2014 - 2015

Contents

- It’s A New Dawn
- ITB Graduate School: A Glance
- An Evolution
- Student Voices
- Graduate Programs
- Research Centers
- Sustainable Multi Campus
- Campus Life

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46
Regardless of your previous background—whether you are a fresh university graduate or you have been away from the boundaries of any educational institution for an extended period of time—you might find the decision to pursue graduate education to be a rather tough one. It is a new dawn in your life that should involve a great deal of careful considerations on your part. So, how can you know for sure if you are making the right decision by enrolling in a graduate school? Honestly, you should go to graduate school when you have decided that you would like to get the most out of the experiences it offers.

In this regard, the Graduate School of Institut Teknologi Bandung (ITB) has a lot to offer you, be it in the fields of sciences, engineering, business, or the visual arts. With our undaunted commitment to research and development, the graduate programs of ITB allow you to explore your fields of interest from classrooms and laboratories, shaping your experience in advanced learning of a specialized discipline or sub-discipline and consequently preparing you to advance professionally in your future careers.

If there is one thing worth noting in all the years we have spent as an esteemed educational institution, it is that success in graduate education does not solely depend on the quality of academic instruction. To a much bigger extent than to that of undergraduate education, graduate education thrives on the lively interactions between students and the academic communities. A good graduate program, therefore, would foster its students to develop their own willingness to be exposed to the global academic community. We are proud to say that our faculty members, with their respectable reputations both nationally and internationally, are among the world’s finest academics today. In addition to that, we believe that by directly involving students in our faculty’s researches, we are continually improving the quality of our graduate programs, while simultaneously providing our students with the opportunity to undertake research attempts that serve our mutual interest.

Here at ITB, you will meet fellow students from diverse cultural backgrounds, each one eager to learn themselves, making ITB a fertile ground for exchanging ideas and developing your potential both personally and academically. So, if you are thinking about a new dawn in your graduate education, ITB may just be the right place for you. We look forward to welcoming you to our campus.
Institut Teknologi Bandung (ITB) is Indonesia's premier school of science, engineering, and arts; with a mission to create, to apply, and to share the knowledge of science, technology and art for the global advancement of Indonesia and humanity. The Graduate School of ITB equips students with advanced learning of a specialized discipline or sub-discipline, giving an in-depth understanding so that the student becomes something of an expert in a particular topic of study. Through involvement in research, students learn advanced skills in such areas as problem-solving, methodology, communication; both in writing and oral presentation, and technology, each as applied to the particular field of study.

Doctoral programs prepare students to be leaders of research and research groups, conceiving and promoting new ideas. Master's programs train students to participate as part of a team carrying out advanced work. Some of the master's programs are geared towards training professional practitioners, such as Master's Program in Management, Master's Program for Teachers. Our master's is a four semesters program, while doctoral program is six semester beyond master's program. For students with excellent track records, we offer master's leading to doctoral programs, which takes eight semesters combined.

ITB Graduate School currently offers 53 master’s programs and 27 doctoral programs in various areas of sciences, engineering, business, art and design, with the student body of about 2,800 students (2,600 enrolled in master’s programs, and 200 in doctoral programs).

In collaboration with Rijksuniversiteit Groningen (RUG) the Netherlands, UKM (Universitas Kebangsaan Malaysia), UGM & Universitat Karlsruhe (TH) Germany, IFP School (France Institute of Petroleum Postgraduate School) France, UGM-UNESCO-Osaka University, ITB offers opportunity to obtain double master degrees.
The history of Institut Teknologi Bandung dates back to 1920 during colonial times, with the establishment of Technische Hogeschool te Bandoeing (TH-Bandoeng). For a very brief period in 1944-1945, it became Kogyo Daigaku Bandung. After Indonesia’s independence in 1945, the current campus housed the technical, mathematics, natural sciences, and arts, all branches of Universitas Indonesia—known as UI-Bandung. Finally in 1959, Institut Teknologi Bandung was inaugurated.

The history of graduate education at ITB is as old as ITB itself, which started out as the Technische Hogeschool in 1920. At that time, the doctoral program was integrated into the faculties of the respected discipline. As ITB moved closer to the Anglo-Saxon system, ITB established the Graduate School in 1976, and started offering master’s programs in 1979, in three disciplines: Mathematics, Physics, and Mechanical Engineering. The Graduate School has since flourished, and currently offers 52 master’s programs and 27 doctoral programs in various disciplines and sub-disciplines of sciences, engineering, business, and arts. Since its establishment in 1976 to this day, the Graduate School has inaugurated more than 24,600 master’s and 1,060 doctoral graduates.
“At one point, during my undergraduate study, I really felt drawn to the world of organic synthesis compounds to create a variety ionic liquid of an imidazole base; for their applicability in the renewable energy research. The purpose has led me into the recently inaugurated; Master’s Leading to PhD Program in chemistry ITB, shortly upon finishing my undergraduate degree in 2009, also from ITB. In my doctoral research, I developed research on the synthesis of functional ionic liquids as media in the process of converting biomass into renewable fuels. Why I chose ITB? I really think that ITB has a lot to offer, not only academically, but also atmospherically. During my study at ITB I met knowledgeable and dedicated faculty and fellow students alike. I learned many things from them to nurture my future career in science. I hope that one day I will be able to contribute my best work for Indonesian people with a real product drawn from my research”.

Megawati Zunita
The first graduate of Master’s Leading to PhD Program (Chemistry)
I graduated from ITB with a bachelor degree in Pharmacy in 2012. I was curious of how my knowledge of pharmacy can be applied to products, which were not directly related to medicine. Studying in an institute of technology gives the students a certain degree of leaning towards engineering and technology; that was my motivation when I enrolled in the Master's Program in Industrial Engineering and Management. Working in the Ergonomics Laboratory, I am researching the effective use of aroma therapy to avoid drivers’ drowsiness; It is a very real problem faced daily by millions of drivers on the road. I think I can make a real contribution, now that I feel the thing I have learned from my undergraduate years can be very useful. It is the multi disciplinary attitude and value that I learn in ITB.
“The business landscape is changing, often at a lightning speed. Competition forces companies not to depend solely on innovation on the product. Principal aspects of the company, if not all, such as network, activity systems, marketing, and distribution must be refined; it is the business model that must be innovated. For me, studying the innovation and the dynamic changes of the business model is very noteworthy.

At the School of Business ITB, I have found a nurturing atmosphere that helps me thrive, not only academically, but also personally. Upon completion of the doctoral degree, I wish to expand the knowledge of business model area and make contribution to the science of management”.

"I am always intrigued by the complex interrelation between aesthetics and effective communication in conveying messages through graphical media. It goes much deeper, beyond what I knew when I was doing my undergraduate education in design here also at ITB. It is indeed challenging, and at the same time rewarding to finish a well-thought project. Here at ITB, I learn to think in a more global way, being constantly provoked by various ideas from professors, mentors, and peers alike. It is the openness and inventiveness of the faculty and peers that make me thrive at ITB.

With the knowledge and skills that I learn during my master’s program, through my work I will be able to contribute to make a better aesthetic around us."
When I finished my undergraduate degree at the Hanoi University of Science and Technology, Vietnam, a professor of mine recommended me to continue my graduate education in ITB since the excellence of the programs that I interested in. I really think it was a very wise recommendation, and then I took a very decisive step of my life. Here I am now, at the ITB, on AUN/SEED-Net (ASEAN University Network/South East Asia Engineering Education) Scholarship, learning and doing research in Computational Fluid Dynamics. I find ITB’s learning environment fertile and nurturing. I like the warm and supportive relations with the professors; I enjoy the friendships with my fellow students, they are highly competitive and yet so friendly; I like the lushness of ITB’s landscape; and I love the cool climate of Bandung. Upon the completion the Master’s Degree, I wish I can continue my research towards an advanced degree in Aeronautics and contribute to development of the field.”
I am a senior researcher at the State Petroleum Research Institute; it is a career track that I have nurtured since I finished my undergraduate degree from ITB and a Master’s degree from the Herriot-Watt University, Scotland. However, when a national urgency comes along with the decline of national oil production, and when professional experience alone is no longer sufficient to overcome the problem, I decided to return to ITB for academic research. Here I am doing research on Enhanced Oil Recovery for my doctorate degree. This is a program where ITB really has an edge in the field of petroleum engineering. I wish to bring together the research that I do at ITB and my professional experience to contribute to making a breakthrough in oil production in Indonesia.
The Faculty of Mathematics and Natural Sciences (FMIPA) of Institut Teknologi Bandung (ITB) offers an education in four basic scientific disciplines, namely Astronomy, Chemistry, Mathematics, and Physics. Education of the four disciplines is offered via both the pure and applied sciences tracks.


FMIPA

Graduate programs offered by FMIPA are directly linked to researches in the aforementioned sub-divisions. Candidates are to directly utilize the university’s research facilities, so as to benefit from its lively research environment. FMIPA offers the following graduate programs:

1. Master’s and Doctoral in Astronomy
2. Master’s and Doctoral in Mathematics
3. Master’s and Doctoral in Chemistry
4. Master’s and Doctoral in Physics
5. Master’s in Computational Science

Apart from offering advanced degrees in the above fields, FMIPA also caters to the education of professionals by offering graduate programs, such as Master’s Program in Actuarial Science for those wishing to enter the fast-growing insurance industry and a Master’s Program in the Mathematics/Chemistry/Physics Teaching, for educators who wish to improve their knowledge and competence, so as to further their careers.
The school offers the following graduate programs:

1. Master’s Program and Doctoral Programs in Biology. There are three tracks of research that students may pursue: (1) Cell and Molecular Biology, (2) Organism Biology, (3) Environmental Biology.

2. Master’s Program in Biotechnology, emphasizing on developing high value-added products for application in health, agriculture, environment, and energy.

3. Master’s Program in Biomanagement. This program was developed to respond to the demand for professionals who are able to use interdisciplinary approaches in seeking solutions to tropical bioresources and environmental management problems, which are often complex and multi-dimensional in nature. The School of Business and Management-ITB supports this program for subjects related to economics, business and management. Applicants having undergraduate degrees from any disciplines are welcomed.

SCHOOL OF LIFE SCIENCES AND TECHNOLOGY

In the 21st century, professionals in life sciences play important roles in the development of bioscience, biotechnology, and natural resources management (biomanagement). In fact, biotechnology has been projected to be one of the most important applied sciences.

The School of Biosciences and Biotechnology is equipped with modern facilities for research and service to the community. Research projects, which are funded by national and international grants, reflect the vast activities in research focuses of the eight research groups within SITH, those are: Agrotechnology and Bioprocess Technology, Microbial Biotechnology, Ecology, Physiology, Animal Development and Biomedical Science, Genetics and Molecular Biotechnology, Management of Natural Bioresources, Plants Science and Biotechnology, and lastly Forestry.

SITH

The school offers the following graduate programs:

1. Master’s Program and Doctoral Programs in Biology. There are three tracks of research that students may pursue: (1) Cell and Molecular Biology, (2) Organism Biology, (3) Environmental Biology.

2. Master’s Program in Biotechnology, emphasizing on developing high value-added products for application in health, agriculture, environment, and energy.

3. Master’s Program in Biomanagement. This program was developed to respond to the demand for professionals who are able to use interdisciplinary approaches in seeking solutions to tropical bioresources and environmental management problems, which are often complex and multi-dimensional in nature. The School of Business and Management-ITB supports this program for subjects related to economics, business and management. Applicants having undergraduate degrees from any disciplines are welcomed.

www.sith.itb.ac.id
The School of Pharmacy offers the following:

1. Master’s and Doctoral Programs in Pharmacy, with options in:
   - Pharmacochemistry (Chemical Pharmacy, Food Safety Analysis, Medicinal Chemistry)
   - Pharmaceutics (Pharmaceutical Technology, Biopharmacy, Pharmacokinetics)
   - Natural Product Pharmacy (Pharmacognosy, Phytochemistry, Natural Product Technology, Medicinal Plant Biotechnology)
   - Pharmacology-Toxicology
   - Biotechnology
   - Clinical Pharmacy

2. Master’s Program in Sport Science

3. Master’s Program in Industrial Pharmacy (an applied program focusing in pharmaceutical industries)

In the continuation of professional development, the School of Pharmacy offers Professional Pharmacist education, a one-year program beyond undergraduate program in pharmacy.
Faculty of Mining and Petroleum Engineering

FTTM offers the following graduate programs:

1. Master’s and Doctoral Programs in Petroleum Engineering
2. Master’s and Doctoral Programs in Mining Engineering, with concentration in Management and Mineral - Coal Economics; Mine Environmental Management; Mineral, Coal, and Metallurgical Engineering; Mineral Resources Management; Mineral and Metallurgical Engineering
3. Master’s and Doctoral Programs in Geophysical Engineering
4. Master’s Program in Geothermal Engineering

Faculty of Mining and Petroleum Engineering (Fakultas Teknik Perminyakan dan Pertambangan, FTTM-ITB) was founded in 2007. However, its history traces back to 1948 as a program under the Faculty of Engineering. Through a series of reorganizations, the current FTTM came into being. Currently FTTM ITB embodies five fields of study, namely Mining Engineering, Petroleum Engineering, Geophysical Engineering, Metallurgical Engineering, and Geothermal Engineering.

In the light of Indonesia’s blessed wealth of earth resources, and its unique tectonic features, the presence of FTTM ITB is instrumental as a technology development center for the environmentally sustainable exploration, exploitation, and utilization of earth resources.

Currently FTTM ITB houses seven research groups: Earth Resource Exploration, Mining Engineering, Drilling, Production, and Management of Oil and Gas, Reservoir Engineering, Metallurgy Engineering, Applied Geophysics, and Global Geophysics.

FTTM offers the following graduate programs:

1. Master’s and Doctoral Programs in Petroleum Engineering
2. Master’s and Doctoral Programs in Mining Engineering, with concentration in Management and Mineral - Coal Economics; Mine Environmental Management; Mineral, Coal, and Metallurgical Engineering; Mineral Resources Management; Mineral and Metallurgical Engineering
3. Master’s and Doctoral Programs in Geophysical Engineering
4. Master’s Program in Geothermal Engineering
The Faculty of Earth Sciences and Technology (FITB) of Institut Teknologi Bandung (ITB) was established in 2007, although this field of knowledge had been taught since the university’s earlier days. Our research focuses on the investigation of physical phenomena concerning the earth, which can generally be categorized into eight different groups: Geology, Applied Geology, Atmospheric Sciences, Oceanography, Geodesy, Surveying and Cadastral, Hydrographical Sciences and Engineering, and lastly Remote Sensing and Geographical Information System (GIS).

FITB offers the following graduate programs:

1. Master’s and Doctoral Programs in Geological Engineering, with options in General Geology, Petroleum Geology, Geological Engineering, and Geological Economics
2. Master’s and Doctoral Programs in Earth Sciences, with three field concentrations in Physical Oceanography, Seismology, and Atmospheric Sciences.
3. Master’s Program in Groundwater Engineering
4. Master’s and Doctoral Programs in Geodesy and Geomatics Engineering, with concentrations in Hydrographic and Coastal Survey Engineering, Advanced Surveying, Hazard Mitigation Information Systems, Cadastral Administration, and lastly Geomatics Engineering
5. Master’s Program in Land Administration
FTI offers the following graduate programs:

2. Master’s and Doctor in Engineering Physics, with specialization in Industrial Automation Process, Building Physics, and Computation and (Advanced) Material Process
3. Master’s in Instrumentation and Control
4. Master’s and Doctor in Industrial Engineering and Management, with five areas of specializations: Ergonomics and Performance Engineering, Manufacturing System, Industrial Management, Enterprise Information System, and Industrial and Supply Chain System
5. Applied Master’s in Logistics

Faculty of Industrial Technology (Fakultas Teknologi Industri-FTI), Institut Teknologi Bandung was established in 1973. The faculty is a home to four disciplines, those are: Chemical Engineering, Engineering Physics, Instrumentation and Control, and Industrial Management.

The faculty is organized in eight research groups as follows:

1. Chemical Engineering Process Design and Development
2. Chemical Engineering Product Design and Development
3. Energy and Chemical Engineering Processing System
4. Engineering Physics
5. Instrumentation and Control
6. Manufacturing Systems
7. Industrial Management
8. Industrial System and Techno-Economics

http://www.fti.itb.ac.id
FTMD offers the following graduate programs:

1. Master’s and Doctoral Programs in Mechanical Engineering
3. Master’s and Doctoral Programs in Material Engineering
4. Master’s and Doctoral Programs in Nuclear Science and Engineering
STEI offers the following graduate programs:

1. Master’s and Doctoral Programs in Electrical Engineering, with the following concentrations: Electrical Power, Telecommunication, Telematics and Telecommunication Network, Computer Engineering, Electronics, Biomedical Engineering, Control and Smart System Engineering, Digital Media and Game Engineering, Engineering and Management of Information Security, Information Technology Leaderships, and Information Technology Services.

FTSL runs a number of graduate programs:

1. Master’s and Doctorate in Civil Engineering, with specialization in Structural Engineering, Water Resource Engineering, Geotechnical Engineering, Transportation Engineering, Construction Engineering and Management, as well as Infrastructure Engineering and Management.

2. Master’s and Doctorate in Environmental Engineering, with specialization in environmental protection and management; sustainable development, and sanitation infrastructure.

3. Master’s in Ocean Engineering
SCHOOL OF ARCHITECTURE, PLANNING AND POLICY DEVELOPMENT
http://www.sappk.itb.ac.id

The School of Architecture, Planning and Policy Development, Institut Teknologi Bandung (SAPPD ITB) or Sekolah Arsitektur, Perencanaan dan Pengembangan Kebijakan (SAPPK ITB) encompasses eight main professional disciplines as follows: architecture, regional and city planning, urban design, transportation, development studies, defense studies, tourism planning and landscape architecture. SAPPK offer the following graduate programs:

1. Master’s and Doctoral Programs in Architecture
2. Master’s and Doctoral Programs in Regional and City Planning
3. Master’s and Doctoral Programs in Transportation
4. Master’s Program in Urban Design
5. Master’s Program in Development Studies
6. Master’s Program in Defense Studies
7. Master’s Program in Tourism Planning
8. Master’s Program in Landscape Architecture

SAPPK ITB has extensive links and exchange agreements with a number of leading international universities in Europe, Asia, Australia, and United States. Along with the existing Double Degree programs with universities in Japan and The Netherlands, starting in 2012 the SAPPD and the College of Design, Construction and Planning (DCP) University of Florida (UFL) initiated another new exchange and two year’s DD program, including the Summer Camp (International Joint Design/Planning Studio). SAPPD ITB will offer studies in regional planning, architecture, urban design, tourism and landscape architecture, while UFL will provide courses in the following concentrations: urban and environmental design, growth management and transportation, housing, community and economic development, planning information and analysis system, historic preservation, tourism and sustainability.
The following are graduate programs offered by FSRD:

1. Master's Program in Visual Arts with two academic tracks: i) studio practice track culminating in exhibition or performance, and ii) research practice track in the areas of aesthetics, theory of art, art history or other related issues in the domain of visual arts.

2. Master's Program in Design. This program offers seven fields of design research: Design and Artefact, Design and Material, Design and Systems, Design and Visual Culture, Design and Environment, Design and Human Behavior, and Design and Information. At the end of their studies, candidates are expected to produce a project-based or research-based thesis.

3. Doctoral Program in Visual Arts and Design. This program requires candidates to be grounded in either studies of visual arts (paintings, printmaking, sculptures, and ceramics) or studies of design (products, visual, communication, interior, and crafts). Furthermore, the university strongly encourages candidates to undertake interdisciplinary studies within the domain of creative research.
The School of Business and Management (SBM) of Institut Teknologi Bandung (ITB) was established in 2003 to complement education in the sciences, engineering, and fine art, which have been the traditional disciplines of ITB. In its relatively short history, nevertheless, the school has now become one of the most highly respected and popular business schools in Indonesia. Currently, the school is committed to advancing the science of business through research and developing competent business professionals who are able to address the business challenges in today’s global market.

We offer two competitive research fields within the school, namely Management of Human Resources and Entrepreneurship (Business and Strategy Marketing, People and Knowledge Management, Entrepreneurship and Technology Management, Decision Making and Strategic Negotiations, Operation and Performance Management, Business Risk and Finance); and Management of Operations and Finance (Operation and Performance Management, Business Risks and Finance).

SBM offers the following graduate programs:


2. Master’s Program in Business Administration (administered in Jakarta and Bandung). Two tracks are offered for this particular program, Entrepreneurial Track (Entrepreneurship MBA, MBA in Creative and Cultural Entrepreneurship) and Professional Track (Young Professional, Young Executive, Business Leadership Executive MBA, Sharia Banking and Finance Executive MBA, Global Leadership Executive MBA–GLEMBA). GLEMBA is a dual degree between Finland’s top university, Aalto University, and ITB. The program is structured to suit transnational business environments, where cross-cultural understanding and worldwide business network are necessary.
Research Centers in ITB reflect ITB’s priority research areas. They house multidisciplinary studies which defy common boundaries of Faculties and Schools. Those are:

1. Hazard and Mitigation Research Center
2. New Energy Resources and Renewable Energy Research Center
3. Information Technology and Communication Research Center
4. Food, Health and Drugs Research Center
5. Infrastructures and Rural Area Research Centers
6. Cultural and Environmental Products Research Center

More specific research is carried out in Centers. Those are:

1. Center for Industrial Engineering
2. Center for Mathematical Modeling and Simulations
3. Center for Microelectronics
4. Center for Tourism Planning and Development
5. Center for Life Sciences
6. Center for Bio Environment
7. Center for Coastal and Marine Area Development
8. Center for Energy Policy
9. Center for Remote Sensing
10. Center for Instrumentation and Automation Technology
11. Center for Governance and Public Policy
12. Center for Spatial Data Infrastructures
13. Center for Health and Sport Technology
14. Center for Unmanned Vehicle Systems
15. Center for Quake-proof Infrastructures
16. Center for Logistics and Supply-Chain
17. Center for Water Resources Development
18. Center for Climate Change
19. Center for Open Source Softwares Utilization
20. Center for Agrarian Studies
Recent acquisition and establishment of Jatinangor Campus, to the East of Bandung, has practically tripled the campus area of ITB. A few programs, such as Bioengineering and Forestry, have started their activities in the new campus in the 2013 academic year. We look forwards to livelier activities in the coming years as more programs and research extend their activities to the new campus. In the mean time ITB is committed to keep both campus green and sustainable.