NIIST BHOPAL		NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY DEPARTMENT NAME: CIVIL ENGG
BRANCH	CIVIL	Course Objective & Course Outcome
SESSION	JAN-JUNE 2021	

SEMESTER -VIII	
SUBJECT/CODE : STEEL / CE801	
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 : FOUNDATION ENGINEERING / CE802	
Course Objective:	The objective of this course is to learn about types and purposes of different foundation systems and structures
Course Outcome:	Students will be able to-
Outcome1	To learn about types and purposes of different foundation systems and structures.
Outcome2	To provide students with exposure to the systematic methods for designing foundations.
Outcome3	To discuss and evaluate the feasibility of foundation solutions to different types of soil conditions considering the time effect on soil behavior.
SUBJECT/CODE : IWM / CE803 (D)	
Course Objective:	To study the paradigm shift in water management with global and national perspectives of water crisis. It also aims to understand the concepts of 'blue water', 'green water' and 'virtual water' and their roles in water management.
Course Outcome:	Students will be able to-
Outcome1	Assess the potential of groundwater and surface water resources.
Outcome2	Address the issues related to planning and management of water resources.
Outcome3	Know how to implement IWRM in different regions.
Outcome4	Understand the legal issues of water policy.
Outcome5	Select the method for water harvesting based on the area.

NRI Institute of Information Science & Technology ★ BHOPAL ★
HOD CIVIL

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SEMESTER -VI	
SUBJECT/CODE : STRUCTURAL DESIGN AND DRAWING (RCC I) /CE 601	
Course Objective:	Be able to perform analysis and design of reinforced concrete members and connections.
Course Outcome:	Students will be able to-
Outcome1	To understand the general mechanical behaviour of reinforced concrete in accordance with IS 456:2000.
Outcome2	To identify and apply the applicable industry design codes relevant to the design of reinforced concrete members.
Outcome3	To analyze and design for shear, torsion and bond for structural members.
Outcome4	To design and analysis of singly doubly reinforced beam, one way two way slab.
Outcome5	To design and analysis of column, footing and staircases.
SUBJECT/CODE : ENVIRONMENTAL ENGINEERING I /CE 602	
Course Objective:	The ability to apply the fundamental knowledge of science and engineering to assess environmental and health risk
Course Outcome:	Students will be able to-
Outcome1	To understand the Plan and design water supply systems for a rural/urban area , Use population forecasting methods.
Outcome2	To Design various water treatment units and plan their operations on the basis of raw water quality and water demand.
Outcome3	Apply knowledge of advanced water treatment processes for individual water purification
Outcome4	Students understood Sewage quantity and quality for better treatment so as to reduce scarcity by recycling waste water
Outcome5	Students understood industrial waste water quantity and quality for achieving better sanitation in society
SUBJECT/CODE : ADVANCE PAVEMENT DESIGN /CE 603 C	
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 : ENVIRONMENTAL IMPACT ASSESSMENT /CE604(C)	
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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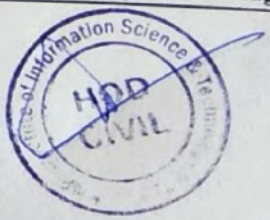
SEMESTER -IV	
SUBJECT/CODE :ENERGY AND ENVIROMENTAL ENGG. /ES-401	
Course Objective:	The objective of this Course is to provide an introduction to energy systems and renewable energy resources, with a scientific examination of the energy field and an emphasis on alternative energy sources and their technology and application.
Course Outcome:	Students will be able to-
Outcome1	Students are able to understand the energy & its importance
Outcome2	Student are able to understand a renewable & nonrenewable resources of energy
Outcome3	Concept of an ecosystem can be understood.
Outcome4	Students are able to understand the Introduction Definition: genetic, species and ecosystem of bio diversity
Outcome5	Environmental Pollution related to Civil Engineering can be understood
SUBJECT/CODE : CONSTRUCTION TECHNOLOGY / CE402	
Course Objective:	This course will introduce and train students in the basic skills necessary to pursue a career in construction. This course covers foundations, flooring, framing, plumbing, electrical, sheet rock, windows, doors etc.
Course Outcome:	Students will be able to-
Outcome1	Students are able to understand the component of building with their function.
Outcome2	Students are able to understand construction procedure of different components
Outcome3	Design of Earthquake resistant Building can be implemented in general practice.
SUBJECT/CODE : STRUCTURAL ANALYSIS - I / CE 403	
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.
Course Outcome:	Students will be able to-
Outcome1	After completion of this subject student will be able to analyze Fixed and continuous beams.
Outcome2	Student will be able to analyze moving loads and will be able to draw influence line diagrams for simply supported beams.
Outcome3	Student will also be able to analyze columns.
Outcome4	Student will also be able to analyze three hinge arches and three hinge suspension bridges.



Outcome5	Influence Line diagrams & Train load analysis can be understood
SUBJECT/CODE : TRANSPOTATION ENGG -I / CE 404	
Course Objective:	The students will get a diverse knowledge of Railway, Bridge and Tunnel engineeri practices applied to real life problems.
Course Outcome:	Students will be able to-
Outcome1	Steps involved in Planning of a railway track will be understood.
Outcome2	Students will get the feel of fundamentals of railway engineering from the syllabus.
Outcome3	under railway Engineering students get knowledge of railway geometrics, Signaling & interlocking Points, crossing and turnouts etc.
Outcome4	Subject will be helpful to introduce Bridge Engineering.
Outcome5	Similarly students get knowledge regarding fundamentals of tunnel its excavation methods, support systems, and executional aspects of tunnel
SUBJECT/CODE : ENGINEERING GEOLOGY & REMOTE SENSING / CE 405	
Course Objective:	To study and identify different types natural materials like rocks & minerals and s
	This course aims to introduce students on concept of Remote Sensing (RS), overvie of RS image processing and its' applications.
Course Outcome:	Students will be able to-
Outcome1	As a students in the Bachelor of Engineering (Civil Engineering) will undertake courses in geology Such as Rock and mineral.
Outcome2	Students are able to understand the use of different rock and mineral
Outcome3	Students are able to understand the different geological structures and their impact on civil engineering structure.
Outcome4	Students are able to decide the suitable site selection for civil engineering structures
Outcome5	Concept of GPS , GIS & Remote sensing will be delivered