WORK PROSPECTS

Oceanography graduates have the opportunity to take part in the fields of:

(1) Education, either at public or private universities

(2) Research, such as the Marine and Fisheries Research Agency (BRKP) of the Ministry of Maritime Affairs and Fisheries (KKP), BPPT, LIPI Oceanographic Research Center, National Institute of Aeronautics and Space (LAPAN), Meteorology, Climatology and Geophysics Agency (BMKG), Center for Resources Research and Development Air (Department of Public Works), (DINAS HYDRODISHIDROS TNI AL, Center for Research and Development of Marine Geology (PPGL), BATAN, Bakosurtanal, PEMDA, and foreign universities (a.l.: Columbia University, USA; Kiel University and Hamburg University, Germany; Tohoku University, Hiroshima University, and Kyoto University, Japan; Utrecht University, TU Delft, WL | Delft Hydraulics, and Twente University, The Netherlands)

(3) Offshore oil exploration, for example at Pertamina and Schlumberger

(4) Consultants, a.l.: in the field of environment and information technology

(5) Foreign and national private survey companies

(6) Other fields outside Oceanography such as the field of management.

ABOUT US

Indonesia's strategic geographical conditions and the physical fact that Indonesia is the largest archipelagic country in the world which has a sea area of 62% of its territorial area make coastal and marine resources an important and beneficial source of foreign exchange for national development. For this reason, Human Resources (HR) are needed who have adequate knowledge and be able to play a role and contribute to the development of the nation from the marine sector. In order to meet human resource needs, the ITB Undergraduate Program of Oceanography was established in 1998.

The Undergraduate Program of Oceanography (S1) curriculum is designed in eight semesters (4 years) with 144 Semester Credit Units (SKS) and in the new academic year ITB Oceanography accepts students with a capacity of 40 people. The source of input for the ITB Oceanography is high school graduates in the exact field who have a strong foundation in the fields of mathematics, physics, and natural sciences.

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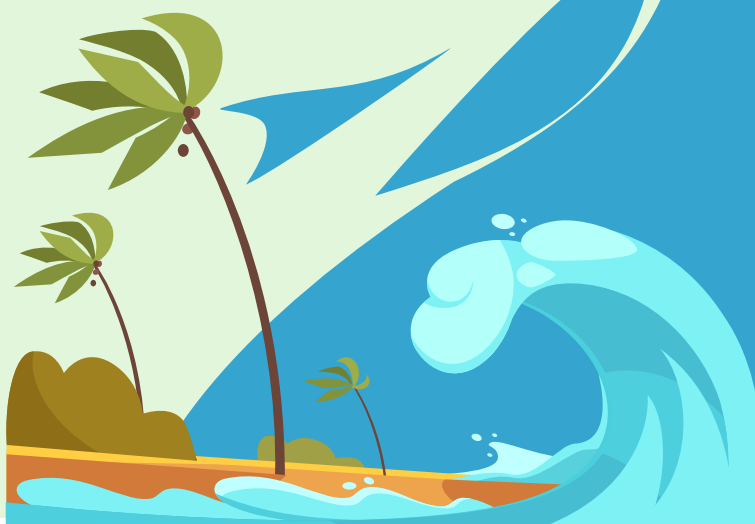
UNDERGRADUATE PROGRAM

OCEANOGRAPHY

FACULTY OF EARTH SCIENCES AND TECHNOLOGY
INSTITUT TEKNOLOGI BANDUNG (ITB)



APPLICATION OF OCEANOGRAPHY

The utilization and application of oceanography are very broad. ITB Oceanography has established partnerships with various government and private agencies/institutions in using the results of oceanographic studies in Indonesian waters in various fields such as:

1. Management of the marine environment for seawater circulation patterns, tides and sea transport, sea sand mining, and distribution of waste heat around the PLTU;
2. Marine engineering such as beach reclamation, shoreline changes, wave fields around coastal structures, as well as refraction and wave diffraction;
3. Natural disasters such as early warning systems and tsunami modeling;
4. Ecology and environment such as nitrogen distribution and marine ecosystem dynamics;
5. Fisheries: prediction of upwelling areas;
6. Sea defense: internal wave and acoustic wave propagation;
7. Sea-atmospheric interactions such as wave climate, El Niño and La Niña, etc.

FACILITIES

The research and education process at Oceanography Study Program ITB is supported by various facilities and laboratories such as:

1. Theoretical Oceanographic Laboratory
2. Regional Oceanographic Laboratory
3. Applied Oceanography Laboratory
4. Public Libraries and web-based information networks
5. Survey equipment includes tide gauge, aquadopp current profiler, and U-10 water quality checker, diving equipment
6. Computer equipped with LAN and Internet

FACILITIES

Oceanography is the science that studies the physical and dynamic processes of seawater. Oceanographers dedicate their field of study to marine issues on a local, regional and global scale, both pure research and applied studies that can support marine and coastal environmental studies, and support the exploration of marine resources, as well as support the development and application of marine engineering and technology. The studies studied at the Oceanography ITB cover the physical and dynamic processes of seawater from theoretical to applied such as studies of tide dynamics, ocean currents, ocean waves, ocean-atmosphere interactions, tsunamis, dynamics of marine ecosystems, prediction of upwelling areas for fishing ground, the erosion and deposition of coastal sediments to the spread of oil spills and other pollutants in the sea. The study area reviewed starts from the headwaters of rivers, estuaries, coastal waters, and high seas. Field observations, laboratory studies, computer modeling and simulation, and remote sensing applications are the main methods in this science. Research fields currently being developed to support the educational process in Oceanography ITB are: Ecosystem Dynamics of the Marine Environment, Alternative Energy from the Sea, Marine Disasters and Mitigation, Oceanographic Modeling, Coastal Management, Application of Internal Waves and Underwater Acoustics in the Military Field, and Interaction Ocean Atmosphere.