



Academic Year 2020-21 [odd semester]

COURSE OUTCOMES OF ALL THE COURSES OFFERED IN CIVIL ENGINEERING I SEMESTER

Course Code	Course Name	L	T	P	C
CIV 101	ELEMENTS OF CIVIL ENGINEERING	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: 1) Recognize the significance of various disciplines in civil engineering. 2) Define the fundamental concepts of engineering mechanics. 3) Summarize the process of resultant calculation in coplanar non-concurrent force systems. 4) Explain the fundamentals of equilibrium in coplanar force systems.					

Course Code	Course Name	L	T	P	C
CIV 102	Environmental Science and Disaster Management	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: 1) Recognize various types of natural resources and their problems during harnessing and utilization. 2) Identify various kinds of ecosystems and biodiversity conservation with examples 3) Discuss about environmental problems, their impacts and mitigative measures. 4) Identify the government acts in protecting different environmental components by anthropogenic interferences.					

COURSE OUTCOMES OF ALL THE COURSES OFFERED IN CIVIL ENGINEERING III SEMESTER

Course Code	Course Name	L	T	P	C
CIV 201	STRENGTH OF MATERIALS	3	1	0	4
Course Outcomes: On successful completion of the course the students shall be able to: 1) Explain the stress-strain behavior of various materials subjected to different loading conditions. 2) Estimate the C.G. coordinates and moment of inertia for two dimensional geometrical sections. 3) Sketch the shear force diagram, bending moment diagram and bending stress diagram for statically determinate beams. 4) Estimate the crippling load for long column and torsional strength for circular shafts.					

Course Code	Course Name	L	T	P	C
CIV 202	SURVEYING	3	1	0	4
Course Outcomes: On successful completion of the course the students shall be able to: 1) Apply the knowledge of fundamental principles of surveying to establish points by predetermined angular and linear measurements. 2) Compute distance, bearing, elevation, direction and area using concepts of surveying by direct or indirect method. 3) Compute area and volume by coordinate method in land surveying.					

Course Code	Course Name	L	T	P	C
CIV 203	Engineering Geology	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: <ol style="list-style-type: none"> 1) Interpret geological activities which shall be based on the past, present and predicted area of the earth under preview. 2) Distinguish between minerals & rocks and their applications in civil engineering programs. 3) Describe the basics of hydrogeological components and rock deformations. 4) Determine fundamental concept of Remote Sensing, Geographic Information System & Global Positioning System 					

Course Code	Course Name	L	T	P	C
CIV 208	FLUID MECHANICS	3	1	0	4
Course Outcomes: On successful completion of the course the students shall be able to: <ol style="list-style-type: none"> 1) Describe the properties of fluid and measurement of fluid pressure. 2) Compute forces on immersed plane and curved plates. 3) Apply continuity equation and energy equation in solving problems on flow through conduits. 4) Compute the Minor and major losses through pipes. 					

Course Code	Course Name	L	T	P	C
CIV 219	Building Materials and Concrete Technology	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: <ol style="list-style-type: none"> 1) Define the various constituents of concrete. 2) Recognize the different types of admixtures for concrete. 3) Describe the properties of fresh concrete and hardened concrete. 4) Compute mix proportions for concrete mixes. 5) Identify the various components in a structure. 					

Course Code	Course Name	L	T	P	C
CIV 263	BASIC MATERIALS TESTING LAB	0	0	2	1
Course Outcomes: On successful completion of the course the students shall be able to: <ol style="list-style-type: none"> 1) Compute the basic physical properties of aggregates required for mix design of concrete 2) Interpret the strength and quality of building materials subjected to various loading conditions 					

Course Code	Course Name	L	T	P	C
CIV 252	Surveying Practice	0	0	2	1
Course Outcomes: On successful completion of the course the students shall be able to: <ol style="list-style-type: none"> 1. Apply the basic principles of engineering surveying for carrying out linear and angular measurements using conventional and advanced instruments. 2. Compute Distance, Elevation and Area using basic Surveying instruments by direct and indirect method. 					

COURSE OUTCOMES OF ALL THE COURSES OFFERED IN CIVIL ENGINEERING V SEMESTER

Course Code	Course Name	L	T	P	C
CIV 209	STRUCTURAL ANALYSIS – II	3	1	0	4
<p>Course Outcomes: On successful completion of the course the students shall be able to:</p> <ol style="list-style-type: none"> 1) Compute the slope, deflection, bending moment and shear force for a statically indeterminate structure for various loading combinations by slope deflection method. 2) Sketch the bending moment diagram and shear force diagram for a statically indeterminate structure for various loading combinations by moment distribution method. 3) Sketch the bending moment and shear force for a statically indeterminate structure for various loading combinations using Kani's method. 4) Sketch the bending moment diagram and shear force diagram in a statically indeterminate structure using flexibility and stiffness matrix analysis. 					

Course Code	Course Name	L	T	P	C
CIV 211	Design of RC Structural Elements	3	1	0	4
<p>Course Outcomes: On successful completion of the course the students shall be able to:</p> <ol style="list-style-type: none"> 1. Explain the design philosophy of reinforced concrete structures. 2. Apply the principles, procedures and current code requirements to the analysis and design of reinforced concrete elements. 3. Solve engineering problems of reinforced concrete elements subjected to flexure, torsion and shear. 4. Design Slabs, beams, columns and footings. 					

Course Code	Course Name	L	T	P	C
CIV 214	Foundation Engineering	3	0	0	3
<p>Course Outcomes: On successful completion of the course the students shall be able to:</p> <ol style="list-style-type: none"> 1) Compute the factor of safety for slope stability. 2) Estimate the stress distribution in soils. 3) Choose the suitable retaining wall based on lateral earth pressure and stability. 4) Predict the load carrying capacity of shallow foundation and pile foundation. 5) Interpret the soil investigation report. 					

Course Code	Course Name	L	T	P	C
CIV 301	PAVEMENT DESIGN	3	0	0	3
<p>Course Outcomes: On successful completion of the course the students shall be able to:</p> <ol style="list-style-type: none"> 1) Describe the structural and functional aspects of various types of pavements. 2) Estimate the critical design traffic for pavement design. 3) Apply concepts of flexible pavement design in practical scenario. 4) Compute stresses in concrete pavements for various load combinations 					

Course Code	Course Name	L	T	P	C
CIV 303	Environmental Pollution and Control	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: <ol style="list-style-type: none"> 1) Outline the various environmental laws and regulations in India. 2) Explain the atmosphere and Lithosphere Pollution and its Control strategies. 3) Interpret the impact of Noise Pollution on human beings 4) Identify water borne and vector borne diseases and their modes of transmission and control measures 					

Course Code	Course Name	L	T	P	C
CIV 315	Advanced Concrete Technology	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: <ol style="list-style-type: none"> 1. Explain the influence of the concrete components and admixtures on the properties of concrete. 2. Describe the properties and durability of hardened concrete. 3. State the correct concreting methods in the field depending upon the site conditions. 4. Identify the suitable concrete for different structures considering the on-site/client's requirements. 					

Course Code	Course Name	L	T	P	C
CIV 308	GROUNDWATER HYDROLOGY	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: <ol style="list-style-type: none"> 1) Explain distribution and occurrence of groundwater and impact of fluctuations in the water table. 2) Estimate hydraulic conductivity, specific yield and other aquifer properties 3) Identify practical problems of well design and pumping test. 					

Course Code	Course Name	L	T	P	C
CIV 313	ADVANCED SURVEYING	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: <ol style="list-style-type: none"> 1) Apply the knowledge of geodetic surveying and theory of errors to accurately determine distances and angles. 2) Illustrate the principle and applications of field astronomy. 3) Demonstrate the use of modern surveying instruments, aerial photogrammetry and remote sensing for capturing the geodetic data accurately. 					

Course Code	Course Name	L	T	P	C
CIV 302	GROUND IMPROVEMENT TECHNIQUES	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: <ol style="list-style-type: none"> 1) Analyze the field problems related to problematic soils and solve the problems using the ground Improvement technique. 2) Demonstrate various techniques of ground modifications. 3) Apply Geo-synthetics for various geotechnical problems. 					

Course Code	Course Name	L	T	P	C
CIV 258	COMPUTER AIDED BUILDING DRAWING	0	0	2	1
Course Outcomes: On successful completion of the course the students shall be able to: 1) Produce plan, section and elevation drawings for buildings using AutoCAD tools. 2) Sketch structural detailing for basic Structural Components. 3) Prepare layout drawing of utilities like water supply, sanitary and electrical connections.					

Course Code	Course Name	L	T	P	C
CIV 260	GEOTECHNICAL ENGINEERING LABORATORY	0	0	2	1
Course Outcomes: On successful completion of the course the students shall be able to: 1. Outline the physical and index properties of the soil. 2. Determine shear strength parameters by direct shear test, unconfined compression test and triaxial shear test. 3. Compute the coefficient of permeability. 4. Determine the coefficient of consolidation and compaction parameters.					

COURSE OUTCOMES OF ALL THE COURSES OFFERED IN CIVIL ENGINEERING VII SEMESTER

Course Code	Course Name	L	T	P	C
CIV 213	Design of Structural Steel Elements	3	1	0	4
Course Outcomes: On successful completion of the course the students shall be able to: 1) Recognize the design philosophy of steel structures and concept of limit state design 2) Identify the different failure modes of bolted and welded connections, and determine their design strengths. 3) Apply the design principles in design of tension and compression members according to specific design criteria. 4) Analyze and design structural steel members subjected to flexure.					

Course Code	Course Name	L	T	P	C
CIV 215	Estimating, Costing and Valuation	3	1	0	4
Course Outcomes: On successful completion of the course the students shall be able to: 1) Describe the principles of estimation and units of measurement for various items of works 2) Compute the quantity of materials required for various civil engineering works with specification 3) Prepare rate analysis for various building works 4) Estimate the valuation of various building works					

Course Code	Course Name	L	T	P	C
CIV 216	Hydrology and Water Resources Engineering	3	1	0	4
Course Outcomes: On successful completion of the course the students shall be able to: 1) Identify the types and forms of precipitation. 2) Recognize the losses in precipitation. 3) Estimate Runoff and Flood Hydrograph. 4) Compute the Water Requirements of Crops					

Course Code	Course Name	L	T	P	C
CIV 281	SUSTAINABLE MATERIALS AND GREEN BUILDINGS	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: 1) Recognize the importance of sustainability and prepare Life Cycle Analysis. 2) Select the Green building materials for construction. 3) Predict the performance rating of green building. 4) Explain the harmful impact of Indoor air pollution and the Life cycle energy use.					

Course Code	Course Name	L	T	P	C
CIV 383	Infrastructure Systems for Smart Cities	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: 1. Identify the latest technology enabled systems for the management of cities. 2. Interpret the dynamic behavior of the urban system in context to physical appearance and by focusing on representations, properties and impact factors. 3. Demonstrate the urban infrastructure systems to benefit the citizens, based on smart cities concept as responsive cities					

Course Code	Course Name	L	T	P	C
CIV 402	Environmental impact Assessment	3	0	0	3
Course Outcomes: On successful completion of the course the students shall be able to: 1) Explain the major principles of environmental impact assessment in India. 2) Predict the impacts on Environment of any developmental projects 3) Discuss the role of public in the EIA process. 4) Discuss the different case studies/examples of EIA in practice.					

Course Code	Course Name	L	T	P	C
CIV 259	Environmental Engineering Lab	0	0	2	1
Course Outcomes: On successful completion of the course the students shall be able to: 1) Understand the concepts of Water quality and Waste water characteristics 2) Analyze the various parameters of water quality and Waste water characteristics. 3) Interpret the result in comparison with public health considerations and standards.					