



**BANSAL INSTITUTE OF RESEARCH & TECHNOLOGY,  
BHOPAL  
Kokta Anand Nagar, Bhopal**



**DEPARTMENT OF CIVIL ENGINEERING**

**COURSE OUTCOMES (COs)**

**Semester: VII**

|                                       |                                                                                                                                                  |                            |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Course Name: Geotechnical Engg</b> |                                                                                                                                                  | <b>Course Code: CE-701</b> |
| <b>Students will be able to:</b>      |                                                                                                                                                  |                            |
| <b>CO1:</b>                           | Identify and classify different types of soils based on their engineering properties and suitability for civil engineering applications.         |                            |
| <b>CO2:</b>                           | Analyze the factors affecting the engineering behavior of soils and select appropriate soil types for various geotechnical engineering projects. |                            |
| <b>CO3:</b>                           | Determine stresses and compressibility characteristics of soils for the analysis of foundation and earthwork problems.                           |                            |
| <b>CO4:</b>                           | Apply compressibility parameters in the design of foundations and other structures under different loading and drainage conditions.              |                            |
| <b>CO5:</b>                           | Evaluate the shear strength and stabilization properties of soils to ensure the safety and performance of geotechnical structures.               |                            |

|                                           |                                                                                                                                                                     |                              |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| <b>Course Name: Environmental Engg-II</b> |                                                                                                                                                                     | <b>Course Code: CE-702 B</b> |
| <b>Students will be able to:</b>          |                                                                                                                                                                     |                              |
| <b>CO1:</b>                               | Understand the principles of wastewater treatment and explain their importance in environmental protection and everyday life.                                       |                              |
| <b>CO2:</b>                               | Explain different wastewater treatment methods and select suitable treatment processes for various conditions and applications.                                     |                              |
| <b>CO3:</b>                               | Understand the unit operations and unit processes involved in water and wastewater treatment systems and apply them to practical engineering problems.              |                              |
| <b>CO4:</b>                               | Understand the principles and operation of filtration and sludge treatment processes, and evaluate their applications in wastewater treatment.                      |                              |
| <b>CO5:</b>                               | Analyze issues related to air pollution and wastewater management and apply appropriate prevention and control techniques for sustainable environmental management. |                              |



**BANSAL INSTITUTE OF RESEARCH & TECHNOLOGY,  
BHOPAL**  
**Kokta Anand Nagar, Bhopal**



**DEPARTMENT OF CIVIL ENGINEERING**

|                                                 |                                                                                                                                                              |                              |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| <b>Course Name: Integrated Waste Management</b> |                                                                                                                                                              | <b>Course Code: CE-703 C</b> |
| <b>Students will be able to:</b>                |                                                                                                                                                              |                              |
| <b>CO1:</b>                                     | Understand the components of solid waste management systems and explain sustainable approaches for effective waste management.                               |                              |
| <b>CO2:</b>                                     | Understand the planning, design, and operational requirements of effective solid waste management systems.                                                   |                              |
| <b>CO3:</b>                                     | Apply engineering, mathematical, and scientific principles to design efficient waste collection, transportation, route optimization, and processing systems. |                              |
| <b>CO4:</b>                                     | Analyze the operation and performance of resource recovery facilities for effective recycling and waste utilization.                                         |                              |
| <b>CO5:</b>                                     | Understand the design, operation, and management of municipal solid waste composting and sanitary landfill systems for safe and sustainable waste disposal.  |                              |

**Approved By: -  
Head of Department**