ACADEMIC GUIDEBOOK

Marine Science and Technology Undergraduate Program
Faculty of Fisheries and Marine Sciences
The Department of Marine Science and Technology (the Department) is one working unit under the Faculty of Fisheries and Marine Science, IPB University (FPIK-IPB). The Department offers Bachelor degree with Honour (BSc.Hons) in Marine Science and Technology. The department consists of four academic divisions, which includes: Marine Hydrobiology/BIO, Oceanography/OSI, Ocean Acoustics and Instrumentation/AIK, and Marine Remote Sensing and Geographic Information System/ISK.

The history of the formation of the Department of Marine Science and Technology (ITK) began with the initial establishment of the Study Program (PS) of Marine Sciences in the academic year 1986/1987. This is in response to the Circular of the Director General of Higher Education No.1023 / D / Q / 1985 concerning the pioneering formation of a new marine science study program (new S1 marine science). Then the IPB Marine Science Study Program was officially confirmed by the Director General of Higher Education Decree No.22 / DIKTI / Kep / 1988 with the principal of developing education and research in the field of marine biological resources exploration. Through the Directorate General of Marine Education Education Project (ADB loan No.894-INO / 895-INO (SF), the main facilities and infrastructure for academic and research activities have been built, namely the Marine Center Building at Darmaga Bogor IPB Campus and the Marine Field Station at Palabuhanratu Sukabumi, West Java.

Based on the Rector’s Decree No.073 / K13.12.1 / OT / 2000 dated May 27, 2000 the status of the Study Program of Marine Sciences IPB was upgraded to the Major of Marine Science and Technology with the mandate to develop marine science and technology to understand the characters, phenomena and processes of physics, chemistry, biology and marine geology by utilizing marine acoustic and remote sensing methods and technology to explore biological resources and the marine environment.

The Department of ITK IPB is the first Marine Science and Technology Department in Indonesia and has always been a trendsetter in that field. Accredited A by BAN-PT and internationally accredited by the Institute of Marine Science in Engineering, Science and Technology (IMarEST) since 2013, ITK has the best quality lecturers with innovative research.
Marine Science and Technology Study Program was Established 1985

Upgrade to Marine Science and Technology Major 2000

Reorganize to Marine Science and Technology Department 2003

Accredited by Institute of Marine Engineering Science and Technology (IMarEST) 2013

Re-accredited by Institute of Marine Engineering Science and Technology (IMarEST) 2019

International Undergraduate Program Marine Science and Technology 2020
Vision

To always stay ahead in the implementation of world-class research-based undergraduate and graduate programs (multi-strata) with major competencies in the field of marine science and technology.

Mission

1. Implement a high quality of marine higher education and conducting comprehensive student development in order to improve the nation’s competitiveness.

2. Develop marine science and technology according to the needs of the maritime community in the present and future trends.

3. Implement a department management system that is characterized by effective, efficient, competent and accountable entrepreneurship.

4. Providing academic facilities and infrastructure that supports the implementation of high-quality multi-strata education programs in the field of marine science and technology.

5. Provide competent human resources in their fields for the organization of marine higher education.
Department of Marine Science and Technology Campus is located in Dramaga, Bogor, West Java, Indonesia.

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Tel. +62 251 9623644
e-mail : itkkipb@apps.ipb.ac.id
website : itk.ipb.ac.id/international_class
Facilities

Teaching and Research Laboratories

- Marine Biology Lab
- Marine Bioprospecting Lab
- Collection room for Marine Organism Specimens
- Marine Biodiversity and Biosystematics Lab
- Marine Microbiology Lab
- Scientific Diving Workshop
- Physical Oceanography Lab
- Chemical Oceanography Lab
- Biogeological Oceanography Teaching Lab
- Oceanographic Data Processing Lab
- Workshop for Marine Instrumentation and Robotics
- Marine Acoustic Lab
- Signal Processing Lab
- Remote Sensing Teaching Lab
- Marine GIS Teaching Lab
- Marine Spatial Modeling and Mapping Lab
- Computer Lab
- Common Computer Lab

Field Station

IFMOS (Integrated Fisheries and Marine Observation System)
Palabuhanratu and Ancol
Public Facilities

- Campus Bus
- Common Class Room
- Campus Library
- Mosque
- Dormitory
- Coffee Shop
- ATM
- Campus Bike
- Student Service Center
Participant of International Class for Indonesian Citizen in 2020 must meet the following requirements:

- Indonesian Citizen (WNI)
- Graduates of SMA / MA / SMK in Science Field both domestically and abroad in year 2018, 2019, or 2020
- Physically and mentally healthy
Program Structure

PROGRAM SCHEME

Option 1
3 + 1 (3 years at IPB, 1 year at partner university)

Option 2
3.5 + 0.5 (3.5 years at IPB, half year at partner university)

Option 3
4.0 + 0 (4 years at IPB)
Semester 1
- Religion
- Bahasa Indonesia
- Introduction to Mathematics
- Biology
- Physics
- English
- Inovative Agro-Maritime

Semester 2
- Pancasila Education and Civilization
- Calculus
- Chemistry
- Business and Entrepreneurship
- Introductory of Fisheries and Marine Science
- Basic Communication
- Ichtiology
- General Oceanography

Semester 3
- Marine Meteorology
- Aquatic Ecology
- Basic Ocean Instrumentation
- Marine Remote Sensing
- Algorithms and Programming
- Scientific Diving
- Marine Biology

Semester 4
- Physical Oceanography
- Statistical Method
- Basic Ocean Acoustics
- Marine Numerical Analysis
- Marine Geographical Information System
- Tropical Marine Ecology
- ----- Elective Courses (2 Courses) ----- 
  - Ecophysiology Marine Organism
  - Marine Biodiversity
  - Marine Morphogenetics
  - Signal Processing
  - Marine Instrumentation

Semester 5
- Marine Survey and Mapping
- Chemical Oceanography
- Fisheries Acoustics
- Marine Fieldwork 1
- ----- Elective Courses (3 Courses) ----- 
  - Marine Microbiology
  - Methods of Data Analysis and Ocean Modeling
  - Bio-Geological Oceanography
  - Marine and Fisheries Artificial Intelligence
  - Ocean Acoustic
  - Marine Biooptics
  - Health and Safety Work at Sea

Semester 6
- Marine Fieldwork 2
- Scientific Method
- Frontier in Marine Science and Technology
- ----- Elective Courses (5 Courses) ----- 
  - Marine Bioprospecting
  - Marine Biogeography
  - Environmental Oceanography
  - Fisheries Oceanography
  - Operational Oceanography
  - Underwater Detection Technique
  - Marine Robotics
  - Thermal Remote Sensing
  - Altimetry Remote Sensing

Semester 7
- Thematic Student Study Service
- Internship
- Comprehensive Examination
- Marine Literacy (Enrichment Course)

Semester 8
- Seminar (Enrichment Course)
- Undergraduate Thesis
1. Student Exchange Program
   Credit Earning Activity Student may apply in credit earning program for a semester in partner universities in Asia, Australia, US or Europe. Through this program, students take several marine science and technology or elective courses in partner universities.

2. Research Collaboration
   Students will conduct their final year research project in a partner university for a semester. Research work is co-supervised by lecturers from IPB (home) and partner (host) university.

3. Short-term International Activities
   Students may participate in international academic program such as, summer courses, winter courses (join with partner universities), internship, training or conferences.

4. Internship
   As option to final year research project, student is also possible to take internship program at Governmental Institution, NGO, and companies.
Academic Activities at IPB
Our Partners

USA
- The University of Washington

Malaysia
- University Malaysia Terengganu

France
- Sorbonne University, Campus UPMC Paris
- University Paul Sabatier Toulouse
- Université de Bretagne Occidentale
- Aix-Marseille University

Australia
- The University of Western Australia

Germany
- University of Bremen
- University of Kiel

Singapore
- National University of Singapore

Netherlands
- Wageningen University

Japan
- Tokyo University of Marine Science Technology
- Kagoshima University
- Chiba University

New Zealand
- University of Otago
- Victoria University of Wellington

Taiwan
- Taiwan National Ocean University
- National Sun Yat Sen University
IPB University
Bogor Indonesia

Inspiring Innovation with Integrity
in Agriculture, Ocean and Biosciences for a Sustainable World

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Faculty of Fisheries and Marine Sciences

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