



NIIST BHOPAL

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

BRANCH

CIVIL

SESSION

JAN-JUNE
2017

Course Objective & Course Outcome

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 paramete 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 simple steel structures.
Course Outcome:	Students will be able to-
Outcome1	Identify the different failure modes of steel tension and compression members and beams, a 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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Course Objective & Course Outcome

SEMESTER -VI

SUBJECT/CODE : STRUCTURAL ANALYSIS-II (CE-601)

Course Objective:

To understand the concept of determinate and indeterminate structures, analyses of determinate and indeterminate structures.

Course Outcome:

Students will be able to-

Outcome1

The student will have the knowledge on advanced methods of analysis of structures like kanis method, Moment distribution method, Slope and deflection method

Outcome2

Students are able to do the analysis of beam by using advance method of analysis

Outcome3

Students are able to do analysis of portal frame.

Outcome4

Understanding of advanced methods of analysis of structures like flexibility and stiffness method

SUBJECT/CODE : WATER RESOURCES & IRRIGATION ENGINEERING (CE-602)

Course Objective:

To study occurrence movement and distribution of water that is a prime resource for development of a civilization..

Course Outcome:

Students will be able to-

Outcome1

To equip the students with capabilities required for identifying, formulating and management of water resource related issues/problems.

Outcome2

To impart training to the students to prepare them for conducting high value research on water resources and other related issues and also to pursue lifelong learning.

Outcome3

To introduce the students to the water related problem at international, national and regional level so that they get exposure to the burning issues.

Outcome4

To impart training to the students to gain capabilities for conducting joint collaborating works.

SUBJECT/CODE : ENVIRONMENTAL ENGINEERING - I (CE-603)

Course Objective:

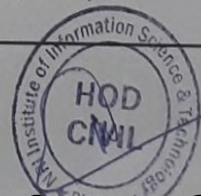
The ability to apply the fundamental knowledge of science and engineering to assess environmental and health risk

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 : GEOTECH ENGINEERING-I (CE-604)

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 : STRUCTURAL DESIGN & DRAWING-II (STEEL) (CE-605)

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.





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Course Objective & Course Outcome

SEMESTER -IV

SUBJECT/CODE : SYSTEM ENGINEERING / ES221

Course Objective: This course in systems engineering examines the principles and process of creating effective systems to meet application demands. The course is organized as a progression through the systems engineering processes of analysis, design, implementation, and deployment with consideration of verification and validation throughout.

Course Outcome: After successful completion of the course, students would be able to Plan and manage the systems engineering process and examine systems from many perspectives (such as software hardware, product, etc.) Students can distinguish critical functions, diagnose problems, and apply descopeing strategies and judge the complexity of production and deployment issues

SUBJECT/CODE : Mathematics-III / MA220

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 : Building Planning & Architecture / CE-228

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.

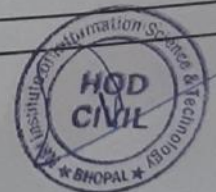
Course Outcome: Students will be able to-
Understand the building planning, orientation, drawing and architectural aspects.

- Outcome1 Representing a building on Paper.
- Outcome2

SUBJECT/CODE : STRUCTURAL ANALYSIS I / CE-227

Course Objective: To understand the concept of determinate and indeterminate structures, analyses determinate and indeterminate structures. To understand the principle of virtual work and its application of influence line diagrams in structural analysis problem. The course will be 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

SUBJECT/CODE: Water Supply & Waste Water Engineering-I / CE-226

Course Objective: To apply knowledge of mathematics, physics, chemistry, and microbiology to solve and analyze engineering problems related to water and wastewater collection, transport, and treatment. To use the fundamental principles of mass balance, chemical analysis 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
Outcome3	Understand and analyze contemporary global water and wastewater issues such as water shortage,

SUBJECT/CODE: Concrete Technology / CE-225

Course Objective: The course covers the fundamentals related to concrete and concrete material, besides dealing with masonry, reinforcement, etc

Course Outcome:	Student will be able to-
Outcome1	Understand the basic knowledge of concrete is, how it is formed, what materials are involved and
Outcome2	Ability to design and analyze special concrete and their applications.

