



NIIST BHOPAL

NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY
DEPARTMENT NAME: CIVIL ENGG

BRANCH

CIVIL

SESSION

JAN-JUNE
2020

Course Objective & Course Outcome

SEMESTER -VIII

SUBJECT/CODE : ADVANCE STRUCTURAL DESIGN II / CE8001

Course Objective:	To teach the students advance level design of steel structures.
Course Outcome:	Students will be able to design complicated structures like plate girder, gantry girder, Industrial structures, tanks and slabs.

SUBJECT/CODE : GEOTECHNICAL ENGINEERING II / CE8002

Course Objective:	To provide a coherent development to the students for the courses in sector of Geotechnical Engineering & Soil Improvement Techniques etc.
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 : TRAFFIC ENGINEERING / CE8003 (2)

Course Objective:	To have an overall knowledge of the traffic components and assess the traffic characteristics and related problems To provide knowledge of traffic control devices and its techniques in transportation interaction.
Course Outcome:	Students will be able to-
Outcome1	The students will gain knowledge in the fundamentals components of traffic engineering and its features.
Outcome2	The students will get a vast understanding on various traffic enforcements rules and regulations.

SUBJECT/CODE : GEOINFORMATICS / CE8004 (3)

Course Objective:	This course aims at introducing concept, principles and applications of Geographic Information Systems (GIS). Course also aims to develop the skill of using software and other This course aims to introduce students on concept of Remote Sensing (RS), overview of RS image processing and its' applications.
Course Outcome:	Students will be able to-
Outcome1	Student are able to understand the Basic concept of Remote sensing, Data and Information
Outcome2	Students are able to understand the Remote Sensing Platforms and Sensors
Outcome3	Students are able to understand Introduction to GIS & components of a GI
Outcome4	Integrated Applications of Remote sensing and GIS can be understood





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Course Objective & Course Outcome

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-

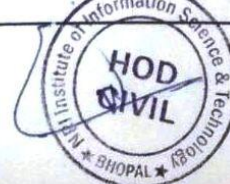
- Outcome1** Students will identify suitable type of pavement.
- Outcome2** Students understood Behaviour of structural components of Flexible pavement.
- Outcome3** Student will know the design methods of flexible and rigid pavement.
- Outcome4** Students will understand the maintenance & repair of 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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BRANCH	CIVIL	<u>Course Objective & Course Outcome</u>
SESSION	JAN-JUNE 2020	
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 engineering	



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 soil.
	This course aims to introduce students on concept of Remote Sensing (RS), overview 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

