



UNDERGRADUATE AND GRADUATE PROGRAMS

The FITB offers undergraduate and graduate programs, as follows:

Undergraduate programs are:

1. Geological Engineering
2. Meteorology
3. Oceanography
4. Geodesy and Geomatics Engineering

Graduate programs are:

1. Geological Engineering (Master and Doctoral programs)
2. Earth Science (Master and Doctoral programs)
3. Geodesy and Geomatics engineering (Master and Doctoral Programs)
4. Ground water Engineering (Master Program)



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INTRODUCTION

The Faculty of Earth Sciences and Technology, known as FITB, is part of the academic units of Institut Teknologi Bandung (ITB) which carries out education, research, community empowerment and services in the fields of geosciences and geoengineering, and related fields. The FITB was established in August 2007 as a part of development of Faculty of Earth Sciences and Mineral Technology into two faculties, namely the Faculty of Earth Sciences and Technology and the Faculty of Mining and Petroleum Engineering. At the beginning, the FITB consists of three undergraduate programs (Geological Engineering, Oceanography, and Meteorology), three master programs (Geological Engineering, Earth Sciences, and Groundwater Engineering), and two doctoral programs (Geological Engineering and Earth Sciences). In October 2007, the undergraduate and graduate programs of Geodesy and Geomatics Engineering, which were formerly a part of the Faculty of Civil and Environmental Engineering, joined the FITB.

The faculty always implements the Three-Mission of Higher Education, known as "Tridarma", consisting of education, research, and community services. Education at the FITB is geared toward producing capable graduates who have strong competitive edges, environmentally aware, and technologically driven, to serve the earth sciences and technology, and related fields. Research carried out at the faculty also takes into account the unique condition of the Indonesian archipelago or maritime continent. One of the research aims is to support and enrich educational curricula and enhance the quality of FITB graduates. Community empowerments and services to the industry by the faculty members are based on their professional expertise. The faculty members are encouraged to carry out consulting and training to the industry and community, to apply their expertise in the broader society for the benefit of all.



FACULTY OF EARTH SCIENCES AND TECHNOLOGY

INSTITUT TEKNOLOGI BANDUNG (ITB)



RESEARCH ACTIVITIES

Research is one of the main activities to support the process of quality education. Research activities involve the faculty members, students, and laboratory technicians.

In Geological Engineering, study program research activities are mainly in petrogenesis, mineralization and alteration, structural analysis and modelling, stratigraphy and basin study, biostratigraphy, paleontology and quaternary geology, rock-soil characterization and landslide assessment, hydrogeological simulation, volcanic and geothermal studies and geocomputation.

In the Meteorology, study program research activities are mainly related to the study physical and dynamical properties of the atmosphere in order to understand the processes related to weather and climate at different time and spatial scales. There is particular emphasis on studying issues related to global climate changes, and extreme weather and climate in the Indonesian maritime continent with their impacts on local, regional, and global atmospheric environment.

In the Oceanography, study program research topics are mainly related to the study of physical and dynamical properties of sea waters (e.g. waves, tides, and currents) which are important for marine industry/technology (e.g. fisheries oceanography, and management of coastal waters environment), marine environment (e.g. marine ecosystem, sea surface topography analysis, sea-air interaction and ENSO, global changes, and marine hazards), and exploration of marine renewable resources.

In the Geodesy and Geomatics Engineering, study program research topics are mainly related to processes and changes of environmental phenomena with special reference to quality of human living. Challenging subjects range from earth surveying to satellite application such as remote sensing and Global Positioning System as well as Geographic Information System.

FACILITIES

Teaching and research activities are supported by 18 (eighteen) laboratories:

- 1 Engineering Geology
- 2 Geodynamics
- 3 Computational Geology
- 4 Petrology and Volcanology
- 5 Sedimentography
- 6 Paleontology
- 7 Geology and Geothermal Exploration
- 8 Theoretical Oceanography
- 9 Regional Oceanography
- 10 Coastal Oceanography
- 11 Physical Oceanographic Observations
- 12 Biological Oceanography
- 13 Meteorological Analysis
- 14 Applied Meteorology
- 15 Survey and Cadastre
- 16 Remote Sensing and Geographical Information Sciences
- 17 Geodesy
- 18 Survey and Engineering Hydrography

FACULTY PERSONNEL

Dean

Prof. Dr. Irwan Meilano, ST., M.Sc.

Vice Dean for Academic and Student Affairs

Prof. Agus Mochamad Ramdhan, ST., MT., Ph.D.

Vice Dean for Resources Affairs

Dr. rer.nat. Mutiara Rachmat Putri, Ssi., M.Si.

Academic Staff and Research Groups

The FITB is supported by 107 academic staff members with more than 75,7% holding PhD degree. The academic staff are grouped into eight research groups:

1. Petrology, Volcanology, and Geochemistry
2. Paleontology and Quaternary Geology
3. Geodynamic and Sedimentology
4. Applied Geology
5. Oceanography
6. Atmospheric Sciences
7. Geodesy
8. Remote Sensing and Geographical Information Science
9. Surveying and Cadastre
10. Engineering of Sea, Coastal and Maritime Region



CURRICULUM UNDERGRADUATE

There are three mandatory core knowledge disciplines offered to undergraduate students in the faculty. These are Basic Sciences, Engineering Sciences, and Engineering Design. In addition, students are also offered diverse topics such as Humanities, Social Studies, Civic & Politics, Environmental Science, Religious Studies, and Sports. Education in the bachelor (sarjana) level is carried out in four years or 144 semester credit units (scu). The master's

program is designed for 3 or 4 semesters (1.5 or 2 years) with 54 scu, and the doctoral program is designed for 6 semesters (3 years) with 68 scu.

COOPERATION

The FITB has established national and international cooperation with industries, educational and research institutions. Previous results of the collaborative research with the institutions have resulted in several publications in scientific conferences and peer reviewed journal. Such cooperations have been carried out to support the goals of the education, which are based on research and community services. In addition, the FITB has also conducted numerous third party projects either directly or indirectly, such as: education and training, product design and services, consulting and advisory services, researches and surveys, and practical training for students.