



Study Programs Profile for KNB Scholarship

Build Your Future
With Us at ITS!



Welcome to ITS

Your Gateway to Innovation and Excellence

Institut Teknologi Sepuluh Nopember (ITS), a beacon of innovation and academic excellence located in Surabaya, Indonesia's vibrant and strategically positioned second-largest city in Southeast Asia. Since its founding in 1960, ITS has been at the forefront of technological advancement, engineering solutions, and cutting-edge research.

Ranked **#97** in the QS World University Rankings ASIA 2026, ITS is a testament to Indonesia's commitment to fostering global leaders and innovators. Our distinguished faculty, state-of-the-art facilities, and rigorous academic programs create an environment where ambition thrives and dreams are realized.

ITS is more than just a university — it's a thriving community that welcomes students from over 40 countries, offering an enriching multicultural experience. ITS is a launchpad for your career in engineering, technology, maritime studies, and beyond.

Start your academic journey today

Welcome to ITS,
where tomorrow's leaders are shaped.





Why Choose ITS ?



- Prestigious reputation: Ranked among Asia's top universities (QS Asia Rankings).
- Affordable, high-quality education.
- Internationally accredited programs.
- English-taught programs across various disciplines.
- Multicultural, safe, and student-friendly environment.
- Strong industry partnerships for internships and career opportunities.





Find Your Path, Shape the Future



With world-class scholarships ready to support you, now it's time to explore the programs that will empower your academic and professional journey.

At ITS, you'll find graduate programs that combine academic rigor, real-world relevance, and global impact — across engineering, science, technology, business, design, and beyond.



Choose a program that aligns with your purpose — and let ITS be the place where your future begins.

Explore Our Program for KNB Scholarship

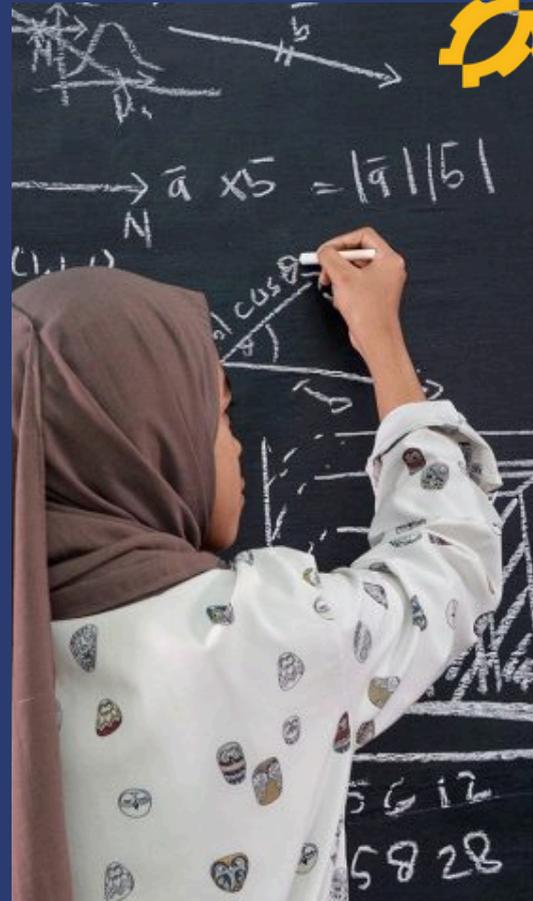
No.	Faculty	Study Program	Master	Doctoral
1	Faculty of Science and Data Analytics (SCIENTICS)	Mathematics	✓	
2		Biology	✓	
3		Physics	✓	
4		Chemistry	✓	✓
5		Statistics	✓	✓
6	Faculty of Industrial Technology And Systems Engineering (INDSYS)	Mechanical Engineering	✓	
7		Chemical Engineering	✓	✓
8		Physics Engineering	✓	
9		Industrial Engineering	✓	
10		Metallurgical and Materials Engineering	✓	
11	Faculty of Civil, Planning, and Geo Engineering (CIVPLAN)	Civil Engineering	✓	✓
12		Architecture	✓	✓
13		Environmental Engineering	✓	✓
14		Geomatics Engineering	✓	
15	Faculty of Intelligent Electrical and Informatics Technology (ELECTICS)	Informatics	✓	✓
16		Information System	✓	
17		Electrical Engineering	✓	✓
18	Faculty of Marine Technology (MARTECH)	Marine Engineering	✓	
19		Ocean Engineering	✓	✓
20		Marine Transport Engineering	✓	

Mathematics



Master's Program

The Mathematics Master's Program at ITS has produced 523 graduates since its establishment in 2003, making significant contributions to human resource development, particularly in Eastern Indonesia. The program emphasizes mastery of core mathematical areas including analysis, algebra, and computation, with strong applications in applied mathematics. Currently supported by 6 Professors and 24 PhD holders specializing in diverse fields such as Max-Plus Algebra, Data Science, Graph Theory, Fluid Dynamics Computation, Financial Mathematics, and Digital Image Processing, the program maintains active collaborations with leading international institutions including Shibaura Institute of Technology (Japan), University of Oxford (UK), and Delft University of Technology (Netherlands).



more information:

<https://www.its.ac.id/matematika/en/academic/study-program/master/>

Biology

The Department of Biology at Institut Teknologi Sepuluh Nopember (ITS) offers a comprehensive Master's Degree Program designed to develop highly skilled graduates capable of addressing global biological challenges through research, innovation, and applied science.

Master of Science in Biology

This two-year program (approximately 38–42 credits) equips students with theoretical and practical knowledge in key areas of biology such as Microbiology, Zoology, Botany, and Ecology.

Delivered in both English and Bahasa Indonesia, the program offers a bilingual academic environment that supports international students and collaborative research. Graduates earn the Magister Sains (M.Si) degree, signifying strong academic competence in biological sciences and research methodology.

This program is eligible for the KNB (Kemitraan Negara Berkembang) Scholarship, which supports talented international students from developing countries.

more information:

<https://www.its.ac.id/biologi/academic/study-programs/master-degree-s2/>



Physics



Master's Program

The Master's Program in Physics at ITS is designed to develop graduates with advanced expertise in physics and strong research capabilities. The program emphasizes analytical thinking, problem-solving skills, and effective communication, while also building essential managerial competencies. Students can specialize in several key areas of physics including Material Physics, Theoretical Physics, Medical Physics and Biophysics, Optoelectronics, Geophysics, and Instrumentation. Through a combination of theoretical coursework and practical research, the program prepares graduates for professional roles in research institutions, technology development, and academic careers, equipping them with both technical knowledge and transferable skills for leadership positions in scientific fields.



more information:

<https://www.its.ac.id/fisika/en/study-programs/>





Chemistry

more information:

<https://www.its.ac.id/kimia/academic/master-degree-s2/>

<https://www.its.ac.id/kimia/academic/doctoral-degree-s3/>

The Graduate Program in Chemistry at Institut Teknologi Sepuluh Nopember (ITS) offers both Master's (S2) and Doctoral (S3) degrees designed to cultivate highly competent graduates in various chemistry disciplines.

Master's Program

The Master's Program provides specialized study tracks in Analytical Chemistry, Inorganic Chemistry, Physical Chemistry, Organic Chemistry, Biochemistry, and Chemistry Education (for teachers). The curriculum consists of 36 credits and is designed to be completed within four semesters.

The program has produced over 350 graduates and established several successful double degree partnerships with international universities, such as National Taiwan University of Science and Technology, Asian Institute of Technology (Thailand), and Université de Picardie Jules Verne (France). Students also benefit from exchange opportunities in universities such as Aristotle University of Thessaloniki, Greece.

Doctoral Program

The Doctoral Program is structured over six semesters and comprises 42 credits, with 12 credits of coursework and 30 credits for the dissertation. Research collaboration is encouraged with global partners including Universiti Teknologi Malaysia (UTM) and Kumamoto University, Japan. ITS also supports student exchanges and research abroad in countries such as Japan, Malaysia, Taiwan, and Thailand.

The program is supported by 21 PhD-qualified faculty members, including 7 full professors, and offers modern laboratories and research facilities in materials chemistry, natural product synthesis, analytical instrumentation, microbial chemistry, and molecular organic geochemistry. Students have full access to international journals and global academic networks.

🎓 The Master's Program in Chemistry is available for applicants under the Kemitraan Negara Berkembang (KNB) Scholarship, and the Doctoral Program can be pursued through the KNB and ITS Global Excellence Scholarship.

Statistics

The Statistics Department at ITS offers advanced postgraduate programs designed to develop expertise in statistical theory, methodologies, and their applications across various fields.

Master's Program

The Master's Program in Statistics is a 4-semester program that provides in-depth training in statistical analysis and data science. The program offers three specialization tracks: Applied Statistics, Computational Statistics, and Business & Industrial Statistics, equipping students with skills in statistical modeling, machine learning, and data analysis. Students gain practical experience through research projects and collaborations with industry partners, supported by modern computing facilities and statistical software. Graduates are prepared for professional roles as data scientists, statistical analysts, and researchers in both public and private sectors.

more information:

<https://www.its.ac.id/statistika/en/academic/study-program/master-program-of-statistics/2025-2028-curriculum/#vision-mission-and-goals>

<https://www.its.ac.id/statistika/en/academic/study-program/doctoral-program-of-statistics/>



Doctoral Program

The Doctoral Program in Statistics is a research-intensive program focused on developing innovative statistical methodologies and advancing statistical science. Doctoral candidates conduct original research in areas such as advanced statistical modeling, computational statistics, and interdisciplinary applications, contributing to the development of new statistical theories and methods. The program fosters a strong research culture with opportunities for international collaboration and academic publications, preparing graduates for careers as university professors, lead researchers, and senior statistical consultants.

You can apply to the Master's in Statistic program with KNB & TIAS Scholarship, and pursue the Doctoral Program with the ITS Global Excellence Scholarship.



Mechanical Engineering

The Master's Program of the Mechanical Engineering Department (MoME) was established in 1993 as part of the Mechanical Engineering Department. The Mechanical Engineering Department itself has been established since 1957, coinciding with the establishment of the Institut Teknologi Sepuluh Nopember. Over the years, our program has proudly graduated over 600 master's students who have gone on to excel in various institutions, spanning both academia and industry. Since its establishment, this program has been designed to produce graduates capable of meeting research needs, both in the realm of science and technology in the academic world and research institutions, as well as in research-based product development in the industry.



more information:

<https://www.its.ac.id/tmesin/en/academic/study-program/master-degree/>



Chemical Engineering

The Department of Chemical Engineering at Institut Teknologi Sepuluh Nopember (ITS) offers graduate-level education through its Master's and Doctoral programs, with a strong focus on innovation, sustainability, and research-based learning.

Master's Program

The Master's Program in Chemical Engineering provides students with advanced knowledge and practical skills in chemical engineering, with two main areas of specialization:

- Process Technology
- Food Technology

more information:

<https://www.its.ac.id/tkimia/en/academic/study-programs/syllabus-master-program/>



Doctoral Program

The Doctoral Program in Chemical Engineering emphasizes advanced research and original contributions to the field. The program offers two pathways,

- Coursework and Thesis Track, for those who wish to combine theoretical study with applied research.
- Research Track, for students who want to focus intensively on research activities under close academic supervision.

You can apply to the Master's in Chemical Engineering program with a KNB Scholarship, and pursue the Doctoral Program with the ITS Global Excellence Scholarship.

more information:

<https://www.its.ac.id/tkimia/en/academic/study-programs/syllabus-master-program/>



Physics Engineering



The Physics Engineering Department at ITS offers advanced programs integrating fundamental physics with engineering applications to address industrial and technological challenges.

Master's Program

The 4-semester Master's program provides three specializations: Instrumentation and Control Systems, Materials Engineering, and Energy Engineering. Students develop expertise through coursework (minimum 36 credits) and thesis research, with access to advanced laboratories including the Energy Conversion Lab, Material Characterization Lab, and Instrumentation System Lab. The program emphasizes practical applications through industry collaborations and prepares graduates for careers in manufacturing, energy, and research sectors.



more information:

<https://www.its.ac.id/tfisika/master/>

Industrial Engineering



The Industrial Engineering Department at ITS offers comprehensive postgraduate programs designed to develop expertise in industrial systems optimization and innovation.

Master's Program

The program offers three specialization tracks: Manufacturing Systems, Service Systems, and Industrial Management, with a strong emphasis on Industry 4.0 technologies and sustainable practices. Students engage in practical learning through case studies, industry collaborations, and research projects in areas like production systems, supply chain management, and ergonomics. The program is supported by modern facilities including the Smart Manufacturing Lab and Ergonomics Center, preparing graduates for leadership roles in manufacturing, logistics, consulting, and research institutions.



more information:

<https://www.its.ac.id/tindustri/en/study-programs/masters-degree-program-m-t/>

Metallurgical and Materials Engineering



Master's Program

The Master's Program in Materials Engineering at ITS prepares students to address Industry 4.0 and 5.0 challenges through advanced materials research and innovation. Established in 2012, this program focuses on material processing, characterization, and development for industrial applications. Students gain expertise in:

- Advanced material design and analysis
- Digital integration in materials engineering
- Sustainable material solutions



more information:

<https://www.its.ac.id/tmaterial/academic/study-program/master-degree-s2/>



Civil Engineering

more information:

<https://www.its.ac.id/tsipil/id/akademik/program-studi/program-studi-magister-teknik-sipil-its/>

<https://www.its.ac.id/tsipil/academic/study-program/doctoral-program/>

The Department of Civil Engineering at Institut Teknologi Sepuluh Nopember (ITS) offers comprehensive graduate programs at the Master's and Doctoral levels, designed to equip students with advanced knowledge, research skills, and technical expertise in civil and infrastructure engineering.

Master's Program

The Master's Program is a two-year academic program (typically 36 credits) that integrates coursework, laboratory work, and thesis research. Students can specialize in various areas such as:

- Structural Engineering
- Geotechnical Engineering
- Transportation Engineering
- Water Resources Engineering
- Project Construction Management
- Environmental Engineering
- Civil Engineering and Management
- Infrastructure Asset Management
- Hydraulic and Water Flow Management
- Hydroinformatics
- High-Rise Building Engineering and Management
- Building Engineering and Management
- Road Preservation in Difficult Geotechnical Soil Conditions
- Highway Geotechnics

The program is designed for future professionals and researchers who aim to contribute to sustainable infrastructure development and innovation in civil engineering systems.

Doctoral Program

The Doctoral Program focuses on developing independent researchers who can make significant contributions to the field through original research. Candidates are required to complete coursework, publish in national and international journals, and produce a dissertation.

With strong faculty support, international collaboration, and access to advanced laboratories and software tools, ITS provides an ideal environment for doctoral research in civil engineering and related disciplines.

Both programs are open to international students and can be pursued through prestigious scholarships such as the KNB Scholarship (for Master's) and the ITS Global Excellence Scholarship (for Doctoral studies).



Architecture

The Department of Architecture at Institut Teknologi Sepuluh Nopember (ITS) offers two advanced degree programs: Master's (S2) and Doctoral (S3), both designed to produce critical, creative, and adaptive professionals ready to respond to contemporary architectural challenges.

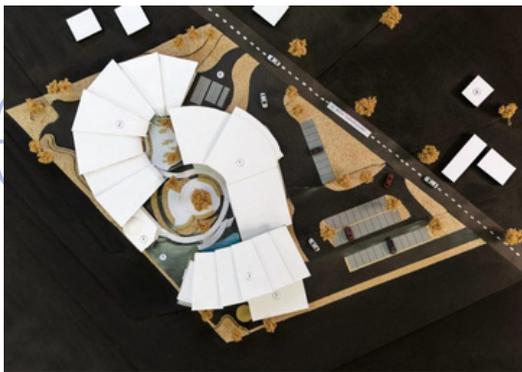
Master of Architecture Program

This four-semester program (36–40 credits) integrates theoretical mastery, field exploration, and thesis research. Students can specialize in areas such as **Housing and Settlements, Tropical Architecture, and Archipelago Architecture.**

The program also offers international collaboration opportunities with leading universities such as the University of Newcastle and UCL.

more information:

<https://www.its.ac.id/arsitektur/program-study/graduate-master/>



Doctoral Program in Architecture

The Doctoral Program is designed for those seeking to contribute to architectural knowledge through rigorous research. With a total of 40 credits, the program offers regular, and full-research pathways. Research focuses include Housing and Settlements, Landscape Architecture, and Environmental Architecture.

International academic partnerships include collaborations with institutions such as the University of Melbourne and Kyoto University.

You can apply to the Master's in Architecture program with a KNB Scholarship, and pursue the Doctoral Program with the ITS Global Excellence Scholarship.

more information:

<https://www.its.ac.id/arsitektur/program-study/4379-2/>

Environmental Engineering



The Environmental Engineering Department under FTSP ITS has offered master's programs since 1999/2000 with recognized accreditation. This program is designed to address complex environmental challenges through sustainable engineering and management approaches.

Master's Program

This 4-semester (40 credits) program offers four main specializations: Environmental Engineering, Environmental Sanitation Engineering, Environmental Management, and Drinking Water Management & Control Engineering. Supported by 44 faculty members (5 professors, 12 PhD holders) and 9 laboratory facilities, students will develop competencies to preparing them for careers in government, industry, or environmental consulting.

more information:

<https://www.its.ac.id/tlingkungan/program-studi/magister/#1725899207291-41672eb6-8ee6>

<https://www.its.ac.id/tlingkungan/program-studi/doktoral/#1725900831554-89ee3bcc-240c>



Doctoral Program

The Doctoral Program in Environmental Engineering at ITS is supported by an outstanding faculty team of 9 Professors and 11 PhD holders with strong international research credentials (5,142 Scopus citations, 9,038 Google Scholar citations, and 3,482 Web of Science citations). The program offers cutting-edge research opportunities through advanced laboratories in Water Treatment Technology, Solid & Hazardous Waste Management, Environmental Quality Management, Air Pollution & Climate Change Control, and Environmental Remediation. Students benefit from global academic partnerships with leading universities in Japan, Malaysia, Singapore, and other countries

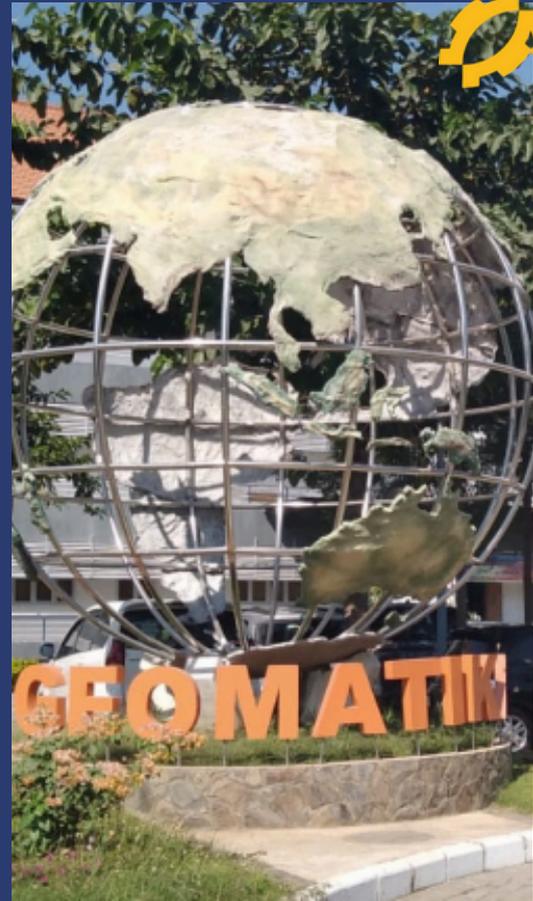
You can apply to the Master and Doctoral in Environmental Engineering program with a KNB, TIAS Scholarship, and ITS Global Excellence Scholarship.

Geomatics Engineering



Master's Program

Geomatics Engineering program at ITS is an advanced study program focusing on developing competencies in geospatial technology and surveying. This 4-semester (36 credits) program offers three main specializations: (1) Surveying and Mapping covering satellite geodesy (GNSS) and terrestrial/hydrographic mapping, (2) Remote Sensing & Photogrammetry for satellite/drone image analysis and 3D modeling, and (3) Geographic Information Systems (GIS) including spatial database management and spatial analysis. Supported by modern laboratory facilities, the program prepares graduates for careers in government agencies, consulting firms, and research institutions.



more information:

<https://www.its.ac.id/tgeomatika/academics/study-program/master-program/>

Informatika



The Department of Informatics Engineering at Institut Teknologi Sepuluh Nopember (ITS) offers high-quality graduate education at both Master's (S2) and Doctoral (S3) levels, preparing students for leadership in research, industry, and innovation in the field of computing.

Master's Program

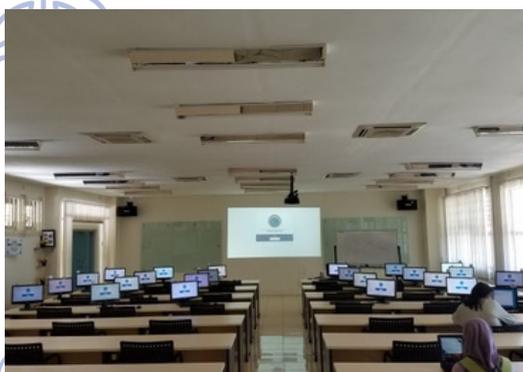
the Master's Program in Informatics Engineering provides students with a comprehensive curriculum that balances theory and practical skills. The program is structured for completion in four semesters (2 years), totaling 36 credit units. the program offers two study tracks:

- Course-Based Track: Emphasizes in-depth coursework.
- Research-Based Track: Focuses on independent research leading to a thesis, guided by expert faculty and active research groups.

more information:

<https://www.its.ac.id/informatika/academic/study-program/magister-degree/>

<https://www.its.ac.id/informatika/academic/study-program/doctor-degree/>



Doctoral Program

The Doctoral Program in Informatics Engineering at ITS is designed to produce independent researchers and thought leaders who contribute to advancements in **computer science** and information technology. The program emphasizes deep theoretical understanding and original research. This program requires the completion of a minimum of 42 credit units, including research seminars, proposal defenses, dissertation writing, and scientific publication.

Information System



The Information Systems Department at ITS offers comprehensive postgraduate education to develop experts in digital transformation and advanced information technologies.

Master's Program

This 4-semester program provides three specializations: Business Information Systems, Intelligent Systems, and Information Systems Management. Combining technical and managerial approaches, the curriculum prepares graduates for roles as systems analysts, IT consultants, and technology managers through industry-aligned coursework and practical projects.



more information:

<https://www.its.ac.id/si/en/s2-postgraduate-study/>

Electrical Engineering



Offers comprehensive S2 and S3 programs with international-standard research facilities and global academic networks.

Master's Program

4-semester program (36 credits) with six specializations: Power Systems, Control Systems, Multimedia Telecommunications, Electronics, Smart Networks, and Telematics. The curriculum combines advanced theoretical knowledge with practical industry applications through hands-on laboratory work and research projects. Students benefit from small class sizes and personalized mentorship by experienced faculty members. Features international joint-degree opportunities and industry collaboration, including potential internships with partner companies.

more information:

<https://www.its.ac.id/telekro/academics/master-degree/>

<https://www.its.ac.id/telekro/academics/doctoral-degree/>



Doctoral Program

6-semester research-intensive program (42 credits) focusing on renewable energy, smart grid technologies, and advanced telecommunications. The program emphasizes cutting-edge research methodologies and innovative solutions to complex engineering challenges. Candidates work closely with faculty advisors to develop original research contributing to the field's body of knowledge. Includes international research exchange programs with partner universities worldwide, providing global exposure and cross-cultural research experience. Graduates are equipped to take leadership positions in academia, research institutions, and high-tech industries.

You can apply to the Master's in Electrical Engineering program with a KNB and TIAS Scholarship, and pursue the Doctoral Program with the ITS Global Excellence Scholarship.

Marine Engineering



The Marine Engineering Department at ITS offers comprehensive postgraduate programs designed to develop expertise in maritime technology and ship systems engineering.

Master's Program

ITS offers Indonesia's premier Master's in Marine Engineering with two study options: a 2-year Master of Engineering (M.T.) and a Double Degree with Germany's Wismar University. The program focuses on ship systems technology, covering propulsion, offshore structures, automation, and maritime safety. Students access six specialized labs and gain practical skills for careers in ship design and marine operations.



more information:

<https://www.its.ac.id/siskal/study-program/master-degree/>



Ocean Engineering

Master's Program

Masters Program in Ocean Engineering implemented within four semesters (two years). The total credit load is 75 credits (equal to 120 ECTS), consisting of mandatory subjects and elective courses (36 credits), publication, research and thesis writing (39 credits) in accordance with the curriculum. These additional activities are mandatory in order to complete the academic activities and graduate from the program. The complete information regarding academic activities credits can be seen in table of the conversion of academic activities credit into ECTS. The Program Education Objectives (PEO) and Learning Outcomes (LOs) of MOE are as follows.



Doctoral Program

The Doctoral Program on Ocean Engineering is implemented in 4 semesters (2 years), with total credit load is 50 credits, consisting of compulsory courses, supporting subjects, dissertation research and writing in accordance with the curriculum.



more information:

<https://www.its.ac.id/tkelautan/en/study-program-2/master-degree/>

<https://www.its.ac.id/tkelautan/en/study-program-2/doctoral-degree/>



Marine Transport Engineering

Master's Program

In compiling the curriculum structure of the Master Study Program, Marine Transportation Engineering involves stakeholders consisting of all lecturers, industry representatives, government agencies and foreign university partners related to the marine transportation sector to provide suggestions or proposals related to curriculum suitability with the requirements and developments of industry as well as the world of work so that it is expected that the graduates can be accommodated to the world of work. The following is a documentation of the discussion of the curriculum for the Master Program in Marine Transportation Engineering which is carried out online with lecturers, industry representatives, government agencies and partner universities.



more information:

<https://www.its.ac.id/seatrans/academic/study-program/master-degree-s2/>





Unlock Your Potential at ITS!

Pursue your postgraduate dreams with **KNB Scholarships** at ITS,
a leading tech university in Indonesia.

Apply now and take the first step toward an exceptional academic journey.

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<https://www.its.ac.id/international/>



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