Id	Program	CourseCode	CourseName	COCode	со
	Civil				Deliberate the classification and characteristics of
1911	Engineering	8CE04	Elective -Dam Engineering	CO1	Dam Engineering
	Civil				
1911	Engineering	5CEO6	Communication Skill	CO1	Learn the characteristics of Communication Skills
	Civil		Reinforced Cement		Identify Quality Control tests on concrete making
1911	Engineering	4CE05	Concrete-I	CO1	materials.
	Civil		Reinforced Cement		Understand the behavior of fresh and hardened
1911	Engineering	4CE05	Concrete-I	CO2	concrete.
	Civil		Reinforced Cement		
1911	Engineering	4CE05	Concrete-I	CO5	Understand the need for special concretes.
	Civil		Reinforced Cement		
1911	Engineering	4CE05	Concrete-I	CO3	Design concrete mixes as per IS and ACI codes
	Civil		Reinforced Cement		Understand the durability requirements of
1911	Engineering	4CE05	Concrete-I	CO4	concrete.
	Civil				
1911	Engineering	4CE01	Geotechnical Engineering-I	CO1	Find out various parameters of soil.
	Civil				
1911	Engineering	4CE01	Geotechnical Engineering-I	CO2	Calculate stresses and settlement in soil.
	Civil				To understand Laplace equation for flow net and its
1911	Engineering	4CE01	Geotechnical Engineering-I	CO3	discharge calculation.
	Civil				
1911	Engineering	4CE01	Geotechnical Engineering-I	CO5	Calculate shear stength for various types of soil.
	Civil				
1911	Engineering	4CE01	Geotechnical Engineering-I	CO4	Find permeability of soil layer.
	Civil				
1911	Engineering	6CE02	Structural Design-I	CO1	Design various Types of connections
	Civil				
1911	Engineering	6CE02	Structural Design-I	CO3	Design simple, compound Beams, and Plate girder.
	Civil		Enviromental Engineering-		Find out biological parameter and treatment of
1911	Engineering	8CEO2	11	CO1	water.
	Civil				
1911	Engineering	6CE02	Structural Design-I	CO4	Design column and column bases.
	Civil		Enviromental Engineering-		Know about various charateristics of water and
1911	Engineering	8CEO2		CO2	methods use to calculate them.
	Civil				
1911	Engineering	6CE02	Structural Design-I	CO2	Design tension and compression members.
	Civil		Water Resource		Find Crop water requirement and design for the
1911	Engineering	6CE03	Engineering-l	CO1	same
	Civil		Water Resource		
1911	Engineering	6CE03	Engineering-l	CO2	Calculate evaporation and its control measures.
			Water Resource		
1911	Engineering	6CE03	Engineering-l	CO3	Make flood measurement and its control.
			Water Resource		
1911	Engineering	6CE03	Engineering-l	CO4	Understand various irrigation techniques
1011		0.05.0.2	Enviromental Engineering-	600	Understand effects of airpolution and its control
1911	Engineering	8CEO2	II <del>-</del>	CO3	measures.
1044			Transportation	CO1	
1911	Engineering	οιευ4	Engineering-II	01	Plan raliway way network
1044				<u> </u>	Design Bailway geographia
1911	Engineering	οιευ4	Engineering-II	02	Design Kallway geometric.
1044		90503	Enviromental Engineering-	604	Design low each traction at a lost for source
1911	Engineering	oleuz		CU4	Design low cost treatment plant for sewer.
1044		00504		<u> </u>	Design signert laws at
1911	∟ngineering	DCEU4	Engineering-II	CU3	Design airport layout.

	Civil		Enviromental Engineering-		
1911	Engineering	8CEO2	11	CO5	Design sewer system its testing and maintenance .
	Civil		Transportation		Understand the principles of construction and
1911	Engineering	6CE04	Engineering-II	CO4	maintenance of airport
	Civil		0 0		An ability to apply conservation laws to derive
1911	Engineering	4CE02	Fluid Mechanics-I	CO1	governing equations of fluid flows
	Civil				To understand compute hydrostatic and
1011	Engineering	4CE02	Fluid Mechanics-I	CO2	hydrodynamic forces
1911	Civil	40202	Transportation	602	Design intersections and prepare traffic
1011	Engineering			COF	management plans
1911	Civil	00204		05	To understand analyze and design simple pipe
1011	Civil	40500	Fluid Machanias I	<u> </u>	susteme
1911	Engineering	4CEU2	Fiuld Mechanics-I	03	Systems.
1011		5.6504	Reinfored Cement	601	Design the Reinforced Concrete beams using limit
1911	Engineering	SCEUI	Concrete-II	01	state and working stress methods
			Reinfored Cement		
1911	Engineering	5CE01	Concrete-II	CO2	Design Reinforced Concrete slabs
	Civil		Reinfored Cement		Design the Reinforced Concrete Columns and
1911	Engineering	5CE01	Concrete-II	CO3	footings
	Civil		Reinfored Cement		
1911	Engineering	5CE01	Concrete-II	CO4	Design structures for serviceability
	Civil		Reinfored Cement		Design stair cases, canopy, retaining wall and water
1911	Engineering	5CE01	Concrete-II	CO5	tanks
			Elective -Advanced Design		
	Civil		Of Reinforced Cement		Analysis of multistoried frame by seismic coefficient
1911	Engineering	8CE04	Cocrete Structures	CO3	method.
			Elective -Advanced Design		
	Civil		Of Reinforced Cement		
1911	Engineering	8CE04	Cocrete Structures	CO4	Design of square bunkers Silos
			Elective -Advanced Design		
	Civil		Of Reinforced Cement		
1011	Engineering	8CE0/	Cocrete Structures	CO5	Design of B C C. Intre tanks, staging for Intre tanks
1711	Civil	00204		005	
1011	Civil	70504	Environmental Engineering L	CO1	Calculate water requirement and consumption
1911	Engineering	7CE04	Environientai Engineering-i	01	Calculate water requirement and consumption.
1011		5.650.4	Currue de la U	601	is strong such
1911	Engineering	SCE04	Surveying-II	01	instruments.
1911	Engineering	7CE04	Enviromental Engineering-I	CO2	Know about various water distribution systems.
	Civil				
1911	Engineering	5CE04	Surveying-II	CO2	An ability to calculate angles, distances and levels.
	Civil				
1911	Engineering	7CE04	Enviromental Engineering-I	CO3	Understand various processes of water purification.
	Civil				To understand identify data collection methods and
1911	Engineering	5CE04	Surveying-II	CO3	prepare field notes.
	Civil				
1911	Engineering	7CE04	Enviromental Engineering-I	CO4	Design various filters for water purification.
	Civil				
1911	Engineering	7CE04	Enviromental Engineering-I	CO5	Calculate quantity of disinfectant.
	Civil				An ability to estimate measurement errors and
1911	Engineering	5CE04	Surveying-II	CO4	apply corrections.
	Civil		-, 0	-	To understand interpret survey data and compute
1011	Engineering	5CE04	Surveying-II	CO5	areas and volume
1911	LIBUICCIIIB	50104	Surveying-II		

	Civil		Geotechanical Engineering-		An ability to determine the earth pressures on
1911	Engineering	7CE02		CO1	foundations and retaining structures.
	Civil		Geotechanical Engineering-		
1911	Engineering	7CE02		CO2	An ability to analyze shallow and deep foundations.
	Civil		Geotechanical Engineering-		To understan calculate and bearing capasity of soils
1911	Engineering	7CE02	II	CO3	and foundations sesttlements.
-	Civil		Flective - Proiect		Understand the Concepts of Project & Project
1911	Engineering	5FFMF05	Management	CO1	Selection
1911	Civil		Geotechanical Engineering	601	
1911	Engineering	7CE02		CO4	To Understand soil exploration methods
1711	Civil	70202	II Elective Project	04	To onderstand son exploration methods.
1011	Engineering	FEENEOF	Management	<u> </u>	Understand Project organization and planning
1911	Civil	SFEIVIEUS		02	
1011	Civil		Liective - Project	<u> </u>	Dropage Dudgeting and Cast Estimation
1911	Engineering	SFEIVIEUS		03	Prepare Budgeting and Cost Estimation
1011			Elective - Project	60 A	
1911	Engineering	SFEME05	Management	CO4	Understand Scheduling and resource allocation
	Civil				Design various types of retaining walls and flat
1911	Engineering	7CE03	Structural Design-II	CO1	slabs.
	Civil		Elective - Project		
1911	Engineering	5FEME05	Management	CO5	Project Control
	Civil				
1911	Engineering	7CE03	Structural Design-II	CO2	Design combined footing.
	Civil		Elective - Project		
1911	Engineering	5FEME05	Management	CO5	Understand Issues in project Management.
	Civil				
1911	Engineering	7CE03	Structural Design-II	CO3	Analyze prestressed sections.
	Civil				
1911	Engineering	7CE03	Structural Design-II	CO4	Design of prestressed sections and water tank.
					Analyze the different types of fixed, continuous
	Civil				beams, overhang beams, two hinged, and three
1911	Engineering	7CF01	Theory of Structure-II	CO1	hinged arches
1011	211811001118	/ 0201		001	
					Apply the basic tables and equations in analyzing
	Civil				the heams and nortals frames by using slone
1011	Engineering	7CE01	Theory of Structure-II	<u> </u>	deflection and moment distribution methods
1911	Civil	70101		02	CO1 Analyse the statisally determinate and
1011	Civil	20502	Strongth of Motorials	CO1	indeterminete probleme
1911	Engineering	3CEU2	Strength of Materials	01	indeterminate problems
	<b>C</b> 1				
1044		20502	Characteric Contraction	600 C	Determine the stresses and strains in the members
1911	Engineering	3CE02	Strength of Materials	CO2	subjected to axial, bending and torsional loads
	Civil				Evaluate the slope and deflection of beams
1911	Engineering	3CE02	Strength of Materials	CO3	subjected to loads
	Civil				Determine the principal stresses and strains in
1911	Engineering	3CE02	Strength of Materials	CO4	structural members Topics covered
	Civil		Transportation		
1911	Engineering	3CE03	Engineering-I	CO1	Plan highway networks
	Civil		Transportation		
1911	Engineering	3CE03	Engineering-I	CO2	Design highway geometries.
					Know various methods of analysis of beams and
	-				nortal frames such as flexibility and stiffness
	Civil				portar frames, such as frexibility and stimess
1911	Civil Engineering	7CE01	Theory of Structure-II	CO3	coefficient method.
1911	Civil Engineering	7CE01	Theory of Structure-II	CO3	coefficient method.
1911	Civil Engineering Civil	7CE01	Theory of Structure-II	CO3	coefficient method.
1911	Civil Engineering Civil Engineering	7CE01 7CE01	Theory of Structure-II	CO3	Use of castiglianous theorem for analyzing beams

	Civil		Transportation		Design Intersections and prepare traffic
1911	Engineering	3CE03	Engineering-I	СОЗ	management plans.
	Civil		Transportation		
1911	Engineering	3CE03	Engineering-I	CO4	Design flexible and rigid pavements.
	Civil		Transportation		Understand the principles of construction and
1911	Engineering	3CE03	Engineering-I	CO5	maintenance of highways
	Civil		Elective - Advanced		
1911	Engineering	7CE05	Concrete Technology	CO1	Admixtures and construction chemicals.
	Civil		Building Construction &		
1911	Engineering	3CE04	Materials	CO1	Know about various types of doors and windows.
	Civil		Building Construction &		To know the various types of stair case and its
1911	Engineering	3CF04	Materials	CO2	design.
	Civil		Elective - Advanced		
1911	Engineering	7CE05	Concrete Technology	CO2	To know the Durability of concrete
1911	Civil	70205	Building Construction &	002	Understand various types of stone missionary and
1011	Engineering	30504	Materials	CO3	brick masonry
1711	Civil	JCL04	Ruilding Construction &	005	Know about various types of special construction
1011	Civil	20504	Materials	CO4	mothede
1911	Civil	SCE04		C04	methods.
1011		70505	Elective - Advanced		
1911	Engineering	7CE05	Concrete Technology	03	Identify the Deformation in concrete.
			Building Construction &		
1911	Engineering	3CE04	Materials	C05	Get knowledge about various floors types.
	Civil		Elective - Advanced		
1911	Engineering	7CE05	Concrete Technology	CO4	Special concrete and concreting techniques.
	Civil		Elective - Advanced		
1911	Engineering	7CE05	Concrete Technology	CO5	Repairs and rehabilitations.
	Civil		Elective - Advanced		
1911	Engineering	7CE05	Concrete Technology	CO6	Non-destructive testing of concrete.
	Civil				An ability to apply principles of dimensional
1911	Engineering	4CE02	Fluid Mechanics-I	CO4	analysis to design experiments
	Civil		Water Resources		
1911	Engineering	8CEO1	Engineering-II	CO1	An abilty to plan an irrigation system.
	Civil				Prepare quantity estimates for buildings, roads,
1911	Engineering	6CE06	Estimating & Costing	CO1	rails and canal works
	Civil		Water Resources		To understand design irrigation canals and canal
1911	Engineering	8CEO1	Engineering-II	CO2	network.
	Civil				Calculate the quantity of materials required for civil
1911	Engineering	6CE06	Estimating & Costing	CO2	engineering works as per specifications
					Analyze the diffetent types of fixed,continuous
	Civil				beams, overhand beams, two hinged and three
1911	Engineering	4CE03	Theory Of Structure-I	CO1	hingedb arches.
	Civil		Water Resources		<u> </u>
1911	Engineering	8CEO1	Engineering-II	соз	An ability to plan and design diversion head works.
	Civil				Evaluate contracts and tenders in construction
1911	Engineering	6CE06	Estimating & Costing	CO3	practices
1911	211811001118	00200			
					Apply the basic table and equations in analyzing the
	Civil				beams and nortal frames by using slone deflection
1911	Engineering	4CE03	Theory Of Structure-I	CO2	and moment distribution method
1,11	Civil	-10203	Water Resources		and moment distribution method.
1011	Engineering		Engineering_I	CO4	An ability to design irrigation canal structures
1211		JCLUI		204	An ability to design in gation candi structures.
1011		CCTOC	Estimating & Casting	604	Dranara aast astimates
1911	Engineering	OLEUD	Estimating & Costing	CU4	Prepare cost estimates

					Various methods of analysis of beams and portal
	Civil				frames, such as flexibility and stiffness coefficient
1911	Engineering	4CE03	Theory Of Structure-I	СОЗ	method.
	Civil		Water Resources		
1911	Engineering	8CE01	Engineering-II	CO5	To understand analyze gravity and earth dams
1011	Civil	00201	Water Resources		An ability to Design snillways and energy
1011	Engineering			CO6	dissingtions works
1911	Lingineering	80201	Lingineering-ii	000	
	Ciil				
1011		40500		60 A	Use of castiglinous theorem for analyzing beams
1911	Engineering	4CE03	Theory Of Structure-I	CO4	and portals, popularly called as unit load method
	Civil		Project Planning &		Understand the roles and responsibilities of a
1911	Engineering	8CEO3	Management	CO1	project manager
	Civil				
1911	Engineering	5CE03	Building Planning & CAD	CO1	Draw the plan, section and elevation of a building
	Civil		Project Planning &		Prepare schedule of activities in a construction
1911	Engineering	8CEO3	Management	CO2	project
	Civil				Create, analyze and produce 2D drawings of
1911	Engineering	5CE03	Building Planning & CAD	CO2	buildings in AUTO CAD environment
	Civil		Project Planning &		Prepare tender and contract document for a
1911	Engineering	8CEO3	Management	CO3	construction project
	Civil		Project Planning &		Understand safety practices in construction
1911	Engineering	8CEO3	Management	CO4	industry
	Civil		Project Planning &		
1911	Engineering	8CEO3	Management	CO5	Identify the equipment used in construction
	Civil				
1911	Engineering	5CE03	Building Planning & CAD	соз	Detailing building plans in CAD environment
	0 0				o understand Building rules and by laws. Preparing
	Civil				line plans of Public Building And Residential
1911	Engineering	5CE03	Building Planning & CAD	CO4	Building
	Civil				
1911	Engineering	5CE02	Fluid Mechanics-II	CO3	An Ability to Design Channels
1011	Civil	50202			An Ability compute flow frofile in channel
1911	Engineering	5CE02	Fluid Mechanics-II	CO4	transitions and analyze hydraulic transients
1911		56262		204	
			Elective -Advanced Design		
	Civil		Of Poinforced Comont		
1011	Civil	9CE04	Cocrete Structures	CO1	Decign of Portal frame. Decign of singular clab
1911	Engineering	8CE04		01	Design of Portal frame, Design of circular slab.
1011		5.6500		605	To understand analyze compressible flows of liquid
1911	Engineering	SCEU2	Fiuld Wechanics-II	05	and gases.
	Civil		clective -Advanced Design		
		0.0504	Of Reinforced Cement		
1911	Engineering	8CE04	Cocrete Structures	CO2	Design of a footbridge, Design of RCC girder.
	Civil				
1911	Engineering	3CE05	Engineering Geology	CO1	Understand structural features of rock.
	Civil				To know types of minerals rocks ,their properties
1911	Engineering	3CE05	Engineering Geology	CO2	and formation
	Civil				Understand failures and faults in rocks also about
1911	Engineering	3CE05	Engineering Geology	CO3	site selection for particular project
	Civil				Understand about effect and occurrence of
1911	Engineering	3CE05	Engineering Geology	CO4	earthquake.
					Knowledge of developing algorithms and finding
	Civil		Numerical Method and		solutions for linear simultaneous equations using
1911	Engineering	6CE01	Computer Programming	CO1	various numerical methods

	Civil		Numerical Method and		Knowledge and methods to formulate nonlinear
1911	Engineering	6CE01	Computer Programming	CO2	algebraic equations.
	Civil		Numerical Method and		Exposure to solutions of civil engineering problems
1911	Engineering	6CE01	Computer Programming	CO3	using numerical integration methods.
					Knowledge of use of numerical methods for finding
	Civil		Numerical Method and		solution to statically determinate and
1911	Engineering	6CE01	Computer Programming	CO4	indeterminate beams.
	Civil		Numerical Method and		Knowledge of developing algorithm and finding
1911	Engineering	6CE01	Computer Programming	CO5	solution for ordinary differential equations.
				understand	
	Civil			the basic of	
1911	Engineering	3CE01	Mathematics-III	mthmatic	understand the basic of mthmatic
	Civil				An ability design the working proportions of
1911	Engineering	5CE02	Fluid Mechanics-II	CO1	hydraulic machines.
	Civil				
1911	Engineering	5CE02	Fluid Mechanics-II	CO2	An ability to compute drag and lift coefficients.