

SCHOOL OF TECHNOLOGY



Dr. Nagesh .R. Iyer, Director, Structural Engineering Research Centre with Chancellor, Vice Chancellor, Director & delegates

B.TECH CIVIL ENGINEERING

OBJECTIVES, OUTCOMES AND PROSPECTS

OBJECTIVES

- Will prepare graduates with the technical and managerial skills necessary to enter careers in the planning, design, construction, operation or maintenance of the built environment and global infrastructure.
- Typically have strengths in their knowledge of the building, testing, operation and maintenance of infrastructure with the ability to produce and utilize basic construction documents and perform basic analysis and design of system components whereas baccalaureate degree graduates are prepared to analyze and design systems, specify project methods and materials, perform cost estimates and analyses, and manage technical activities in support of civil projects.



John Smeaton

OUTCOMES

Capable of

- Utilizing graphic techniques to produce engineering documents.
- Conducting standardized field and laboratory testing on civil engineering materials.
- Utilizing modern surveying methods for land measurement and/or construction layout.
- Determining forces and stresses in elementary structural

systems.

- Estimating material quantities for technical projects and
- Employing productivity software to solve technical problems.

Capable of

- Planning and preparing design and construction documents such as specifications, contracts, change orders, engineering drawings and construction schedules.
- Performing economic analyses and cost estimates related to design, construction, operations and maintenance of systems in the civil technical specialities.
- Selecting appropriate engineering materials and practices.
- Applying basic technical concepts to the solution of civil problems involving hydraulics, hydrology, geodetics, structures, material behaviour, transportation systems, and water and wastewater systems.
- Performing standard analysis and design in at least three of the recognized technical specialities within civil engineering technology that are appropriate to the goals of the programme.

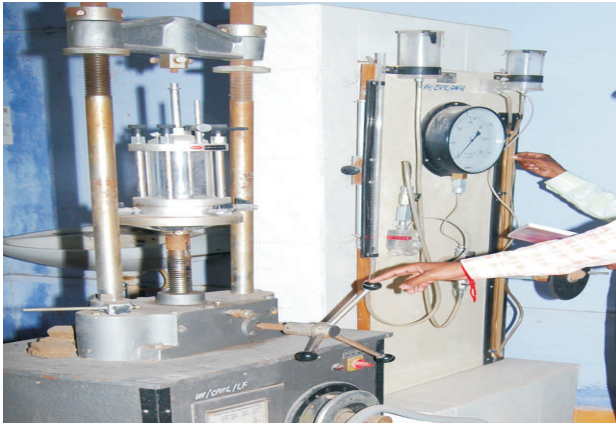
PROSPECTS

The demand for qualified civil engineers is so great with explosion in investment in infrastructure building all over the world that the present supply of manpower will continue to be short.



INDUSTRIAL ACADEMIA INTERACTION

BHEL PROJECT ENGINEERING MANAGEMENT (PEM), BUILDING MATERIALS & TECHNOLOGY PROMOTION COUNCIL (BMTPC), CENTRAL TOOL ROOM & TRAINING CENTRE, CHENNAI PORT TRUST, CONSTRUCTION INDUSTRY DEVELOPMENT COUNCIL (CIDC), ESAB INDIA LTD, INSTITUTE OF SEISMOLOGICAL RESEARCH, INTEGRAL COACH FACTORY (ICF), NATIONAL ACADEMY OF CONSTRUCTION (NAC), NATIONAL COUNCIL FOR CEMENT AND BUILDING MATERIALS (NCB), RITES INDIA, POONDI RESERVOIR, TIRUVALUR, SATHANUR DAM, WATERTREATMENT PLANT, CHEMBARAMPAKKAM



B.TECH CIVIL ENGINEERING

KNOWLEDGE BUFFET



This 3+1 year Industry Stream programme in association with Construction Industry Development Council, Planning Commission, Govt. of India. The curricula of this programme in integration with the diploma curriculum at CIDC. This enables the students to get joint degree after the successful completion of 4 years.

INDUSTRY STREAM

Engineering Geology
 Surveying-I
 Mechanics of Solids
 Fluid mechanics
 Building science
 Engineering mechanics
 Numerical Methods
 Environmental science and engineering
 Highway Engineering
 Surveying-II
 Soil mechanics
 Strength of Materials
 Structural Analysis-I
 Concrete and construction technology
 Environmental Engineering
 Foundation Engineering
 Structural Analysis-II
 Design of RC Elements
 Applied Hydraulic Engineering
 Design of Steel structures
 Design of Reinforced concrete & Brick masonry structures
 Railways, Airports and Docks & Harbours
 Irrigation Engineering
 Water resources engineering
 Estimation and Quantity Surveying
 Pre-stressed concrete structures
 Construction Planning & Scheduling
 Bridge Structures

Hydrology
 Storage Structures
 Industrial Structures
 Tall Buildings
 Groundwater Engineering
 Traffic Engineering & Management
 Environmental Impact Assessment of Civil Engineering Projects
 Industrial waste Management
 Pavement Engineering
 Ground Improvement Techniques
 Geographical Information System
 Design of Plate and shell structures
 Prefabricated structures
 Wind Engineering
 Finite Element methods in Civil Engineering
 Earthquake Resistant Design
 Air-Pollution management
 Municipal solid waste and management
 Ecological Engineering
 Management of Irrigation systems
 Coastal zone management
 Introduction to soil dynamics and machine foundations
 Rock Engineering
 Cartography
 Electronic Surveying
 Housing Planning and Management
 Smart structures and smart materials

LABORATORIES

Surveying Practical-I Laboratory - Strength of Materials Lab - Hydraulics Engineering Laboratory - Surveying Practical-II- Laboratory - Environmental Engineering laboratory - Soil Engineering lab - Computer Aided Building drawing - Environmental design and drawing using CAD - Concrete Technology Lab - Survey Camp - Irrigation design and drawing using CAD - CADD - Lab(Computer Aided Design & Drafting)