design of shallow foundations
	CE422.5	Analyse and design of deep foundations

Technical Seminar 2080193	CE424.1	Establish motivation for any topic of interest and develop a thought process for technical presentation.
	CE424.2	Organize a detailed literature survey and build a document with respect to technical publications
	CE424.3	Analysis and comprehension of proof-of-concept and related data.
	CE424.4	Effective presentation and improve soft skills.
	CE424.5	Make use of new and recent technology for creating technical reports
Project Stage - II 2080194	CE425.1	Undertake problem identification, formulation and solution.
	CE425.2	Design engineering solutions to complex problems utilising a systems approach.
	CE425.3	Design engineering solutions to complex problems utilising a systems approach.
	CE425.4	Integrate information from multiple sources.
	CE425.5	Communicate with engineers and the community at large in written and oral forms.