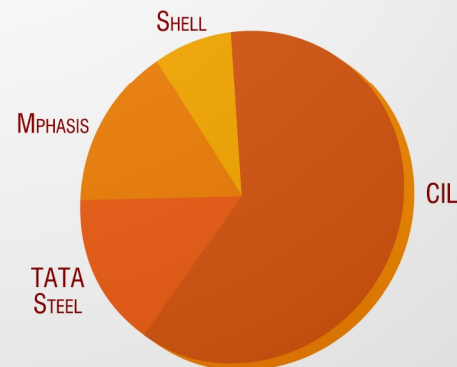
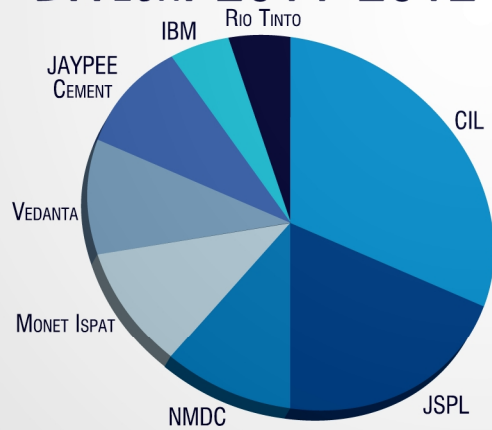


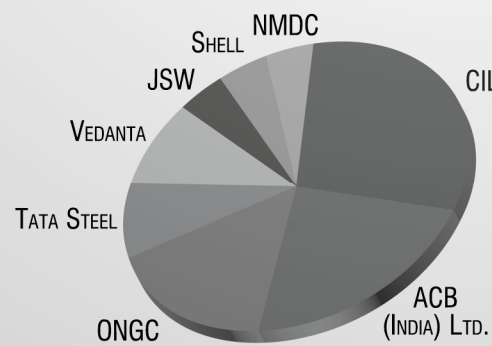
06. Treatability & Disposal of Mine Water.
07. Air quality monitoring.
08. Setting up of standards as ISO 14001,OHSAS,HAZOP;Risk Assessment, Ind. Safety.
09. Design of Water & Effluent Treatment plant.
10. Design of oil &grease trap.
11. Design of Rainwater Harvesting in Mining Areas & Integrated Thermal power plants.
12. Mine Backfilling by using fly ash & its feasibility analysis for opencast mines.
13. Geotechnical Analysis of overburden-dump materials for stability analysis.
14. Design of benign geoliner using fly ash along with other mine waste at disposal sites for prevention of ground water contamination.
15. Utilization of fly ash as soil conditioner for agriculture.
16. Utilization of fly ash, in bio reclamation of overburden dumps & other degraded land.
17. Selection & Screening of native species for restoration of overburden dumps.
18. Design of green belts for mining areas.
19. Quantification of Soil Erosion in Mining Areas.
20. Design of garland drains & other control measures for soil erosion management.
21. Soil Quality Monitoring in Mining Area.
22. Impacts of mining & related activities on bio-diversity.
23. Ecological sampling & monitoring for mining projects.
24. Sustainability studies & Environmental Reporting.
25. Rehabilitation, Resettlement & Reclamation issues.

PLACEMENT SCENARIO

B.TECH. 2011-2012



B.TECH. 2010-2011



B.TECH. 2009-2010

CONTACTS

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Information Booklet

DEPARTMENT OF
**ENVIRONMENTAL SCIENCE
& ENGINEERING**



Indian School Of Mines, Dhanbad

"Connecting technology
with Environment"

DESIGNED BY:
Aftab Jamal

ABOUT INDIAN SCHOOL OF MINES, DHANBAD

The Government of India in 1920 decided to establish a Mining Institution for the Nation, which is to be financed by the Central Govt. & be named as Indian School of Mines, Dhanbad.



The Indian School of Mines was formally opened by his Excellency The Vice Roy Lord Erwin on 9th December, 1926 in the pattern of Royal School of Mines, UK. The School is offering B.Tech (through IIT JEE), M.Tech., M.Sc.Tech., M.Phil., Ph.D, D.Sc & MBA (through CAT) to the Indians as well as foreign nationals. The School today is making foray into newer areas of academic endeavours intune with the changing times.

ABOUT THE DEPARTMENT



The Department of Environmental Science and Engineering is the youngest department created out of existing Centre of Mining Environment(1990) at Indian School of Mines in June 2007 with the commencement of a regular B.Tech program in Environmental Engineering under IIT-JEE (First of its kind offered by any national institute).

The outgoing students are well accepted by organizations like Coal India Ltd, National Mineral Development Corporation, Uranium Corporation of India Ltd, Gujarat Mineral Development Corporation, Tata Steel, Shell Technology, Rio Tinto, ONGC, Monnet Ispat, JP Industries, JSW, JSPL, Vedanta, TCS, IBM, Mphasis, Electrosteel Casting, etc. Apart from B.Tech (Env. Engineering), , the Department is also offering regular M.Tech. Program in Environmental Science and Engineering (since 1990) and Ph.D. program in Environmental Science, Environmental Science and Engineering disciplines. The Department also offers course on Environmental Studies to Undergraduate Students of various Departments of the Institute. The students are also well accepted by the Industry.

CURRICULUM

The major areas of study under the curriculum of the B.Tech.(Environmental Engg.) academic programme follows:

(<http://www.ismdhanbad.ac.in/depart/cme/academic.html>)

Core courses of B.Tech Environmental Engineering are as follows.

- * Environmental Chemistry
- * Environmental Biology and Ecology
- * Environmental Microbiology
- * Air Pollution
- * Ait Pollution Control
- * Noise: Fundamentals and Control
- * Water resource Planning and Management
- * Municipal Wastewater Engineering
- * Industrial Wastewater Treatment
- * Water Quality and Treatment
- * Environmental Hydraulics
- * Land Management: Principles and Design
- * Land Surveying and Mapping
- * Geology for Environmental Engineering
- * Environmental Geo-Technology
- * Solid Waste Management
- * Remote Sensing and GIS
- * Instrumentation methods for Env. analysis
- * Energy and Environment
- * Leadership Projects
- * Environmental Policy and Legislation
- * Environmental Impact Assessment
- * Design of Environmental System
- * Environmental Auditing
- * Environmental Modelling
- * Risk Assessment & Disaster mgmt.
- * Solid Waste Management
- * Remote Sensing and GIS
- * Environmental Geo-Technology
- * Land Mgmt: Principles & Design
- * Land Surveying and Mapping
- * Geology for Environmental Engg.
- * Energy and Environment
- * Land Surveying and Mapping
- * Industrial Environmental Issues: Case Studies
- * Occupational Health & Safety
- * Environmental Aspects of Industries-I (Petroleum, Chemical and Allied Industries)
- * Environmental Aspects of Industries-II (Mining, Metallurgy, Thermal & Allied Industries)
- * Sustainable Development of Industry

LABORATORY FACILITIES

The department has a number of laboratories specially dedicated to core environmental research areas that provide hands on experience to the students of all programmes.

Some of the laboratories are as follows:

- * Instrumentation
- * Micrometeorological
- * Weather Station
- * Air Pollution
- * Noise Pollution
- * Water Chemistry
- * Municipal Wastewater Engineering
- * Environmental Microbiology
- * Soil Quality & Geotechnical Engineering
- * Land Use & Hydrogeology
- * Land Surveying
- * Remote Sensing and GIS
- * Radiation
- * Fluid Mechanics
- * Computer
- * Industrial Waste Water
- * Experimental Area (ISM Campus and in Industrial Fields)
- * Reclamation
- * Ecology

FIELD EXPOSURE

	EXPOSURE
Industrial Training	Training or internship at various companies and institutes like CIL, ONGC, SESA, CMPDI, JSW, TATA Steel, NMDC, Shell India Ltd., Indian Oil Ltd., NTPC, etc.
Field trips & Excursions	Excursion at Bengal Engineering College, Shivpur; SPCB, West Bengal; IIT Kharagpur; NIT Rourkela; NEERI, Nagpur; NBSSLUP, Nagpur; Rourkela Steel Plant; CPCB; IARI New Delhi; Sriram Institute of Industrial Research; IIP Dehradun, WII Dehradun; ONGC (KDMIPE) Dehradun; CIMFR, Dhanbad; Chandrapura Thermal Power Plant(DVC); SAIL Bokaro, BCCL Block II Mine, Maithan Hydel Power Plant(DVC);

STUDENT ACHIEVEMENTS

- * Students have completed different projects in reputed institutions like the *National University of Singapore (NUS)*, *MIT Boston*, *Chaing Mai University*, *Joanneum Research, Austria* under the summer internship program.
- * Students have worked in different areas of their interest and presented papers in various national and international conferences.
- * Each and every student of the batch is working on different projects. Their performance is graded at the end of the semester.
- * Students have succeeded in collaborating the departmental activities with various National and International organizations like Indian Youth Climate Network, Society of Petroleum Engineering and Institute of Electrical & Electronics Engineering. IYCN has been initiated by the student of our department.
- * Students have participated and one of them won a silver medal in the case study organized by the Shell Industries on harnessing the CBM from the block and to overcome with the environmental problems related to CBM generation.

SERVICES STUDENTS CAN RENDER TO THE INDUSTRY

The details of services that students can render are:

01. EIA Study of all major Industries.
02. Hydrogeological and Geochemistry studies For Water Management.
03. Water Quality Monitoring and Assessment.
04. Effluent Quality Monitoring and Assessment,
05. Water Balance Studies for effective utilization of mining water.