NIIST BHOPAL		NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY DEPARTMENT NAME: CIVIL ENGG
BRANCH	CIVIL	Course Objective & Course Outcome
SESSION	JULY-DEC 2018	
SEMESTER -VII		
SUBJECT/CODE : ADVANCE STRUCTURAL DESIGN I (RCC)/ CE 7001		
Course Objective:	The objective of RCC is to introduce the theory and application of analysis and design of reinforced concrete structures.	
Course Outcome:	Students will be able to-	
Outcome1	Students are able to do the mathematical/computational methods for the design of basic structural elements to make .	
Outcome2	Students are able to do the suitable approximations so that an indeterminate structure is reduced to a determinate structure	
SUBJECT/CODE : STRUCTURAL DESIGN II (STEEL) / CE-7002		
Course Objective:	To understand the basic concepts of fluid mechanics for undergraduate students in Civil Engineering. The course will begin with the fundamental concepts of fluid flow and proceed to cover various flow phenomena and approaches to analyse the flow phenomena.	
Course Outcome:	Students will be able to-	
Outcome1	Knowledge of the basic concepts and principles of fluid mechanics	
Outcome2	Ability to analyze fluid flow problems with the application of momentum and energy equations	
Outcome3	Ability to distinguish between various types of fluid flow.	
Outcome4	Ability to find solutions to typical pipe flow problems	
Outcome5	Basic knowledge of hydraulic machines.	
SUBJECT/CODE : MODERN CONSTRUCTION TECHNIQUES AND EQUIPMENTS / CE-7003		
Course Objective:	To familiarize the student with the various stresses that may act on a material such as compressive stress, tensile stress, tangential stress, etc and the response of a material to each of these types. The course will define basic concepts and calculations that will come handy in long-term to civil engineering students.	
Course Outcome:	Students will be able to-	
Outcome1	An ability to identify and compute various mechanical stresses in material and the material's response to	
Outcome2	An ability to apply this knowledge in science and engineering models.	

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SUBJECT/CODE : PAVEMENT DESIGN / CE-7004	
Course Objective:	To introduce the student to the importance and objectives of surveying. The course would begin with the basic concepts of surveying and move on to discuss advancements such as GID and Remote Sensing.
Course Outcome:	Students will be able to-
Outcome1	The student will be able to understand the basic principles of surveying and how they are implemented in practice
Outcome2	The student will be able to adjust for errors that occur in practising of various surveying methods
Outcome3	The student will be able to plan a survey for applications such as road alignment and height of the
SUBJECT/CODE : INFRASTRUCTURE ENGINEERING / CE-7005	
Course Objective:	To understand various concepts of infrastructure planning and management. Private Involvement in Infrastructure: A Historical Overview of Infrastructure Privatization.
Course Outcome:	Students will be able to-
Outcome1	The students will be able to understand and apply the knowledge of management functions like planning, scheduling, executing and controlling to construction projects.
Outcome2	Understand the role of Private sector in infrastructure growth
Outcome3	Know stages of an Infrastructure Project Lifecycle.
Outcome4	Understand the strategies for Successful Infrastructure Project Implementation.
Outcome5	Understand the need to plan, develop and maintain infrastructure at a high level

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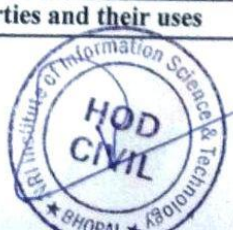
SEMESTER -V		
SUBJECT/CODE : TRANSPOTATION ENGINEERING / CE 5001		
Course Objective:		To understand the principles of geometric design for various transportation facilities, To know the design of at-grade and grade separated intersections along with design of drainage facilities.
Course Outcome:		Students will be able to-
Outcome1		Gain knowledge about railways, permanent way stations, yards, tunnels and able
Outcome2		Know the different types of points and crossings used in railway tracks
SUBJECT/CODE : QUANTITY SURVEYING & CASTING / CE 5002		
Course Objective:		This subject covers the various aspects of estimating of quantities of items of works involved in buildings, water supply and sanitary works, road works and irrigation works. This also covers the rate analysis, valuation of properties and preparation of reports for estimation of various items.
Course Outcome:		Students will be able to-
Outcome1		Understand the preparation of an Abstract Estimate for a Residential Building
Outcome2		Analyze the units for various quantities of items of works
Outcome3		Demonstrate the calculation of earth work quantity for roads and canals.
Outcome4		Design and Prepare Bar bending schedule for reinforcement works
SUBJECT/CODE : STRUCTURAL ANALYSIS II / CE 5003		
Course Objective:		To impart the principles of elastic structural analysis and behaviour of indeterminate structures. To impart knowledge about various methods involved in the analysis of indeterminate structures
Course Outcome:		Students will be able to-
Outcome1		Classify & discuss between symmetrical and unsymmetrical frames
Outcome2		Apply the different methods and analysis frame
Outcome3		Identify &analyze stiffness matrix, transformation matrix, load matrix for various structural
Outcome4		Explain the basics of finite element method in the analysis of structural components
SUBJECT/CODE : CONSTRUCTION MATERIALS & TECHNIQUES / CE 5004		
Course Objective:		To know the various conventional construction materials, properties and their uses ,and To know the various latest and modern construction materials, properties and their uses To know and understand the general construction processes and their sequences.
Course Outcome:		Students will be able to-
Outcome1		Understand various conventional construction materials, properties and their uses



Outcome2	**Describe various latest and modern construction materials, properties and their uses**
Outcome3	**Understand the general construction processes and their sequences**
Outcome4	**Understand the various techniques which are useful for the substructure construction**
SUBJECT/CODE : CONSTRUCTION PLANNING AND MANAGEMENT / CE 5005	
Course Objective:	**To make them understand the concepts of Project Management for planning to execution of projects. And To make them understand the feasibility analysis in Project Management and network analysis tools for cost and time estimation.**
Course Outcome:	**Students will be able to-**
Outcome1	**create oral presentations appropriate to the construction discipline.**
Outcome2	**analyze professional decisions based on ethical principles.**
Outcome3	**analyze methods, materials, and equipment used to construct projects.**
Outcome4	**apply construction management skills as a member of a multi- disciplinary team.**

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SEMESTER -III	
SUBJECT/CODE : MIII/ BT301	
Course Objective:	The objective of this course is to fulfill the needs of engineers to understand applications of Numerical Analysis, Transform Calculus and Statistical techniques in order to acquire mathematical knowledge and to solving wide range of practical problems appearing in different sections of science and engineering.
Course Outcome:	Students will be able to-
Outcome1	Student will demonstrate basic knowledge of L.D.E., Vector, P.D.E.,F.T.& Probability
Outcome2	Student will show the understanding of impact of Engineering Mathematics in Civil.
Outcome3	Student will demonstrate their understanding of mathematical ideas from multiple perspectives, such as by
	(a) using the internal connections between geometry, algebra, and numerical computation,
	(b) applying the connections between theory and applications, or
	(c) Distinguishing between a formal proof and a less formal arguments and understanding the different role they play in mathematics.

SUBJECT/CODE :CONSTRUCTION MATERIAL/ CE302	
Course Objective:	To know the various latest and modern construction materials, properties and thei
Course Outcome:	Students will be able to-
Outcome1	Students are able to understand the property , use , advantage and disadvantage of different material used in construction
Outcome2	After completion of this subject student will be familiar with different ingredients of concrete.
Outcome3	Student will be familiar with Manufacturing, types, selection & uses of Bricks.
Outcome4	The properties & uses of aluminum & steel can be understood.
Outcome5	Student will be able to understand uses & properties of Asphalt, Tar & Bitumen.

SUBJECT/CODE : SURVEYING/ CE303	
Course Objective:	Have the ability to apply knowledge of mathematics, science and engineering to understand the measurement techniques and equipmentsd used in land surveying.
Course Outcome:	Students will be able to-

Outcome1	The students are able to understand the use of different surveying instruments and their use
Outcome2	Students are able to calculate compute the area and earthwork for different works by using surveying instruments.
Outcome3	Students are able to do the surveying of different civil engineering projects
Outcome4	Students are able to do trigonometric and Geodetic Survey
Outcome5	Students are able to understand the hydrographic survey
SUBJECT/CODE : BUILDING PLANNING AND ARCHITECTURE/ CE304	
Course Objective:	To understand the concept of building planning and architecture. To understand the various building codes to be followed while planning a building. To have the knowledge of various building components.
Course Outcome:	Students will be able to-
Outcome1	After completion of this students will able to understand basic principles of building design and planning.
Outcome2	They will explore building drawing as a way of discovering and developing ideas for designing residential, commercial and public buildings.
Outcome3	The student develops basic drawing skills; create multilayer architectural and working drawing drawings.
Outcome4	Basic Concepts of Architecture will be developed
Outcome5	Use of Vaastu Shastra in Civil Engineering can be understood
SUBJECT/CODE : STRENGTH OF MATERIAL/ CE305	
Course Objective:	To give an ability to apply the knowledge of strength of materials on engineering applications and design problems
Course Outcome:	Students will be able to-
Outcome1	Students are able to understand the behavior of material under different loading
Outcome2	Student are able to understand and calculate the different type of stress like, simple stress, shear stress, direct stress and bending stress in the material
Outcome3	Students are students are able to understand and calculate the shear force and bending moment for beam of different loading
Outcome4	Students are able to calculate the deflection of beam for different loading
Outcome5	Torsion & Unsymmetrical Bending in Civil Engineering can be understood