NIIST BHOPAL		NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY DEPARTMENT NAME: CIVIL ENGG
BRANCH	CIVIL	Course Objective & Course Outcome
SESSION	JAN-JUNE 2018	

SEMESTER -VIII	
SUBJECT/CODE : GEO. TECHNICAL ENGG.-II (CE-801)	
Course Objective:	Acquire knowledge of basics of soil mechanics and soil properties.
Course Outcome:	Students will be able to-
Outcome1	Students are able to classify soils
Outcome2	Students are able to know how water affect the soil parameters
Outcome3	Students are able to understand the compaction, consolidation and shear strength parameters of soil.
Outcome4	Students are able to calculate the compaction, consolidation and shear strength of soil
SUBJECT/CODE : CONSTRUCTION PLANNING & MANAGEMENT (CE-802)	
Course Objective:	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	Understand project characteristics and various stages of a project
Outcome2	Understand the conceptual clarity about project organization and feasibility analyses
Outcome3	Analyze the learning and understand techniques for Project planning, scheduling and Execution Control.
Outcome4	Apply the risk management plan and analyse the role of stakeholders.
Outcome5	Understand the contract management, Project Procurement, Service level Agreements and productivity.
SUBJECT/CODE : ADVANCED STRUCTURAL DESIGN-II (STEEL)	
Course Objective:	The objectives of this are to learn the behavior and design of structural steel components (members and connections in two - dimensional (2D) truss and frame structures) and to gain an educational and comprehensive experience in the design of simple steel structures.
Course Outcome:	Students will be able to-
Outcome1	Identify the different failure modes of steel tension and compression members and beams, and compute their design strengths
Outcome2	Identify the different failure modes of bolted and welded connections, and determine their design strengths
Outcome3	Select the most suitable section shape and size for tension and compression members and beams according to specific design criteria.
SUBJECT/CODE : PAVEMENT DESIGN (CE-8042)	
Course Objective:	To design the flexible and rigid pavements using different Empirical, semi-empirical and theoretical approaches .
Course Outcome:	Students will be able to-
Outcome1	Students will identify suitable type of pavement.
Outcome2	Students understood Behaviour of structural components of Flexible pavement.
Outcome3	Student will know the design methods of flexible and rigid pavement
Outcome4	Students will understand the maintenance & repair of pavement

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SESSION	JAN-JUNE 2018	Course Objective & Course Outcome

SEMESTER -VI	
SUBJECT/CODE : DESIGN OF HYDRALIC STRUCTURE S / CE6001	
Course Objective:	The objective of EIA is to encourage consideration of the environment in the planning and decision-making process to arrive at actions that avoid or minimize adverse impacts on the environment.
Course Outcome:	Students will be able to-
Outcome1	The understanding of Significant Environmental Impacts will be developed.
Outcome2	Methods of Impact Identification will be understood.
Outcome3	The student will be able to understand the assessment of impact of air, water, noise and socio-economic environment
SUBJECT/CODE : STRUCTURAL DESIGN I / CE 6002	
Course Objective:	To design the flexible and rigid pavements using different Empirical, semi-empirical and theoretical approaches
Course Outcome:	Students will be able to-
Outcome1	Students will identify suitable type of pavement.
Outcome2	Students understood Behaviour of structural components of Flexible pavement.
Outcome3	Student will know the design methods of flexible and rigid pavement
Outcome4	Students will understand the maintenance & repair of pavement
SUBJECT/CODE : GEOTECHNICAL ENGINEERING I / CE 6003	
Course Objective:	The objective of this course is to introduce the students to the principles and practices of geotechnical exploration, foundation engineering, and ground improvement methods,
Course Outcome:	Students will be able to-
Outcome1	The students will gain an experience in the implementation of Geotechnical Engineering on engineering concepts which are applied in field Geotechnical Engineering
Outcome2	The students will get a diverse knowledge of geotechnical engineering practices applied to real life problems of designing of structures.
Outcome3	The students will learn to understand the theoretical and practical aspects of geotechnical engineering along with the design and management applications.
SUBJECT/CODE : HIGHWAY ENGINEERING /CE 6004	
Course Objective:	To provide a coherent development to the students for the courses in sector of Engineering like Transportation & Traffic Engineering etc.
Course Outcome:	Students will be able to-
Outcome1	The students will gain an experience in the implementation of Transportation Engineering on engineering concepts which are applied in field Highway Engineering.
Outcome2	The students will get a diverse knowledge of highway engineering practices applied to real life problems.
Outcome3	The students will learn to understand the theoretical and practical aspects of highway engineering along with the design and management applications.
SUBJECT/CODE :ENVIRONMENTAL IMPACT ASSESSMENT /CE 6005	
Course Objective:	The objective of EIA is to encourage consideration of the environment in the planning and decision-making process to arrive at actions that avoid or minimize adverse impacts on the environment.
Course Outcome:	Students will be able to-
Outcome1	The understanding of Significant Environmental Impacts will be developed.
Outcome2	Methods of Impact Identification will be understood.
Outcome3	The student will be able to understand the assessment of impact of air, water, noise and socio-economic environment

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SUBJECT/CODE : Mathematics-III / BE-3001	
Course Objective:	The objective of this course is to fulfill the needs of Engineers to understand the Applications of Fourier Series, Different Transforms, Complex Analysis & Numerical Solution of Algebraic and Transcendental Equations in order to enable young technocrats to acquire Mathematical thinking of Formulating, Analyzing and Solving a wide range of Practical Problems Appearing in Science & Engineering.
Course Outcome:	The curriculum of the Department is designed to satisfy the diverse needs of students. Coursework is designed to provide students the opportunity to learn key concepts of Fourier Series, Different Transforms, Complex Analysis & Numerical Solution of Algebraic and Transcendental Equations.
SUBJECT/CODE : Concrete technology / CE-4002	
Course Objective:	The course relates to the fundamentals related to concrete and concrete material, besides dealing with masonry, reinforcement, etc
Course Outcome:	Students will be able to-
Outcome1	The knowledge of what concrete is, how it is formed
Outcome2	what materials are involved and properties and requirements of each concrete ingredient.
SUBJECT/CODE : Water Supply & Waste Water Engineering-I / CE-4003	
Course Objective:	To apply knowledge of mathematics, physics, chemistry, and microbiology to solve and analyze engineering problems related to water and wastewater collection, transport, quality and treatment. To use the fundamental principles of mass balance, chemical kinetics and equilibrium to design water or wastewater reactors to achieve a desirable treatment goal.
Course Outcome:	Students will be able to-
Outcome1	Design a water or wastewater treatment component
Outcome2	Learn how to characterize wastewater, and the BAT for physical, chemical and microbiological treatment of wastewater.
Outcome3	Understand selected contemporary global water and wastewater issues such as water shortage, wastewater reuse and emerging contaminants.
SUBJECT/CODE : Building Planning & Architecture / CE-4004	
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
Course Outcome:	Students will be able to-
Outcome1	Understanding of building planning, orientation, drawing and architectural aspects.
Outcome2	Representation of a building on Paper.
SUBJECT/CODE : STRUCTURAL ANALYSIS I / CE-4005	
Course Objective:	To understand the concept of determinate and indeterminate structures, analyses of determinate and indeterminate structures. To understand the principle of virtual work and the application of influence line diagrams in structural analysis problems. The course runs through a number of techniques which are used for the analysis of civil engineering structures.
Course Outcome:	Students will be able to-
Outcome1	Ability to distinguish between determinate and indeterminate structures
Outcome2	Ability to analyze determinate and indeterminate structures
Outcome3	Ability to use influence line diagrams as a valid tool for structural analysis

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