

Department of Mining Engineering, Indian School of Mines, Dhanbad



Introduction

Situated in the heart of the country's prime coking coal belt, 260 kms from Kolkata with a campus spread over 88 hectares the fully residential ISM has all the facilities of world class academic institute. What started as an institution to impart mining education has graduated into a full-fledged technical institution of international acclaim offering a host of programmes like B.Tech., M.Tech., M.Sc. Tech. and MBA. In addition the School offers M. Phil. and full as well as part time Ph.D. programmes, while also awarding D.Sc. as the highest degree of academic achievement. The serene campus comprises academic buildings, student hostels and 100% residential facilities for faculty and staff apart from other infrastructure facilities for a cosmopolitan community. The School has links with reputed universities and institutes across the globe and has an alumni base all over the world. The School today is making foray into the newer areas of academic endeavours in tune with the changing times.

The Department of Mining Engineering was established in 1926 with the founding of the School in that year by the Viceroy of India, Lord Irwin. Over the Past 88 years, it has developed and grown to become the largest Department of its kind in the country with excellent facilities for teaching and research and widespread activities in both coal and non-coal/metalliferous mining sectors. Its high reputation attracts students from all parts of India as well as from abroad.

The Department has been recognized as a QIP Centre for the faculty members of other Mining Engineering Departments of the country to pursue higher studies. The Department has been accorded the status of "Centre of Advanced Studies" in Mining Engineering by the University Grant Commission, in recognition of its high standards of teaching, research and services to the mining industry. The students passing out from this Department have traditionally occupied top positions in the government departments as well as in the mining industry, both in India and abroad.

Postgraduate Programmes

Admission to the 2-year M. Tech. programmes, is made on the basis of GATE Score/ ISM Entrance Examination and satisfactory performance in an interview, held generally in June – July every year. Candidates sponsored by Govt./Semi-Govt./Public Sector Undertakings, are also admitted to the M. Tech. programmes. Such sponsored candidates are not required to produce GATE Score and are not eligible for scholarship. Candidates seeking admission to M. Tech. programmes without GATE Score, have to qualify in a written test conducted by the School followed by a personal interview; such students are not eligible for any scholarship. The Department offers various 2-year M. Tech Programmes on different subjects of mining and M. Tech Geomatics is one of them. M. Tech Programme in Geomatics

In view of importance of the subject vis-à-vis the needs of qualified surveyors in mining and allied industry, a new M. Tech Programme in Geomatics with special emphasis on Mine Surveying has been introduced for the first time in the country in the Department of Mining Engineering at Indian School of Mines, Dhanbad. The students for this programme are selected on the basis of GATE scores and personal interview of the candidates having basic qualification of B.Tech/B.E./4-year B.Sc. (Engineering) in Mining /Environmental/ Civil/ Geomatics/ Geo Informatics/ Geo Sciences/Remote Sensing/Computer Science/IT or M.Sc. in M. Sc. Tech (Applied Geology/Applied Geophysics/with 60% marks in Mathematics at Graduate level/ M. Sc. in Geospatial Sciences /GIS/Geo-information. The Course covers both traditional as well as advanced surveying and attaches special emphasis on Mine Surveying. This is a two years full time course with four semesters out of which the first two semesters are devoted to class work with practical including summer training and the other two semesters are earmarked for thesis work. The Course is also approved by DGMS. M. Tech (Geomatics) degree holder of this institute will be granted Mine Surveyor

Certificate of Competency subject to having one year of experience

Main area of coverage in the course

- Mine Surveying
- Digitization of old map
- Remote Sensing & GIS tools and Techniques
- Preparation of Computer Aided Plans & Section including GIS based maps
- Preparation of Mine Information Systems using GIS
- Application of information Technology in Mine Surveying
- Photogrammetry and Remote Sensing

Research, Training, and Consultancy

The department has so far undertaken more than 100 consultancy projects in the various area of Mine Surveying, Land information, Mine Safety, Disaster Management and solved the real life problems of Mining Industry. The department has contributed towards the capacity building Training and R&D projects GIS based Land Information System including digitization of mine plans (surface & Underground), Digitization and Mapping, Application of GIS & Remote Sensing in Mine Safety & Disaster Management and Application of advanced GIS & surveying techniques for preparation of digital mine plans, quick updation of Mine

plans & sections, 3D visualization of mine (Underground & opencast) , check surveying and correlation of underground mines Geomatics Infrastructure The Department has an excellent infrastructure for Geomatics Lab and Mine Survey. The students of this course are provided with hands on training in the use of modern state-of-the-art survey instruments and softwares being used in the Mining Sector. The Geomatics Facility includes most of the geospatial softwares such as ARC GIS, and relevant Remote Sensing softwares and relevant modern survey instruments as required in the Geomatics domain Like Plotter and Scanner and DGPS and other GPS for extracting and processing the information from mine plans and to update them with the latest information •

For More Details

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