ITS
Institut
Teknologi
Sepuluh Nopember

INTERNATIONAL UNDERGRADUATE PROGRAM GUIDE

2022

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ABOUT ITS

Graha Institut Teknologi
Sepuluh Nopember

Awards

RANK 160

QS ASIAN UNIVERSITY RANKINGS

YEAR **2022**

751 – 800

QS WORLD UNIVERSITY RANKINGS

YEAR **2022**

751-800 (Global), **6** (Indonesia)

351 – 400

THE WORLD UNIVERSITY RANKINGS 2021 ASIA

RANK 1001+

THE WORLD UNIVERSITY RANKINGS 2021

1001+ (Global), **3** (Indonesia)

INTERNATIONAL

RANK 1 Sapuangin ITS Team, Shell Eco-Marathon, 2021 Off-Track Award

RANK 1 Ichiro ITS Robotic Team, RoboCup 2019 and Fira RoboWorldCup, 2019

RANK 1 Barunastra ITS Team, AUVSI 14th International Roboboat Competition, 2021

RANK 1 Sapuangin ITS Team, Shell Eco-Marathon Drivers World Championship 2018 in United Kingdom

RANK 1 Ichiro ITS Robotic Team, Robocup 2018 in Canada

RANK 1 Barunastra ITS Team, 11th Annual International Robobat Competition 2018 in the United States of America

RANK 3 Jalapatih ITS Team, Solar Sport One 2018 in Netherlands

NATIONAL

RANK 1 ITS Robotic Team, Indonesia Robotic Contest, 2018, 2019, 2020, 2021

RANK 2 Bayucaraka ITS Team, Indonesia Flying-Robotic Contest, Racing Plane and Best Design, 2021

RANK 1 Nogogeni ITS Team, Sufficient Energy Car Contest, 2021

RANK 2 Institution with the Highest Scientific Publication (SINTA Award 2018)

RANK 4 Institution with the Highest Grade in Higher Degree National Assessment (SBMPTN) 2018

RANK 1 The Most Innovative University (The Ministry of Research, Technology and Higher Education 2017)

RANK 5 Best University in Indonesia (The Ministry of Research, Technology and Higher Education 2017)

RANK 3 National Research Student Competition 2017

RANK 1 The Most Outstanding Student in Vocational Degree 2017

...and many others

An Institution that Concerns on Technology

1957

The Establishment of The Foundation

E *The Foundation of Technical College was established by the initiative of Doctor Angka Nitisastro, at the first Lustrum of Indonesian Engineers Association in East Java. Hereafter, the 10 November Technical College Surabaya was established by Ir. Soekarno on 10th November 1957.*

I Yayasan Perguruan Tinggi Teknik (YPTT) didirikan atas gagasan dr. Angka, pada Lustrum I PII Jawa Timur. Selanjutnya, Perguruan Tinggi Teknik 10 Nopember Surabaya diresmikan oleh Ir. Soekarno pada tanggal 10 Nopember 1957.

1960

ITS Became Public University

E *The 10th November Technical College Surabaya turned into Institut Teknologi Sepuluh Nopember, and changed its status to be a public university, on 3rd November 1960.*

I Perguruan Tinggi Teknik 10 Nopember Surabaya berubah menjadi Institut Teknologi 10 Nopember, dengan status sebagai Perguruan Tinggi Negeri. Pada tanggal 3 Desember 1960, nama tersebut diubah kembali menjadi Institut Teknologi Sepuluh Nopember (ITS).

1972

Faculty Transfer & Development Plan

E *ITS has a campus branch at Jl. Manyar 8 Surabaya that is used by the Faculty of Civil Engineering.*

I ITS memiliki kampus di Jl. Manyar 8 Surabaya yang digunakan untuk Fakultas Teknik Sipil.

1982

The Inauguration of Sukolilo Campus

E *The construction of ITS Sukolilo Phase 1 was started using ADB funds that completed in 1980 and was inaugurated on 27th March 1982.*

I Mulai pembangunan kampus ITS Sukolilo Tahap I menggunakan sebagian dana ADB selesai pada Tahun 1980 dan diresmikan pada tanggal 27 Maret 1982.

2008

ITS as Public Service Agency

E *ITS was assigned as a public service agency according to the Decree of the Ministry of Finance No. 363/KMK.05/2008. Thus, the management system changed, which enabled ITS to account for the use of government finance. ITS also became an independent institution by initiating cooperation at the national and international levels.*

I ITS ditetapkan sebagai Badan Layanan Umum (BLU) berdasarkan SK Menkeu No. 363/KMK.05/2008. Sehingga, pola manajemen ITS berubah, yaitu mampu mempertanggung jawabkan penggunaan keunganan bersumber dari pemerintah, ITS juga menjadi institusi mandiri dengan membuka peluang kerjasama pada level nasional dan internasional.

2014

ITS as an Autonomous University

E *ITS has become an autonomous university according to the Government Regulation No.83 Year 2014. Thus, the management system of ITS changed which enabled ITS to autonomously manage its academic, norms and operational policy as well as organizational acts, finance, student affairs, manpower, and facilities.*

I ITS sebagai Perguruan Tinggi Negeri Badan Hukum (PTNBH) berdasarkan PP No. 83 Tahun 2014. Sehingga ITS harus mampu melakukan pengelolaan secara otonom, baik dalam bidang akademik, norma dan kebijakan operasional serta pelaksanaan organisasi, keuangan, kemahasiswaan, ketenagaan, serta sarana prasarana.

2017

Kick-Off ITS as Autonomous University

E ITS started to implement the autonomous university policy. ITS has 10 faculties.

I ITS telah mengimplementasikan aturan PTNBH. ITS telah menjadi 10 Fakultas.

Landmark
Synchro ITS

Globally Connected

- EPI-UNET
- ACNET-EngTech
- JWG
- Other Collaboration

E *Institut Teknologi Sepuluh Nopember has been struggling to be A World Class University (WCU). Some steps that have been taken by ITS is to establish a lot of collaboration with several leading institutions that range from Asia to Europe and America. Thus far, ITS has signed at least 393 MoUs and MoAs with international institutions and campuses.*

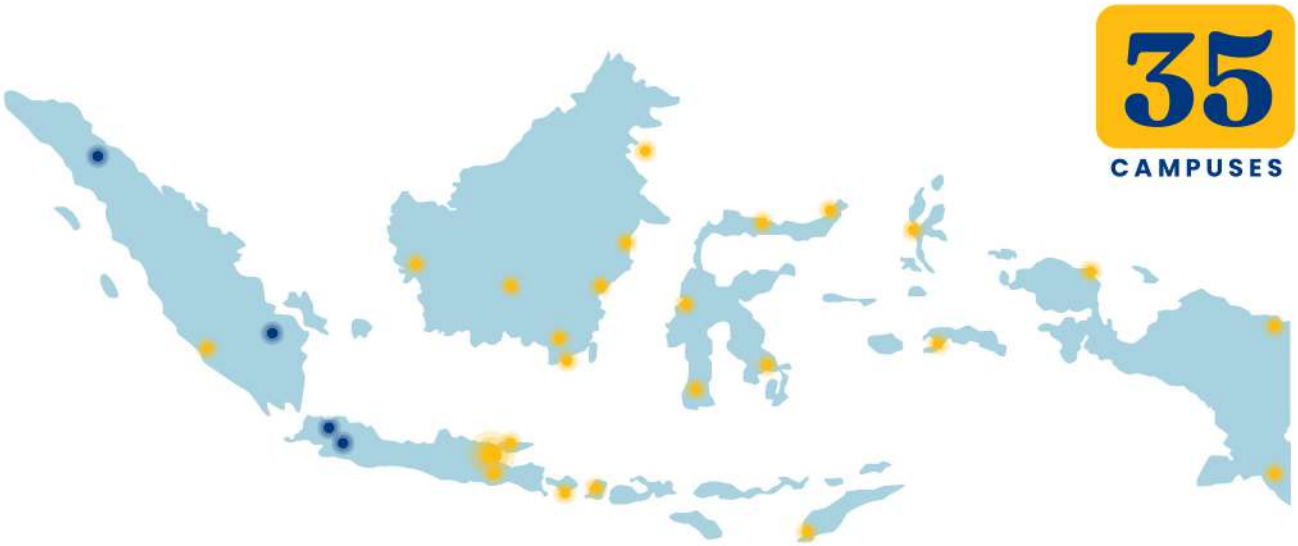
I Institut Teknologi Sepuluh Nopember (ITS) telah berusaha menjadi salah satu kampus terbaik dunia bergelar World Class University (WCU). Beberapa langkah yang telah dilakukan ITS adalah dengan membentuk berbagai kerja sama dengan beberapa institusi ternama yang tersebar dari Asia hingga ke Eropa dan Amerika. Terhitung hingga hari ini, ITS telah menandatangani setidaknya 393 MoU dan MoA dengan institusi maupun kampus internasional.

EPI - UNET

(Eastern Part of Indonesia University Network)

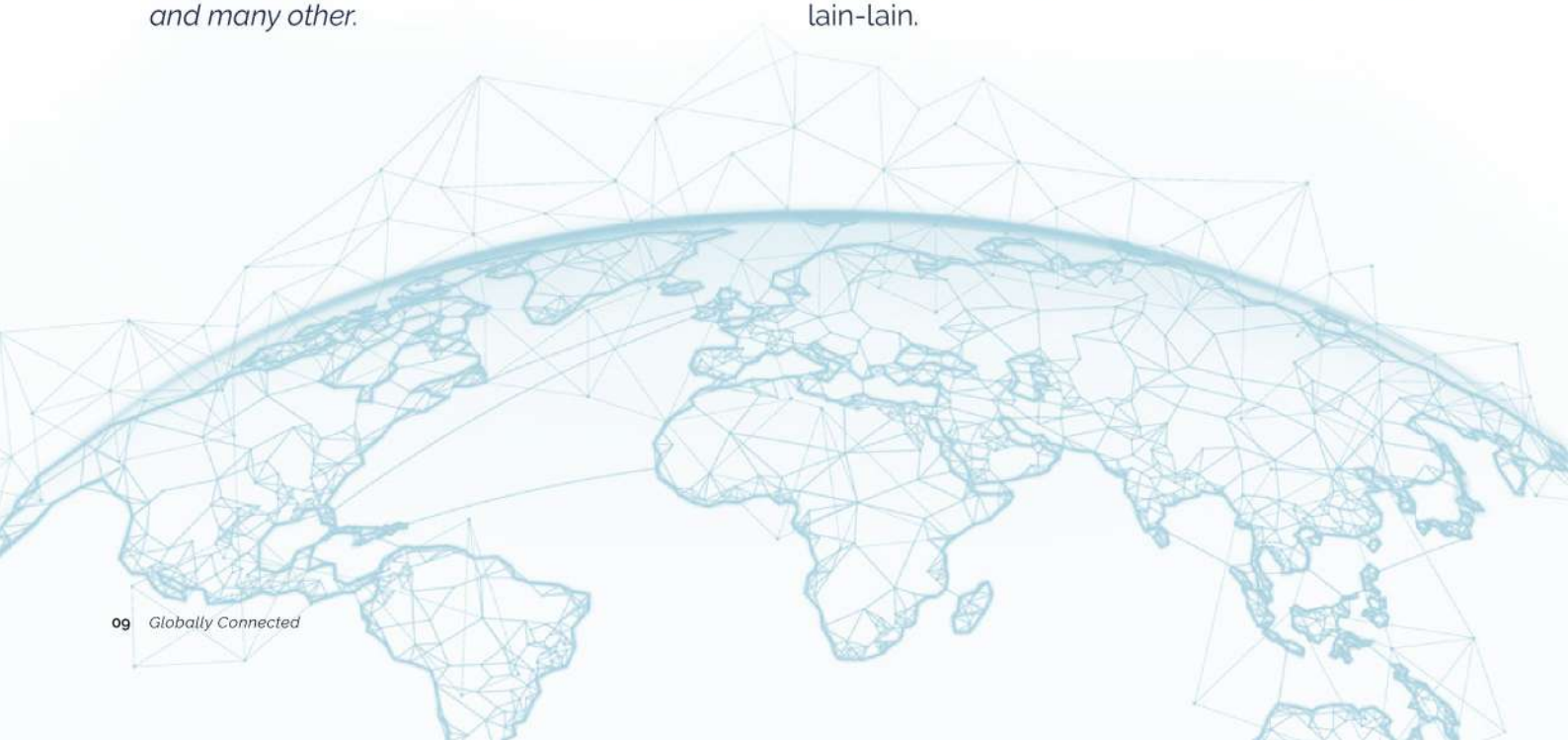
E *At the global level, ITS participates in several consortia. One of them is the Eastern Part of Indonesia University Network (EPI-UNET). In this consortium, ITS has joined to collaborate with 35 countries and universities in Eastern part of Indonesia for the last eight years.*

I Dalam tingkat global, ITS turut serta tergabung dalam beberapa konsorsium. Salah satunya adalah konsorsium Eastern Part of Indonesia University Network (EPI-UNET). Dalam konsorsium ini, ITS telah bergabung bersama dengan 35 universitas di Indonesia Timur selama delapan tahun terakhir.



E *In addition, ITS also collaborates with other universities such as University of Bengkulu, State University of Medan, Universitas Sumatera Utara, Sriwijaya University, Universitas Indonesia, Institut Pertanian Bogor, and many other.*

I Di luar konsorsium, ITS juga menjalin kerjasama dengan universitas lain seperti Universitas Medan, Universitas Sumatera Utara, Universitas Sriwijaya, Universitas Indonesia, Institut Pertanian Bogor, dan lain-lain.



ACNET-EngTech

(ASEAN-China Network Engineering Technology)

E *Besides, ITS also takes part in the consortium of ASEAN-China Network Engineering Technology (ACNET-EngTech) where ITS collaborates with 20 other reputable campuses in China and ASEAN.*

I Disamping itu, ITS juga mengambil bagian dalam konsorsium ASEAN-China Network Engineering Technology (ACNET- EngTech) dimana ITS bekerjasama dengan 20 kampus ternama negara Tiongkok dan negara lainnya di ASEAN.

JWG

(Joint Working Group Indonesia - Jepang)

E *Since 2012, ITS has collaborated in Joint Working Group (JWG) Indonesia-Japan forum to strengthen research cooperation, innovation, education and sustainable industry development. In 2017, ITS hosted the fourth JWG conference event.*

I Sejak tahun 2012, ITS bekerjasama dalam forum Joint Working Group (JWG) Indonesia-Jepang dalam penguatan kerjasama penelitian, inovasi, pendidikan, serta pengembangan industri berkelanjutan. Tahun 2017, ITS menjadi tuan rumah perhelatan konferensi ke-empat JWG.

Other Collaboration

E *Since January 2017, ITS has collaborated with Bialystok University of Technology in Poland, Tomsk State University in Russia, Zurich University of Applied Sciences in Switzerland, Loughborough University in the UK, International Alatoo University at Kyrgyzstan, Heriot Watt University in Scotland, and Saxion University of Applied Sciences in the Netherlands as well as Power Technology ASEAN Ltd in New Zealand. Those collaboration ranges from research collaboration, student exchange and staff mobilization. In 2017, ITS also collaborates with Mokpo National University in Korea, in the fields of maritime. The signing of the collaboration was witnessed by the fifth president of Indonesia, Megawati Soekarnoputri.*

I Terhitung mulai Januari 2017, ITS telah bekerjasama dengan Bialystok University of Technology di Polandia, Tomsk State University di Rusia, Zurich University of Applied Sciences di Swiss, Loughborough University di Inggris, International Alatoo University di Kyrgystan, Heriot Watt University di Skotlandia, serta Saxion University of applied Sciences di Belanda serta power Technology Asean Ltd di Selandia Baru. Kerjasama terkait meliputi kolaborasi riset, pertukaran pelajar maupun mobilisasi staf. Tahun 2017, ITS mulai menjalin kerjasama dengan Mokpo National University di Korea dI bidang studi kemaritiman. Penandatanganan kerjasama ini disaksikan presiden Republik Indonesia ke-5, Megawati Soekarnoputri.

Applying to ITS

International Undergraduate Program

E *The International Undergraduate Program (also known as IUP) is a bachelor program that implements English as the language of instruction. IUP is intended for Indonesian nationality and Non-Indonesian nationality high school graduates who meet the requirements set by ITS. The program offers the regular undergraduate curriculum and provides opportunities for students to take part in one or more international exposure activities.*

I Program Sarjana Internasional (IUP) adalah program pendidikan sarjana dengan menggunakan bahasa Inggris sebagai bahasa pengantar. IUP ditujukan untuk lulusan sekolah menengah atas baik WNI atau WNA yang memenuhi persyaratan yang ditentukan ITS. Program ini menawarkan kurikulum sarjana dan memberikan kesempatan bagi mahasiswa untuk mengambil bagian dalam satu atau lebih kegiatan berskala internasional.

General Requirements

1

E *Indonesian Nationality and Non-Indonesian Nationality high school or its equivalent (minimum of 12-years of schooling) graduated no longer than three years at the date of admission are eligible to apply for both periods of admission. Prospective student should apply through its.ac.id/admission.*

I WNI atau WNA lulusan SMA/SMK/MA atau sederajat (minimal pendidikan 12 tahun) yang lulus tidak lebih dari 3 tahun dari tanggal pendaftaran berhak mendaftar di kedua masa penerimaan. Calon mahasiswa mendaftar melalui its.ac.id/admission.

2

E *Applicants should have excellent academic potential as measured by one of the following:*

I Pendaftar memiliki kemampuan akademik yang mumpuni yang dibuktikan oleh salah satu dari berikut:

1. **High School Academic Report/Transcript,**
2. **General SAT Test Score Conducted by the College Board (http://sat.collegeboard.org), or**
3. **Cambridge IGCSE Score, or**
4. **UTBK Score, or**
5. **ITS Academic Test Result.**

3

E *Applicants should have good command and knowledge of English as shown by one of the following English language proficiency results:*

I Pendaftar harus memiliki kemampuan bahasa Inggris yang mumpuni yang dibuktikan oleh salah satu hasil kecakapan bahasa Inggris sebagai berikut:

1. **TOEFL ITP ≥ 500,**
2. **TOEFL IBT ≥ 61,**
3. **TOEFL CBT ≥ 173,**
4. **IELTS ≥ 6,**
5. **TOEIC ≥ 575.**
6. **Duolingo English test score ≥ 90**

4 E *Applicants must upload Motivation Letter.*
I Pendaftar harus mengunggah Surat Motivasi.

5 E *Applicants must fill out the Commitment Letter of Parents.*
I Pendaftar harus mengisi Surat Komitmen Orang Tua

6 E *Applicants from foreign countries, other than the above requirements, must also provide:*
I Pendaftar dari luar negeri, selain persyaratan di atas, juga harus melampirkan:

1. Health Statement
2. Recommendation Letter
3. Passport

Specific Requirements

E *Several study programs require specific physical competency related to vision function to support learning process: having adequate vision function to distinguish colors. Therefore, students who are accepted in the program mentioned below are required to provide health certificates during the registration process.*

I Beberapa program studi membutuhkan kondisi fisik tertentu yang berkaitan dengan fungsi indra pengelihatan untuk mendukung proses pembelajaran: tidak buta warna atau dapat membedakan warna. Jadi, calon mahasiswa yang diterima di program berikut diwajibkan melampirkan Surat Kesehatan dalam proses registrasi.

Faculty of Science and Data Analytics (SCIENTICS) : **Physic, Chemistry**	Faculty of Industrial Technology and Systems Engineering (INDSYS) **Chemical Engineering**	Faculty of Civil, Planning and Geo Engineering (CIVPLAN) **Architecture, Environmental Engineering, Geomatics Engineering, Geophysical Engineering**

Tuition Fees

Education fees consist of:

1. Tuition Fee

The tuition fee is paid per semester.

For all International Undergraduate Program:

IDR 25.000.000 for Indonesian nationality
USD 4.500 for Non-Indonesian nationality

For Joint Degree Program:

Marine Engineering: IDR 20.000.000
Naval Architecture: IDR 30.000.000
Mechanical Engineering: IDR 30.000.000

2. Institution Development Donation (IDD)

Institution Development Donation is IDR 75.000.000

E *Education Fees do not cover international exposure program's costs. Those costs depend on the type of international exposure program and conditional living costs at overseas partner institutions. Any payment that has been made cannot be refunded.*

I Biaya pendidikan belum meliputi biaya program kegiatan internasional. Biaya-biaya tersebut tergantung pada tipe program atau kegiatan internasional yang diambil dan biaya hidup di institusi mitra di luar negeri. Segala bentuk biaya yang sudah dibayarkan tidak dapat dikembalikan.

Contact

E *All information about admission to ITS can be seen on* ***its.ac.id/admission*** *or contact :*

I Semua informasi tentang penerimaan mahasiswa baru ITS dapat dilihat di **its.ac.id/admission** atau hubungi:

Directorate of Education
Direktorat Pendidikan
Secretariat:
ITS Campus, Sukolilo, Surabaya 60111
E-mail:
Indonesian Nationality Applicants admisi@its.ac.id
Non-Indonesian Nationality Applicants intladmission@its.ac.id

Teaching & Learning

Lectures

E *The lectures at ITS uses Semester Credit Unit (SKS) where students choose their own classes. For students, 1 credit means each week in a certain semester follow 50 minutes face to-face class, 50 independent study, and 50 minutes assignment activity. Lectures is the best opportunity for students to study the latest theory and research from our lecturers.*

I Perkuliahan di ITS menggunakan sistem Satuan Kredit Semester (SKS) dimana mahasiswa memilih sendiri kelas yang dikehendaki. Satu SKS mempunyai beban studi per minggu sebesar 50 menit tatap muka di kelas, 50 menit kegiatan mandiri, dan 50 menit mengerjakan tugas. Perkuliahan tatap muka adalah kesempatan mahasiswa untuk mempelajari teori dan hasil riset terbaru melalui pengajar.

Seminar

E *Seminar is designed for large-group (30-100 students) covering specific topic in depth. The speakers are experienced and well-known expert in their field.*

I Seminar diadakan untuk perkuliahan skala besar (30-100 orang) yang membahas topik secara khusus. Pembicara seminar ini adalah para ahli di bidangnya.

Laboratory

E *Laboratory classes are conducted to strengthen students' understanding towards the topic and polish their practical skill. ITS has more than 180 labs spread over 7 faculties and 1 interdiciplinary school.*

I Untuk menunjang ilmu yang dipelajari di kelas teori, mahasiswa mengikuti kelas laboratorium untuk mengasah kemampuan praktek. ITS memiliki 180 lab yang tersebar di 7 fakultas dan 1 sekolah interdisiplin.

Studio

E *In studio class, students independently manage their time to work on current project while being supervised. This type of class is often applied in architecture and design classes.*

I Dalam kelas studio ini, mahasiswa mengatur waktunya secara mandiri untuk mengerjakan proyek yang ada sambil berdiskusi dengan dosen atau supervisor. Kelas ini banyak diterapkan di kelas perancangan arsitektur dan desain.

Supervisions

E *Students are facilitated to conduct a small group discussions in certain topics with their experienced supervisor. Supervisor will provide regular feedback for students to improve their work.*

I Mahasiswa difasilitasi untuk melakukan diskusi dalam kelompok kecil dengan pengajar yang ahli di bidangnya. Pengajar akan memberikan saran dan masukan terhadap pekerjaan mahasiswa.

Field Trip

E *At least once a year, field trip is held by some courses. Time and location of the field trip depends on which course students take.*

I Setidaknya sekali dalam setahun, beberapa kelas mengadakan karyawisata. Lokasi dan waktu pelaksanaan bervariasi, tergantung dari pelaksana karyawisata di jurusan.

E-Learning

classroom.its.ac.id

E *There is also available an E-Learning facility called ITS Classroom. This integrated electronic learning system provide a wide array of learning materials: from moduls, a collection of assignments, quizes/tests, and many others.*

It is expected that this E-Learning facility can facilitate students to do their study anywhere and anytheme, suitable to their needs and preferences. Furthermore, students can also be implored to become more independent and always prepared to manage their time in accordance with this system.

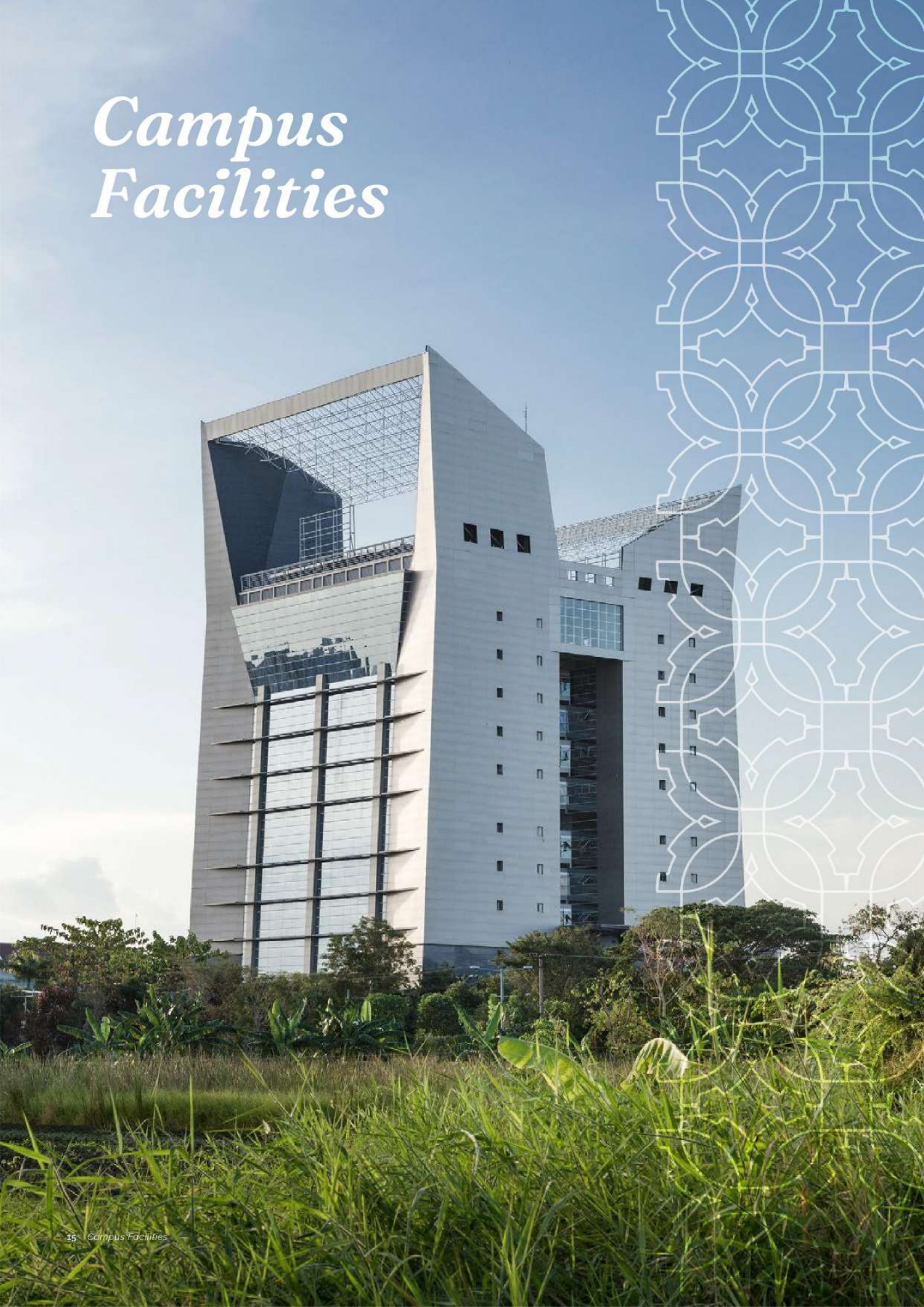
For further information regarding this online learning system, from its registration procedure to how to operate it, you can access the website at: ***classroom.its.ac.id***

I Terdapat fasilitas E-Learning yang dinamakan ITS Classroom. Sistem belajar daring terintegrasi ini menyediakan berbagai macam fasilitas belajar mengajar, mulai dari modul, tugas, ujian/kuis, dan lain-lain.

Fasilitas E-learning diharapkan mampu memfasilitasi mahasiswa agar dapat melakukan kegaitan belajar di mana saja dan kapan saja, sesuai dengan preferensi dari mahasiswa. Mahasiswa juga dapat dituntut untuk mandiri dan senantiasa mengatur waktu untuk mengikuti kegiatan belajar daring ini.

Untuk informasi lebih lanjut mengenai sistem belajar daring ini, mulai dari tata cara registrasi hingga pengoperasiannya, dapat dilihat di: **classroom.its.ac.id**

Campus Facilities



Library

E *ITS central library is a 6-storey building with total area of 9000 m2. There are more than 80,000 book titles, 10,000 audio visual datas, and more than 18000 collections of digital library. In addition to presenting books, the central library also offers several pleasant areas such as PLN Corner, Sampoerna Corner, and Indonesia Development Information Services (IDIS).*

I Perpustakaan pusat ITS merupakan sebuah gedung 6 lantai dengan luas total 9000 m2. Terdapat lebih dari 80.000 judul buku, 10000 data audio visual serta koleksi digital library lebih dari 18000. Selain menyuguhkan buku, perpustakaan juga menawarkan area belajar yang sangat nyaman seperti PLN Corner, Sampurna Corner, dan Indonesia Development Information Services (IDIS).

I Pembinaan olahraga juga menjadi perhatian bagi ITS selain di bidang akademik. Fasilitas olah raga yang tersedia berupa fasilitas indoor dan outdoor. Semua fasilitas yang disediakan tersebut dapat digunakan oleh mahasiswa maupun dosen serta karyawam dengan menurut jadwal masing-masing. Selain digunakan oleh civitas akademika ITS, semua fasilitas tersebut juga dapat digunakan oleh pihak luar.

Sport Center

E *Sports coaching is a concern for ITS in addition to the academic life. Sports facilities are available both indoor and outdoor. All the facilities provided can be used by students and lecturers as well employees according to their respective schedule. In addition to being used by the ITS academic community, all these facilities can also be used by outsiders.*

Student Dormitory

E *ITS student dormitory consists of 9 buildings and has 518 rooms that available for 1,132 students from various regions in Indonesia. Aside from providing accommodation for domestic student, ITS also provide international dormitory to accommodates a number of foreign students from various countries who studied at ITS.*

I Asrama mahasiswa ITS mempunyai 9 gedung dan memiliki 518 kamar, dengan daya tampung sebanyak 1.132 orang mahasiswa dari berbagai daerah di Indonesia. Tak hanya mahasiswa dalam negeri saja, asrama mahasiswa juga menampung sejumlah mahasiswa asing dari berbagai negara yang menempuh pendidikan di ITS.

Central Cafeteria

E *The ITS central cafetaria is one of the campus facilities provided to serve food and beverages needs for the academic community at ITS. After being renovated in 2011, the cafetaria was designated with glass largely dominates the canteen in combination with brighter lightning and spacious space. The food offered is varied with an affordable price.*

I Kantin pusat ITS merupakan salah satu fasilitas kampus yang disediakan untuk melayani civitas akademika akan kebutuhan makanan dan minuman. Setelah direnovasi pada tahun 2011, kaca yang sebagian besar mendominasi kantin pusat dibuat lebih terang dan luas. Makanan yang ditawarkan pun cukup bervariasi dengan harga yang cukup terjangkau.

Medical Center

E *The ITS Medical Center is the health service for ITS community and public. The services provided include, outpatient services, medical treatment and medical support referrals.*

I Medical Center (Pusat Kesehatan) ITS merupakan layanan kesehatan untuk komunitas ITS maupun khalayak umum. Layanan yang diberikan antara lain : pelayanan pasien rawat jalan, penanganan medis dan rujukan dukungan medis.

Wisma ITS

E *ITS provides accommodation services for ITS guests, student parents, and others. Some of the accommodation services are Wisma Flamboyan, Wisma Bougenville and Wisma Yasmine*

I ITS memberikan layanan akomodasi untuk tamu ITS, orang tua mahasiswa, dan lain-lain. Beberapa layanan akomodasi tersebut antara lain : Wisma Flamboyan, Wisma Bougenville dan Wisma Yasmine

SCC (Student Community Center)

E *The SCC Building is a place to facilitate students to interact and to develop student activities. This three-storey building is also used as the secretariat for student activity unit, BEM and LMB.*

I Gedung SCC merupakan tempat yang memfasilitasi mahasiswa berinteraksi dan mengembangkan berbagai kegiatan kemahasiswaan. Gedung SCC yang terdiri dari tiga lantai, juga digunakan sebagai Sekretariat UKM, BEM dan LMB.

ITS Career and Student Entrepreneurship Center

E *ITS Career Center is a unit to improve student's competence so that they could find a competitive job offer. ITS Career Center also assists ITS in shaping the qualified resources. ITS Career Center provides several programs, such as job search training, student training based on psychological aspects, and job oportunities.*

I PKKM ITS merupakan sebuah unit yang bertujuan untuk meningkatkan kompetensi mahasiswa agar nantinya mereka siap sedia dalam mencari pekerjaan dan juga untuk menyediakan layanan berkelanjutan kepada mahasiswa agar dapat memiliki pekerjaan.

ITS Mosque

E *Most of people in ITS campus, are Muslim. Manarul Ilmi Mosque is the center for Muslim to pray inside campus. Some activities at Manarul Ilmi Mosque are studying, praying, donation, article making, and the availability of a library.*

I Sebagian besar yang ada di kampus ITS, beragama muslim. Masjid ITS sebagai pusat tempat ibadah umat muslim di area kampus. Adapun beberapa aktifitasnya terdiri dari : kajian, beribadah, donasi, pembuatan artikel, ketersediaan perpustakaan.

Student Life

Organization

E *ITS applies various efforts to improve student soft skills. Soft skills could be leadership upgrading, self-management, event management, and managing public opinion. All of those of soft skills can be learned through various way such as training, organization, and community. Organizations that are provided by ITS include: ITS' Student Executive Board, Faculty Student Executive Boardy, Student Representative Council, Student Constitutional Court Students.*

I ITS menerapkan beragam upaya untuk meningkatkan soft skill mahasiswa. Soft skill sendiri dapat meliputi peningkatan kemampuan memimpin (leadership), manajemen diri, manajemen acara, hingga memanajemen opini publik. Semua jenis soft skill tersebut dapat dipelajari lewat berbagai cara seperti pelatihan, organisasi, maupun komunitas. Organisasi yang dinaungi oleh ITS diantaranya: BEM (Badan Eksekutif Mahasiswa) Institut, BEM (Badan Eksekutif Mahasiswa) dan lain-lain.

Interest and Talent

E *In addition to having student executive board and student association, ITS also has a Talent society which houses the Student Activity Unit as a forum for students to learn and to explore new things as well as to improve their skill according to their interest. Student activity unit is almost the same as the extracurricular in high school. There are 38 student activity units in ITS today. Of all ITS student activity units, it can be grouped into four types: Arts (Photography, Choir, Videography, etc), Sports (Bridge, Chess, Badminton, and others) , Martial Fields (Kendo, Kempo, Taekwondo, etc), and special Sectors (Robotics, Menwa, Scouts, etc)*

I Selain memiliki BEM dan HIMA, ITS juga memiliki Lembaga Minat Bakat yang menaungi Unit Kegiatan Mahasiswa (UKM) sebagai wadah mahasiswa untuk mempelajari dan mengeksplor banyak hal baru serta meningkatkan kemampuan dalam bidang yang diinginkan. UKM hampir sama dengan ekstrakulikuler yang ada saat SMA. Terdapat 38 UKM di ITS saat ini. Dari semua UKM di ITS, UKM-UKM tersebut dapat dikelompokkan menjadi empat jenis, yaitu: Bidang Kesenian (UKM Fotografi, Paduan Suara, Videografi, dan lain-lain), Bidang Olahraga (UKM Bridge, Catur, Badminton, dan lain-lain), Bidang Beladiri (UKM Kendo, Kempo, Taekwondo, dan lain-lain), Bidang Khusus (UKM Robotika, Menwa, Pramuka, dan lain-lain)

Gerigi ITS

E *GERIGI ITS is a university's new students orientation period, designed to introduce and showcase the life of the campus, and also to cultivate students's solidarity and kinship*

I GERIGI ITS adalah masa orientasi mahasiswa baru tingkat universitas yang bertujuan untuk memperkenalkan kehidupan kampus serta memupuk rasa solidaritas dan kekeluargaan.

ITS Expo

E *ITS EXPO is an annual event created by ITS students as a mean to showcase and to promote their campus. Also included in the event are talkshow, entertainment and art show, urban market and various competitions.*

I ITS EXPO merupakan ajang bagi mahasiswa ITS untuk memamerkan kampus ITS ke dunia luar. Selain itu juga terdapat kegiatan hiburan berupa entertainment show, pagelaran seni, talkshow, pasar malam, urban market, pameran komunitas, dan lomba-lomba.

Ide Art

E *IDE ART (year 2017 in the picture) is a biannual art event; as a mean for student to channel their creative ideas through art exhibition and also interactive rides that can be enjoyed by visitors.*

I Pameran seni IDE ART 2017 merupakan sarana mahasiswa dalam menyalurkan ide-ide kreatifnya melalui pameran seni dan wahana-wahana interaktif yang dapat dinikmati pengunjung.

Barunastra ITS Team

E *One of student's achievements, a solar-powered ship prototype; recently won a first place in 2021 International Roboboat Competition.*

I Salah satu karya mahasiswa, sebuah prototype kapal bertenaga surya, yang menjadi juara 1 di kompetisi Roboboat 2021.

Graduation Ceremony

E *Graduation ceremony, most awaited day by final year students; is done twice in a one study year.*

I Upacara kelulusan, hari yang ditunggu-tunggu oleh mahasiswa tingkat akhir, dilakukan sebanyak dua kali dalam satu tahun ajaran.

Ichiro ITS Team

E *Sophisticated football robot created by ITS student; recently nabbed the first place in 2018 Robocup competition in Canada*

I Robot canggih yang dapat bermain sepak bola; baru saja meraih juara 1 di Robocup 2018 Kanada.

Sapuangin Car

E *Sapuangin Car, a fuel-efficient car initiated by ITS student, have been awarded the first place in 2021 Shell Eco-Marathon Off-Track Award.*

I Mobil Sapuangin adalah mobil irit bahan bakar hasil inisiasi mahasiswa ITS yang telah berhasil memenangkan juara 1 di kompetisi Shell Eco-Marathon 2021.

Explore Surabaya

The City

E *Surabaya is the second largest metropolitan city in Indonesia after the capital city of DKI Jakarta. Surabaya became a reference city in the field of industry, trade, education, and maritime in the eastern part of Indonesia. Industrial areas are concentrated in Tandes, Benowo, Asemrowo, Rungkut, and Gunung Anyar. These industries include consumer goods industry, chemical industry, large trading industry, garment industry, and others. The progress of these industrial sector has made Surabaya's economy expand rapidly. In 2013, Surabaya's economic growth reached 7.6%. This is higher than the national economic growth figures.*

In addition to the industrial sector, Surabaya also won the Adipura award eight times in a row from the Ministry of Environment. This national level award is given to cities in Indonesia that successfully manage urban hygiene and environment in a sustainable manner.

I Surabaya adalah kota metropolitan terbesar kedua di Indonesia setelah ibu kota DKI Jakarta. Surabaya menjadi kota acuan dalam bidang industri, perdagangan, pendidikan, serta kelautan di wilayah Indonesia bagian Timur. Daerah-daerah industri terpusat di Tandes, Benowo, Asemrowo, Rungkut, dan Gunung Anyar. Industri tersebut meliputi industri barang konsumsi, industri kimia, industri perdagangan besar, industri garmen, dan lainnya. Kemajuan industri tersebut membuat perekonomian Surabaya berkembang pesat. Pada tahun 2013, pertumbuhan ekonominya mencapai 7,6%. Angka ini lebih tinggi dari pertumbuhan ekonomi di Jawa Timur dan Nasional.

Selain sektor industri, Kota Surabaya juga menyabet penghargaan Adipura delapan kali berturut-turut dari Kementerian Lingkungan Hidup. Penghargaan nasional ini diberikan kepada kota di Indonesia yang berhasil mengelola kebersihan dan lingkungan perkotaan secara berkelanjutan.

The People

E *Surabaya is famous for its nickname "City of Heroes". In accordance with the nickname, Surabaya people is known for being expressive and extroverted, full of determination, and bold. The typical suroboyoan dialect becomes the identity of arek suroboyo—the nickname for Surabaya people. Even so, the people of Surabaya are very open to newcomers, and will be happy to welcome you to become part of their community.*

I Surabaya terkenal dengan julukan kota pahlawan. Sesuai dengan julukan tersebut, masyarakat Surabaya terkenal ekspresif dan terbuka dalam berkomunikasi, memiliki tekad kuat, dan tegas. Dialek suroboyoan yang khas menjadi identitas arek suroboyo (julukan orang Surabaya). Meski begitu, masyarakat Surabaya sangat terbuka pada pendatang baru baik dari dalam maupun luar negeri, dan akan dengan senang hati menerima Anda menjadi bagian dari komunitasnya.

The Food

E *East Java culinary generally has a tendency to taste salty. Located on the coast, the availability of seafood in Surabaya is very abundant throughout the year. The famous food menu is iga penyet (beef ribs), soto (chicken soup), rawon (dark beef soup, rujak cingur (spicy salad with beef lips), and many more. Your tongue won't be bored because the various food with rich flavors are ready to pamper you during your stay in Surabaya.*

I Kuliner Jawa Timur umumnya memiliki cita rasa cenderung asin. Terletak di pesisir, ketersediaan seafood di Surabaya sangat berlimpah sepanjang tahun. Menu makanan yang terkenal adalah iga penyet, soto ayam, rawon, rujak cingur, dan sebagainya. Lidah Anda tidak akan bosan karena berbagai menu dengan citarasa beragam siap memanjakan Anda selama tinggal di Surabaya.

Accomodation

E *Students from outside Surabaya has 3 accomodation options: room rent, apartment, or dormitory.*

- *Boarding room rent around ITS spread in ITS triangle namely Mulyosari area, Gebang, and Keputih. Room rates vary based on room types, starting from IDR 300.000 to above IDR 1 million per month, depends on the facilities and location. Students can also rent a boarding room in ITS lecturers housing with more secure security because it is located in the campus area.*
- *There are also various options for apartment around ITS. For students looking for a place to live with better security and privacy, the apartment is the right choice. The rental price range is IDR 2 million to IDR 4 million per month.*
- *Another option is the ITS student dormitory located in the southern part of the campus area. Rental rates vary depending on the type of room available.*

I Mahasiswa dari luar Surabaya memiliki 3 opsi tempat tinggal : kost, apartemen, atau asrama.

- *Kamar kost di sekitar ITS tersebar di segitiga ITS yaitu daerah Mulyosari, Gebang, dan Keputih. Harga sewa kost berdasarkan tipe kamar yang tersedia, mulai dari Rp 300.000 hingga di atas Rp 1.000.000 per bulan. Mahasiswa juga bisa menyewa kamar kost di perumahan dosen ITS dengan kemanan yang lebih terjamin karena terletak di area kampus.*
- *Bagi mahasiswa yang ingin tempat tinggal dengan keamanan dan privasi lebih terjaga, apartemen merupakan pilihan yang tepat. Kisaran harga sewa adalah 2 juta rupiah sampai 4 juta rupiah per bulan.*
- *Pilihan lainnya adalah asrama mahasiswa ITS yang terletak di bagian selatan area kampus. Harga sewa bervariasi tergantung jenis kamar yang tersedia.*

Career After Graduation

E *ITS has one of the highest employment rate in the country. Many of ITS graduates have succeed in various field of industry such as government agencies (including BUMN), private companies, non-profit organizations, and own business. This proves the quality of ITS graduates wbo are able to compete with other university graduate.*

I ITS menghasilkan lulusan dengan tingkat penyerapan tenaga kerja yang tinggi di Indonesia. Alumni ITS telah sukses berkiprah di berbagai bidang industri baik di instansi pemerintah (termasuk BUMN), perusahaan swasta, organisasi non-profit, maupun memiliki usaha sendiri. Hal ini membuktikan kualitas lulusan ITS yang mampu bersaing dengan lulusan universitas lain.

4 MONTHS

Average waiting time for graduate to land on their first job

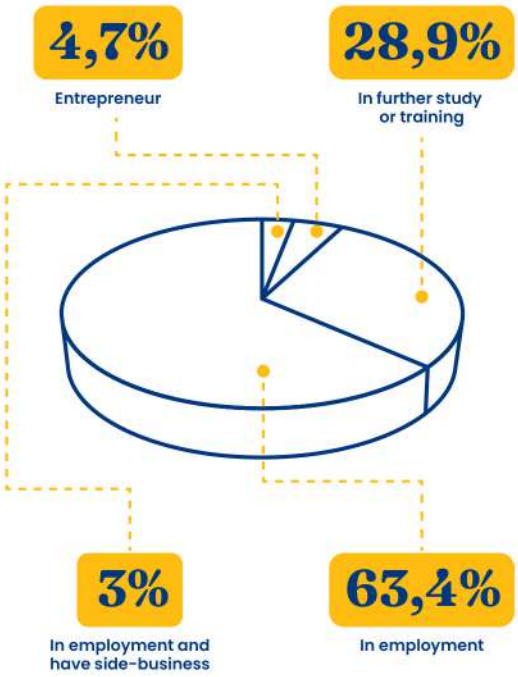
73%

Working in the field related to 73% their major

Career Destination

E *We offer a wide range of course in science, engineering, and design that today's industry needs. Supported with accreditation and certification, our graduates are sought after national and multinational company for their high-quality hardskills and softskils.*

I Kami menawarkan berbagai disiplin ilmu teknik, desain, dan manajemen yang dibutuhkan industri saat ini. Didukung dengan akreditasi dan sertifikasi, lulusan kami banyak dicari oleh perusahaan karena memiliki kualitas yang mumpuni. Berikut merupakan data yang dihimpun melalui Tracer Study tahun 2017 mengenai lulusan kami :



Soft Skill

E *We encourage our students to develop their softskill through student organization as well as other non-academic activities in the campus. These activities have proved to be able hone our students' leadership skills, time-management skills, and communication skills. It's these skills that employers look for in our graduates.*

I Selama di ITS, mahasiswa selalu diberikan dukungan untuk mengembangkan softskill baik melalui kegiatan organisasi mahasiswa maupun kegiatan non-akademik lainnya yang tersedia. Kegiatan-kegiatan ini terbukti mampu mengasah kemampuan kepemimpinan, time-management, dan komunikasi lulusan kami. Softskill tersebut sangat dibutuhkan di industri dan mengantarkan lulusan kami mendapatkan pekerjaan impiannya.

ITS Career Center

E *We provide various services for jobseeker/alumni and current students to guide them in their first job. Our staffs will help you develop your softskills as well as planning your future career.*

I Salah satu upaya yang kami lakukan untuk membantu lulusan ITS adalah menyediakan berbagai macam layanan bagi jobseeker/alumni dan mahasiswa. Staf kami akan membantu Anda mengembangkan softskill dan merencanakan karir masa depan Anda.

ITS Career Service

E *Careers consultations, Softskills improvement program for graduate, Seminar/Workshop on career development, Psychological test and academic potential test, Online resources for job and internship vacancies Career exchange and networking session every semester*

I Konsultasi Karir, Program peningkatan kompetensi lulusan, Seminar/Workshop pengembangan karir, Tes psikologi dan Tes Potensi Akademik, Informasi lowongan pekerjaan dan magang secara online, Event bursa karir setiap semester

Service lists and schedule can be accessed through : **https://careers.its.ac.id/**

International Student

E *We invite undergraduate and graduate students from all over the world to take 1-2 semester non-degree study at ITS. This program usually called student mobility, student exchange, or study abroad program. This can be done with or without exchange agreement between ITS and students' home university. Students can study for 1 semester with no tuition fee. However, if they want to extend their study to the 2nd semester, they have to pay the tuition fee with local student's tuition fee.*

I Kami mengundang mahasiswa/i sarjana dan pascasarjana dari seluruh dunia untuk mengambil program non-gelar selama 1-2 semester di ITS. Program ini biasanya disebut student mobility, student exchange, atau program study abroad. Hal ini dapat dilakukan dengan atau tanpa kesepakatan pertukaran antara ITS dan universitas asal mahasiswa. Mahasiswa dapat belajar selama 1 semester tanpa perlu membayar biaya kuliah. Namun, mahasiswa yang ingin memperpanjang masa studi menjadi 2 semester wajib membayar biaya kuliah sesuai biaya kuliah mahasiswa lokal.

Please check this link to see universities who have agreementwith ITS, including subagreement on free dormitory: ***www.international.its.ac.id/mou_search/***

For course selection and admission please contact us at ***international@its.ac.id***

Internship

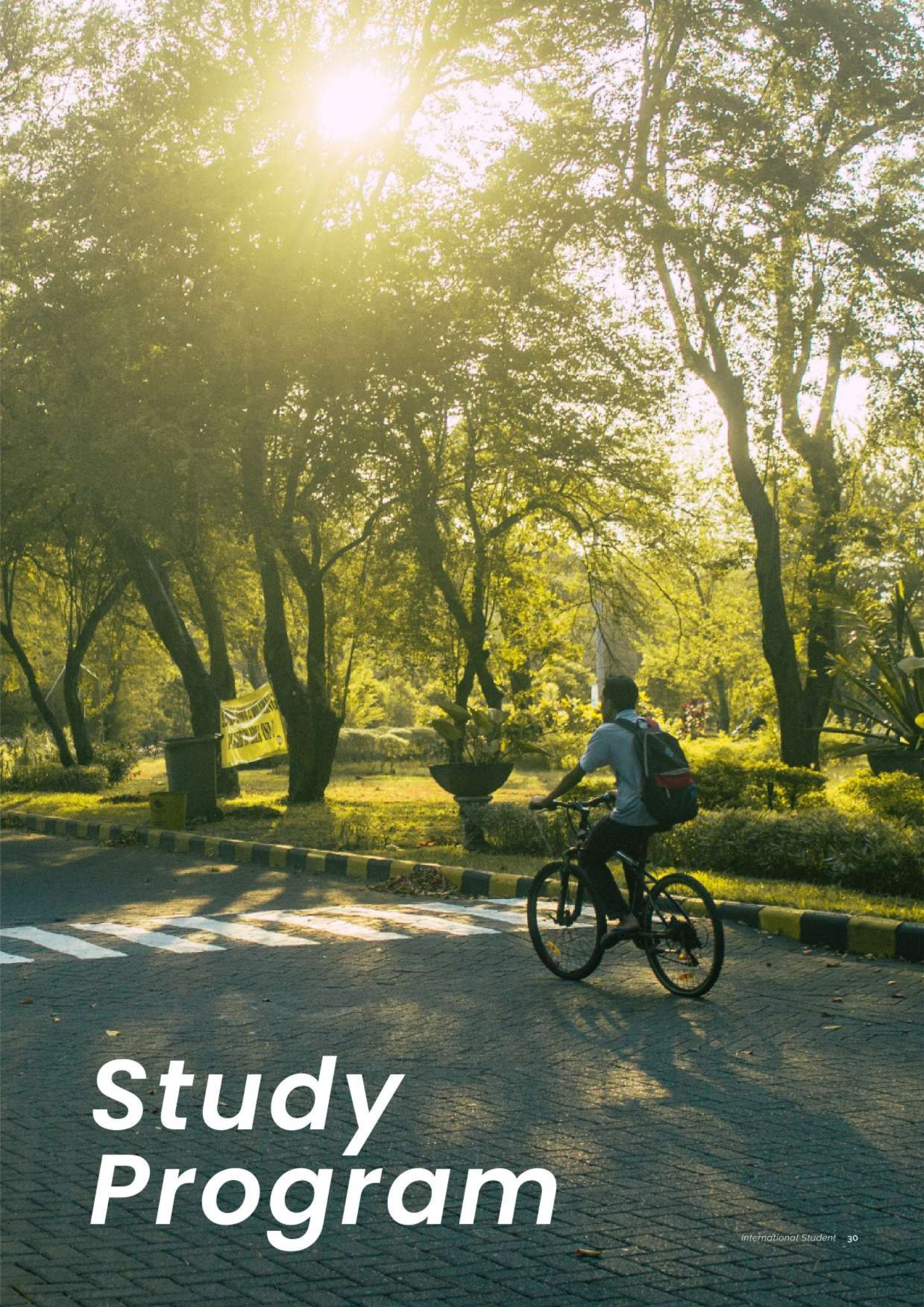
E *ITS provides opportunities for students from all over the world to have an internship experience at ITS laboratories (lab-based) or industries (industrial-based) that have relationship to ITS. Students may choose to do the internship for 1-4 months.*

I ITS memberi kesempatan bagi mahasiswa dari seluruh dunia untuk memiliki pengalaman magang di laboratorium ITS (lab-based) atau industri (industrial-based) yang memiliki hubungan dengan ITS. Mahasiswa dapat memilih untuk melakukan magang selama 1-4 bulan.

Customized Short Program

E *In addition to our bi-annual international short course program, CommTECH (Community and Technological Camp). ITS is also willing to organize customized short-programs for minimum 15 participants based on specifics request. The program could be credit or non-credit program at any topic in ITS's expertises. Schedule, content, and course fee could be discussed to suit your need.*

I Selain program kursus singkat internasional dua tahunan kami, CommTECH (Community and Technological Camp), ITS juga bersedia untuk menyelenggarakan program singkat sesuai kebutuhan dengan syarat minimal 15 peserta. Program ini dapat berupa program kredit atau non-kredit pada topik apapun dalam lingkup keahlian ITS. Jadwal, konten, dan biaya per mata kuliah dapat didiskusikan sesuai kebutuhan Anda.



Study Program

Architecture

E *The Department of Architecture (DArs) was established on 15th September 1965 and passed the first generation in 1974. Several alumni have obtained doctoral and master's degrees, spread throughout Indonesia in and work in governmental, educational, and professional sectors. DArs is equipped with various laboratories including residential laboratories, architectural models, landscape architecture, urban planning, architectural design, and others. The graduates of architecture work in architectural engineering or in the consultation industry. Graduates may also work in residential or nonresidential construction firms or government agencies. Some graduates also open their own business.*

I Departemen Arsitektur (DArs) berdiri pada tanggal 15 September 1965 dan meluluskan angkatan pertama pada tahun 1974. Beberapa alumni telah mampu meraih gelar doktor dan master, serta tersebar di seluruh kawasan Indonesia baik yang berkiprah di pemerintahan, pendidikan maupun profesional. DArs dilengkapi dengan berbagai laboratorium antara lain laboratorium perumahan, model arsitektur, arsitektur lansekap, perencanaan kota, perancangan arsitektur, dan lain-lain. Lulusan DArs bekerja di teknik arsitektur atau industri jasa yang bersangkutan. Lulusan juga dapat bekerja di firma konstruksi bangunan hunian ataupun non-hunian atau agensi pemerintahan. Beberapa lulusan juga membuka usaha sendiri.

Course Structure

Semester 1-2 (Preparation Phase)
Semester 3-8 (Undergraduate Phase)

Year 1

Semester 1	Religion	Civics	Basic Architectural Design 1	Introduction to Architecture	Physics	English
Semester 2	Pancasila	Indonesian	Basic Architectural Design 2	Basic of Building Structure and Construction	Mathematics	Introduction to Built-Environment

Year 2

Semester 3	Introduction to Housing and Human Settlements	Design Method and Research in Architecture	Architectural Design 1	Architectural Design Principles 1	Structure and Construction in Architecture	Architectural Science and Technology
Semester 4	Introduction to Urban Design	Architectural Theory	Architectural Design 2	Architectural Design Principles 2	Landscape Architecture	Building Services

Year 3

Semester 5	Elective Course 1	Nusantara Architecture	Architectural Design 3	Architectural Design Principles 3	Experimental Architecture	Architectural Ecology	
Semester 6	Sustainable Design	Elective Course 2	History of Architecture	Architectural Design 4	Architectural Design Principles 4	Enrichment Course	Concept of Technology

Year 4

Semester 7	Elective Course 3	Contemporary Architecture	Architectural Design 5	Architectural Design Principles 5	Final Project Proposal	Technopreneurship
Semester 8	Final Project	Ethics and the Practice of Architecture				

Specializations

During their education, students of Architecture can choose one of the five specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. **Architectural Design**
2. **Theory, History, and Criticism**
3. **Architectural Science and Technology**
4. **Housing and Human Settlement**
5. **Urban Design**

Career Options

Knowledge and market responsive curriculum are also the prime factor determining the success of the graduate in filling the job market. At present, the graduates filling the job market is within three months (average) after the graduation. Around 85% of the graduate works in architecture related areas. Good selection scheme for the intake and good quality of process influence the excellent profile of the graduate (80% pass the program on time with average GPA 3.2) and thus, contribute to the good outcome previously mentioned.

1. **Architect**
2. **Drafter**
3. **Surveyor**
4. **Developer**
5. **Contractor**
6. **Consultant**
7. **Structure Planner**
8. **Lecturer**

Partner Universities and International Exposure

In collaboration with our overseas partners, students at the Architecture Department have opportunities to study abroad through our various mobility programs. The IUP in Architecture provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

1. **Chung-Ang University – South Korea**
2. **Hanze University of Applied Science – Netherlands**
3. **Shibaura Institute of Technology – Japan**
4. **King Mongkut's University of Technology Thonburi – Thailand**
5. **Hochschule Darmstadt – Germany**
6. **University of Southern Denmark – Denmark**
7. **Asia University – Taiwan**

More information contact/ Informasi lebih lanjut hubungi:
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fenty.ratna@arch.its.ac.id

Business Management

E *The Department of Business Management (DMB) is one of the most favorite majors at ITS and believed to have a very bright prospect for its alumni both in Indonesia and internationally. Students are trained to take strategic decisions, to create new business or to improve the company's performance. This department is equipped with various laboratories including Entrepreneurship and the development of Small and Medium Enterprises, Business Analytic and Strategy. The graduates work as a businessman, entrepreneur, sociopreneur, technopreneur, being manager in an energy manufacturing, transportation, chemical, or retail company, being staffs in human capital management*

Business Management

Business Management Building

Departemen Manajemen Bisnis (DMB) merupakan salah satu departemen terfavorit dan memiliki prospek yang sangat cerah terhadap alumninya, baik di Indonesia maupun internasional. Mahasiswa dilatih agar mampu mengambil keputusan strategis untuk menciptakan usaha baru ataupun meningkatkan performa perusahaan. DMB dilengkapi dengan berbagai laboratorium antara lain laboratorium kewirausahaan dan pengembangan Usaha Kecil dan Menengah dan bisnis analitik dan strategi. Lulusan DMB bekerja sebagai *business owner/entrepreneur/sociopreneur (technopreneur), manager in manufacturing, energy, transportation, chemical, retail, staff in human capital management, marketing, finance, and accounting, business/ management/financial consultant*, dan lain-lain.

Course Structure

Semester 1-2 (Preparation Phase)

Semester 3-8 (Undergraduated Phase)

Year 1

Semester 1	Introduction to Accounting	Introduction to Business Management	Microeconomy	Mathematics 1	Civics	English	Religion
Semester 2	Financial Accounting	Data Analysis	Quantitative Modeling for Business	Design Thinking for Innovation	Macroeconomy	Pancasila	Indonesian Language

Year 2

Semester 3	Financial Management	Operations Management	Marketing Management	Human Capital Management	New Venture Creation	Statistics for Business	
Semester 4	Organizational Design and Behavior	Business Ethics and Corporate Social Responsibility	Social Entrepreneurship	Business Communication	Investment and Portfolio Management	Consumer Behavior	

Year 3

Semester 5	Managerial Accounting	Law Aspects in Business	International Business	Risk Management and Governance	Research Methods for Business	Business Information Systems	
Semester 6	E-Business Modeling and Analysis	Project Management	Business Valuation	Taxation	Technopreneurship	Internship	Elective Courses

Year 4

Semester 7	Innovation Management and New Product Development	Strategic Management	Business Consulting Project	Concept of Technology	Elective Courses		
Semester 8	Performance Management	Marketing of High Technology Products	Undergraduate Thesis				

Specializations

During their education, students of Business Management can choose one of the four specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Financial Management Focus
2. Operation Management Focus
3. Marketing Management Focus
4. uman Capital Management Focus

Partner Universities & International Exposure

In collaboration with our overseas partners, students at the Business Management Program have opportunities to study abroad through our various mobility programs. The IUP in Business Management provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of: Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

1. University of Queensland, Australia
2. Rennes School of Business, France
3. VIVES University of Applied Sciences, Belgium
4. Zurich University of Applied Sciences, Switzerland
5. Memorial University of Newfoundland, Canada
6. Saxion University of Applied Sciences, The Netherlands
7. Fontys University of Applied Sciences, The Netherlands
8. University of Applied Sciences in Nysa, Poland
9. Szczecin University, Poland
10. University of Southern Denmark, Denmark
11. Dankook University, South Korea
12. Asia University, Taiwan
13. National Cheng Kung, Taiwan
14. and many more

Career Options

With multidisciplinary material content, the Bachelor of Business Management Program provides a wide range of job opportunities including:

1. Entrepreneur/businessman
2. Managers in various industry sectors; manufacturing, energy, transportation, chemicals, retail, service companies, multimedia, banking, and both in national and multinational companies
3. Working in various fields; marketing, human resource management, operations and supply chain management, accounting and finance

MORE INFORMATION CONTACT/
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Chemical Engineering

The Department of Chemical Engineering (DCE) was established in 1960 and presenting several areas of interest such as equipment design, chemical process, process and control systems, and biochemical engineering. DCE is equipped with various laboratories such as energy conversion laboratory, thermodynamics, biochemistry, chemical reaction techniques, waste handling, and others. DCE graduates work in manufacturing, food processing, chemical processes (such as fertilizer, pesticides, specialty chemicals, dyes, dyestuff, paints, and lubrication) or in service industries such as science development services, especially in the field of energy and the development of biotechnology and nanotechnology.

Departemen Teknik Kimia (DTK) dibentuk pada tahun 1960 dan menyuguhkan beberapa bidang minat seperti desain peralatan, proses kimia, proses sistem dan kontrol, dan teknik biokimia. DTK dilengkapi dengan berbagai laboratorium antara lain laboratorium konversi energi, termodinamika, biokimia, teknik reaksi kimia, penanganan limbah, dan lain-lain. Lulusan DTK bekerja di industri manufaktur, proses makanan, proses kimia (seperti fertilizer, pestisida, specialty chemicals, dyes, dyestuff, cat dan lubrikasi) ataupun di industri jasa seperti jasa pengembangan sains, terutama dalam bidang energi dan pengembangan bidang bioteknologi dan teknologi nano.

Course Structure

Semester 1-2 (Preparation Phase)

Semester 3-8 (Undergraduated Phase)

Year 1

Semester 1	Chemistry 1	Introduction to Chemical Engineering	Mathematics 1	Physics 1	Religion Studies	Indonesian Language	Civics
Semester 2	English	Pancasila	Physics 2	Mathematics 2	Introduction to Industrial Chemistry	Analytical Chemistry	Data Processing and Analysis

Year 2

Semester 3	Chemical Engineering Thermodynamics I	Organic Chemistry	Chemical Engineering Principles I	Momentum Transfer	Physical Chemistry	
Semester 4	Industrial Microbiology	Chemical Engineering Mathematics	Chemical Engineering Principles II	Unit Operation I	Chemical Engineering Thermodynamics II	Mass and Heat Transfers

Year 3

Semester 5	Chemical Reaction Engineering I	Chemical Engineering Application I	Unit Operation II	Construction Materials	Chemical Equipment Design	Chemical Engineering Numerical Computation	
Semester 6	Process Dynamic and Control	Chemical Reaction Engineering II	Chemical Engineering Application II	Unit Operations III	Concept of Technology	Community Outreach Program	Elective Course I

Year 4

Semester 7	Industrial Waste Treatment	Synthesis and Process Simulation	Plant Design and Economic	Research Project	Elective Course II		
Semester 8	Chemical Plant Safety	On Job Training	Plant Design Project	Plant Utility System	Technopreneurship	Enrichment Course	

Specialization

During their education, students of Chemical Engineering can choose one of the nine specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Heat and Mass Transfer
2. Material Technology
3. Chemical Reaction Process and Biomass Conversion
4. Industrial Waste and Biomass Conversion
5. Thermodynamics
6. Electrochemical Engineering
7. Biochemical Engineering
8. Process System Engineering
9. Fluid Mechanics and Mixing

Career Options

1. Oil and Gas Processing Industry
2. Mining Material Processing Industry
3. Food Industry
4. Pharmaceutical Industry
5. Waste Treatment Industry
6. Quality Control
7. Researcher
8. Educator
9. Policy Makers
10. and so on.

MORE INFORMATION CONTACT/
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rendra@its.ac.id

Partner Universities & International Exposure

In collaboration with our overseas partners, students at the Chemical Engineering Department have opportunities to study abroad through our various mobility programs. The IUP in Chemical Engineering provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of: Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

1. National Taiwan University, Taiwan
2. National Taiwan University of Science and Technology, Taiwan
3. Hiroshima University, Japan
4. Kumamoto University, Japan
5. Nagoya University, Japan
6. Curtin University, Australia
7. Pennsylvania State University, USA
8. Universiti Teknologi Petronas, Malaysia
9. and many others

Civil Engineering

The objective of The Department of Civil Engineering is to produce graduates who are able to work together to build environmentally friendly infrastructure and have entrepreneurial skills as well as able to improve themselves through a long-life learning process. Civil Engineering is equipped with various laboratories such as concrete laboratory, structure, soil mechanics, construction management, transportation, and others. The graduates work as contractors in national and international companies. Graduates may also establish their own engineering consultancy.

Departemen Teknik Sipil (DTS) mempunyai tujuan pendidikan menghasilkan lulusan yang mampu bekerjasama untuk membangun infrastruktur yang ramah terhadap lingkungan, dan memiliki keterampilan kewirausahaan serta selalu mampu meningkatkan dirinya melalui long life learning. DTS dilengkapi dengan berbagai laboratorium antara lain laboratorium beton, struktur, mekanika tanah, manajemen kontruksi, perhubungan dan lain-lain. Lulusan DTS bekerja sebagai kontraktor di perusahaan nasional dan internasional. Lulusan juga dapat mendirikan konsultan teknik sendiri.

Course Structure

Semester 1-2 (Preparatory Phase)

Semester 3-8 (Undergraduated Phase)

Year 1

Semester 1	Mathematics 1	Physics 1	Statically Determinate Structure	Indonesian Language	Citizenship	Basic Statistic	Religion
Semester 2	Mathematics 2	Physics 2	Chemistry 1	Mechanic of Materials	English	Computer Programming	Pancasila

Year 2

Semester 3	Civil Engineering Drawing	Modelling And Analysis of Structure	Introduction Geospatial to Information	Building Material Technology	Fluid Mechanics and Hydraulics	Transportation and Traffic Design	
Semester 4	Steel Structure Element	Concrete Structure Element	Hydrology	Railway Engineering	Construction Management	Soil Mechanic and Foundation	

Year 3

Semester 5	Structure Steel Building	Structure Concrete Building	River Engineering	Embankment And Earth Retaining Structure	Construction Equipment and Methods	Drainage	
Semester 6	Bridge Engineering	Design of Reinforced Concrete Building	Hydraulic Coastal Engineering and Port Planning	Irrigation and Water Structures	Project Cost and Schedule Control	Highway Design	

Year 4

Semester 7	Technopreneur	Steel Bridges Design	Decision Making Techniques	Airport Planning and Design	Academic Report Writing	Elective Course	
Semester 8	Insights and Technology Applications	Internship	Procurement and Contract for Construction Project	Enrichment	Final Project		

Specialization

During their education, students of Civil Engineering can choose one of the six specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Concrete and Building Materials
2. Structure
3. Soil and Rock Mechanics
4. Transportation and Roads Materials
5. Hydraulics and Coastal Engineering
6. Construction Management

Career Options

1. Engineering and Management Consultant
2. Contractor
3. Lecturer
4. Researcher
5. Civil Engineering Professionals at Government and Private Agencies
6. Entrepreneurs

Partner Universities & International Exposure

In collaboration with our overseas partners, students at the Civil Engineering Department have opportunities to study abroad through our various mobility programs. The IUP in Civil Engineering provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

1. **Saxion University Applied Science Netherland with Joint Degree scheme 3 years study at ITS and 1 year study at Saxion**
2. **University Teknologi Petronas (UTP) Malaysia with Joint Degree scheme 2 years study at ITS and 2 years study at UTP**
3. **University of Queensland Australia Joint Degree scheme 2 years study at ITS and 2 years study at UQ (under final discussion for cooperation)**
4. **National Taiwan University of Science and Technology Taiwan Joint Degree scheme 2 years study at ITS and 2 years study at NTUST (under final discussion for cooperation)**

University partners for Student Exchange, Short Courses, Internship, and other International Exposure:

1. Dalian Maritime University, China
2. University Teknologi Malaysia, Malaysia
3. Chulalongkorn University, Thailand
4. Suranaree University, Thailand
5. National Taiwan University of Science and Technology, Taiwan
6. Tianjin University, China
7. Shibaura Institute of Technology, Japan
8. Dalian University of Technology, China
9. Chung-Ang University, Korea
10. King Mongkut's University of Technology North Bangkok, Thailand (KMUTNB), Thailand
11. Kumamoto University, Japan
12. Ritsumeikan University, Japan
13. University of Malaya, Malaysia
14. Mahidol University, Thailand
15. Sirindhorn International Institute of Technology (SIIT), Thammasat University, Thailand
16. King Mongkut's Institute of Technology Ladkrabang, Thailand
17. Mapua Institute of Technology, Philippines
18. Ho Chi Minh University of Technology, Vietnam
19. Mokpo National University, Korea
20. Rajamangala University of Technology Thanyaburi, Thailand
21. National Chiao Tung University, Taiwan
22. Dankook University, Korea
23. Feng Chia University, Taiwan
24. Warsaw University of Technology, Poland
25. Saga University-Faculty of Science and Engineering, Japan
26. Saxion Universities of Applied Sciences, Netherlands
27. Kasetsart University, Thailand
28. Vives University College, Belgium
29. School of Architecture, Build Environment & Civil Engineering, Hanze University Groningen, Netherlands
30. Guilin University of Technology, China
31. HZ University of Applied Sciences, Netherlands
32. California Polytechnic State University, United States
33. National Cheng Kung University, Taiwan
34. National Central University, Taiwan
35. Chongqing University, China
36. Surigao State College of Technology, Philippines
37. Saga University, Japan
38. Northeastern University, USA
39. Curtin University, Australia
40. Chun Yuan Christian University, China
41. TU Graz, Austria

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https://www.instagram.com/hmsits/?hl=id
https://www.facebook.com/dtsits/

Electrical Engineering

E *The Department of Electrical Engineering (EE) was established in 1960 and has obtained Accreditation A from National Accreditation Agency for Higher Education (BAN-PT) with 5 fields of expertise study such as Electronics, Control System Engineering, Power System Engineering, Multimedia Telecommunication, Computer Engineering and Telematics. EE is equipped with various laboratories such as power system simulation laboratory, electrical energy conversion, basic electronics, biomedical electronics, system engineering, digital information, and other laboratories. EE graduates are needed in all sectors include energy and ICT.*

I *Departemen Teknik Elektro (DTE) berdirik sejak tahun 1960 dan telah memperoleh Akreditas A (Amat Baik) dari BAN-PT dengan 5 bidang studi keahlian yakni Elektronika, Teknik Sistem Pengaturan, Teknik Sistem Tenaga, Telekomunikasi Multimedia, Teknik Komputer dan Telematika. DTE dilengkapi dengan berbagai laboratorium antara lain laboratorium simulasi sistem tenaga, konversi energi listrik, elektronika dasar, elektronika biomedika, teknik sistem, informasi digital dan lain-lain. Lulusan DTE sangat dibutuhkan di semua sektor, terutama energi dan ICT.*

Semester 1-2 (Preparatory Stage)

Semester 3-5 (Common EE Stage)

Semester 5-8 (Concentration Stage)

Course Structure

Course Structure

Year 1

Semester 1	Mathematics I	Introduction to Electrical Technology	Physics I	Basic Programming	Pancasila	English	Religion
Semester 2	Mathematics II	Linear Algebra and Discrete Structures	Physics II	Chemistry 1	Electric Circuits	Indonesian	Civics

Year 2

Semester 3	Advanced Electric Circuits	Introduction to Telecommunication System and Network	Electromagnetic Field	Partial and Ordinary Differential Equation	Signals and Systems	Electronic Circuits	
Semester 4	Digital and Microprocessor Systems	Introduction to Power System Engineering	Digital Signal Processing	Introduction to Control Systems	Probability, Statistics and Stochastic Processes	Electrical Circuits and Basic Tele-communication Systems Laboratory	

Year 3

Semester 5	Numerical Methods	Analog Circuits	Electronics, Basic Electric Power Systems, and Regulatory Systems Laboratory	Elective Course	Elective Course		
Semester 6	Technopreneur-ship	Internship	Elective Course	Elective Course			

Year 4

Semester 7	Concept of Technology	Final Project Proposal	Elective Course	Elective Course	Elective Course		
Semester 8	Final Project	Elective Course	Elective Course				

Specializations

During their education, students of Electrical Engineering can choose one of the four specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1 Power Systems Engineering
2. Control Systems Engineering
3. Multimedia Telecommunication
4. Electronics

Students can choose one of the concentrations based on their interest. Total credits obtained at this stage is 52 credits including final project, industrial practical work, and university enrichment courses. Some of courses related to concentration are available at Semester-5. So, students practically start their concentration at fifth semester. Once they choose a concentration, it is obligatory for students to follow path of courses guided by their academic supervisor.

*electrical engineering building

Career Options

1. Engineer
2. Research assistant
3. Entrepreneur
4. State officials
5. Private officials

Partner Universities & International Exposure

Exchange partnerts (some):

1. Dankook University, South Korea
2. Fontys University, Japan
3. Kumamoto University, Japan
4. Shibaura Institute of Technology, Tokyo, Japan
5. Chulalongkorn University, Thailand
6. Asia University Taichung, College of Information and Electrical Engineering, Taiwan
7. Kumamoto University, Japan
8. HZ University of Applied Sciences, Netherland
9. Toms University, Rusia
10. Hiroshima University, Japan
11. Istanbul Aydin University, Turkey
12. Universiti Malaya, Malaysia
13. National Chung Cheng University, Taiwan
14. National Taiwan University of Science and Technology
15. University Teknologi Malaysia
16. University Kebangsaan Malaysia
17. Auburn University, US
18. California Polytechnics, San Luis Obispo, US

Joint Degree (JD) partners:

1. Curtin University Australia
2. National Sun Yat-sen University, Taiwan (on progress)

MORE INFORMATION CONTACT/ INFORMASI LEBIH LANJUT HUBUNGI:

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Engineering Physics

E *The Department of Engineering Physics (DEP) is an institution in educational and research development in Engineering Physics. DEP offers an educational program that combines engineering concepts with strong mastery of physics and mathematics along research concentration such as Instrumentation Engineering, Energy Engineering and Environmental Conditioning, Materials Engineering, Photonics Engineering, and others. DEP is equipped with various laboratories such as instrumentation engineering laboratory, materials, vibration, photonics, physical measurement, and other laboratories. DEP graduates get abroad and work in several engineering aspects domestically and internationally such as in processing industries, oil and gas industry, telecommunications, manufacturing, power generation, and even in research and development (R&D) areas.*

Departemen Teknik Fisika (DTF) merupakan institusi pengembangan edukasi dan riset di bidang Engineering Physics. DTF menawarkan program edukasi yang memadukan konsep-konsep keteknikan/rekayasa (engineering) dengan penguasaan ilmu fisika dan matematika yang kuat dengan bidang riset/konsentrasi seperti Rekayasa Instrumentasi, Rekayasa Energi dan Pengkondisian Lingkungan, Rekayasa Bahan, Rekayasa Fotonika, dan sebagiannya. DTF dilengkapi dengan berbagai laboratorium antara lain laboratorium rekayasa instrumentasi, bahan, vibrasi, fotonika, pengukuran fisis, dan lain-lain. Lulusan DTF tersebar dan memiliki karir yang di beberapa cabang keteknikan, baik di Indonesia maupun di luar negeri, seperti contohnya: industri pemrosesan, industri migas, telekomunikasi, manufaktur, pembangkit tenaga, dan bahkan di area riset dan pengembangan (R&D).

Course Structure

Semester 1-2 (Preparation Phase)

Semester 3-8 (Undergraduated Phase)

Year 1

Semester 1	Mathematics 1	Physics 1	Chemistry	Introduction to Engineering Physics	Civics	Indonesian Language	Religion
Semester 2	Mathematics 2	Physics 2	Electrical Circuit	Computer Programming	Thermodynamics	English	Pancasila

Year 2

Semester 3	Engineering Mathematics 1	Statistic and Stochastic	Fluid Mechanics	Electronics	Wave Phenomena	Heat and Mass Transfer	
Semester 4	Engineering Mathematics 2	Measurement System and Calibration	Dynamics System Modeling	Acoustics	Quantum Physics	Electromagnetism	

Year 3

Semester 5	Energy Conversion and Conversion System Engineering	Vibration	Material Physics	Optics	Recent Technology Development	Signal and Systems	
Semester 6	Automatic Control System	Thermal Comfort Engineering	Building Physics	Material Engineering	Engineering Optics	Technopreneurship	

Year 4

Semester 7	Internship	Instrumentation System	Reliability	Research Methodology	Smart Materials	Photonic Systems	
Semester 8	Final Project	Optimization	Elective Course	Elective Course	Elective Course	Elective Course	

Specialization

During their education, students of Engineering Physics can choose one of the five specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. **Instrumentation and Controls**
2. **Energy Engineering and Environmental Conditioning**
3. **Materials Engineering**
4. **Vibration And Acoustics**
5. **Photonics Engineering**

Career Options

1. Engineer
2. Control Engineer
3. Field Engineer
4. Sales Engineer
5. Quality Control Engineer
6. Electrical Engineer
7. Research and Development Engineer
8. Research Assistant
9. Project Manager

Partner Universities & International Exposure

In collaboration with our overseas partners, students at the Engineering Physics Department have opportunities to study abroad through our various mobility programs. The IUP in Engineering Physics provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

1. **Leibniz-Institute of Photonic Technology and Friedrich Schiller University, Germany**
2. **University of Basel, Swiss**
3. **UniKL, Kuala Lumpur, Malaysia**
4. **Universiti Malaya, Malaysia**
5. **Kumamoto University, Japan**

MORE INFORMATION CONTACT/ INFORMASI LEBIH LANJUT HUBUNGI:

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LO-IUP Engineering Physics:
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ruri.tf014@gmail.com

ENVIRONMENTAL ENGINEERING

EN **The Department of Environmental Engineering (DEE)** aims to produce graduates that able to provide infrastructure in the field of environmental engineering, developing technologies that can prevent pollution and restore pollution that has occurred in the environment. Environmental engineering is equipped with laboratories such as water and waste treatment laboratories, environmental remediation, environmental quality management, and others.

IN **Departemen Teknik Lingkungan (DTL)** bertujuan menghasilkan lulusan yang mampu menyediakan infrastruktur bidang teknik lingkungan, mengembangkan teknologi yang dapat mencegah terjadinya pencemaran dan memulihkan pencemaran yang sudah terjadi di lingkungan. DTL dilengkapi dengan berbagai laboratorium antara lain laboratorium teknologi pengolahan air dan limbah, remediasi lingkungan, manajemen kualitas lingkungan, dan lain-lain.

Course Structure

- **Semester 1-2** (Preparation Phase)
- **Semester 3-8** (Undergraduate Phase)

Year 1

Semester 1	Mathematics I	Physics I	Engineering Drawing	Environmental Microbiology	Indonesian Language	Civics	Religion
Semester 2	Mathematics II	Physics II	Introduction to Geospatial Techniques	Environmental Statistics	Chemistry	English	Pan-casila

Year 2

Semester 3	Environmental Chemistry	Water Resources Management	Air Pollution and Climate Change	Soil Mechanics and Geohydrology	Structure Knowledge	Hydraulics
Semester 4	Biological Unit Processes of Environmental Engineering	Solid Waste Management Design	Environmental Pollution Analysis Technique	Management of Gas Emissions & Air Ambient	Physics – Chemical Unit Processes in Environmental Engineering	Drinking Water Supply Design

Year 3

Semester 5	Wastewater Sewerage Design	Unit Operations in Environmental Engineering	Project Management	Urban Drainage Design	Environmental Remediation Techniques	Elective Subject I
Semester 6	Research Methods	Clean Technology	Water Treatment Plant Design	Wastewater Treatment Plant Design	Insights & Technology Applications	Elective Subject II

Year 4

Semester 7	Hazardous Waste Management	Environmental Impact Assessment	Sludge Treatment Plant Design	Landfill Design	Enrichment Subject	Technopreneur
Semester 8	Safety & Occupational Health	Audit & Environmental Management System	Internship	Final Project	Elective Subject III	

Specializations

During their education, students of Environmental Engineering can choose one of the five specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Water Treatment Technology
2. Solid Waste and Hazardous Waste Management
3. Environmental Remediation
4. Environmental Quality Management
5. Air Pollution Control and Climate Change

Career Options

1. Consultants in environmental engineering field, such as air pollution; solid and hazardous waste; water and wastewater treatment.
2. Contractor, e.g. wastewater treatment plant.
3. (Techno)-Entrepreneur.
4. Non-Governmental Organizations.
5. Private companies both national and international scale.
6. Government institutions both local, regional, and national scale.

Partner Universities and International Exposure

In collaboration with our overseas partners, students at the Environmental Engineering Department have opportunities to study abroad through our various mobility programs. The IUP in Environmental Engineering provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

1. Universiti Teknologi Malaysia (UTM)
2. National Taiwan University Science and Technology (NTUST), Taiwan
3. Soka University, Japan
4. National Cheng Kung University (NCKU), Taiwan
5. Wakupro Science, Japan
6. EAWAG-SANDEC, Switzerland
7. Universiti Malaysia Terengganu (UMT)
8. IHE Delft, Netherland
9. National Taiwan University

more information contact/
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GEOMATICS ENGINEERING

EN **The Department of Geomatics Engineering (DGE)** aims to yield graduates with academic / professional skills in spatial information system management, proficient and skilled in the using of survey and mapping technology to support the development of country in globalization era. Geomatics engineering is equipped with various laboratories such as geodesy laboratory, geospatial, geo-marine, geodynamic, and others.

IN **Departemen Teknik Geomatika (DTG)** mempunyai tujuan untuk menghasilkan lulusan yang memiliki kemampuan akademik/profesional dalam bidang pengelolaan sistem informasi spasial, cakap dan trampil dalam penguasaan teknologi survei dan pemetaan yang berbasis teknologi informasi dalam rangka menunjang pembangunan pada era informasi dan globalisasi. DTG dilengkapi dengan berbagai laboratorium antara lain laboratorium geodesi, geospasial, geo-marine, geodinamik, dan lain-lain.

Course Structure

- **Semester 1-2** (Preparation Phase)
- **Semester 3-8** (Undergraduate Phase)

Year 1

Semester 1	Mathematics I	Physics I	Cartography	Introduction to Geospatial Information	Indonesian Language	Civics	Religion
Semester 2	Mathematics II	Physics II	Basic Terrestrial Mapping	Introduction to Earth Science	Chemistry	English	Pan-casila

Year 2

Semester 3	Spatial Data Computation & Programming	Statistics & Probability	Advanced Terrestrial Mapping	Transformation System & Map Projection	Spatial Database System	Digital Cartography
Semester 4	Physical Oceanography	Adjustment Computation	Satellite Geodesy	Introduction to Photogrammetry	Engineering Survey	Toponym

Year 3

Semester 5	Hydrographic Survey	Geodesy Control Network	Introduction to Remote Sensing	Introduction to Geographic Information System	Digital Photo-grammetry	Global Navigation Satellite System Survey
Semester 6	Seabed Imaging & Mapping	Physical Geodesy	Land Administration	Geospatial Information Analysis	Field Camp	Concept of Technology

Year 4

Semester 7	Research Methodology	Land Management	Field Work	Management of Survey & Mapping	Elective Course	Technopreneur
Semester 8	Final Project	Elective Course	Elective Course	Elective Course	Elective Course	

Specializations

During their education, students of Geomatics Engineering can choose one of the five specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Surveying and Cadastre
2. Geospatial
3. Geomarine
4. Geodesy and Geodynamics
5. Geoinformatics

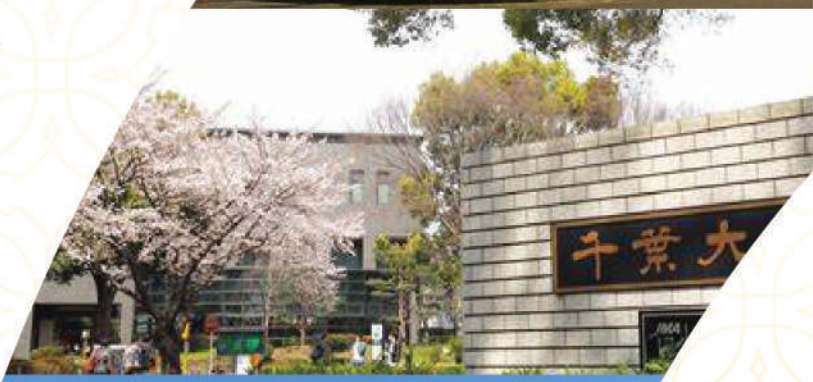
Career Options

1. Geomatics Service Industry
2. Geospatial Information Agency
3. Ministry of Public Works and Public Housing
4. Development Planning Agencies
5. Construction and Consultant Service Industry
6. Developer
7. Center for Hydrography and Oceanography
8. Research Institutions

Partner Universities and International Exposure

In collaboration with our overseas partners, students at the Geomatics Engineering Department have opportunities to study abroad through our various mobility programs. The IUP in Geomatics Engineering provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

1. Université de La Rochelle, France
2. Chiba University, Japan
3. National Cheng Kung University, Taiwan
4. University Warsaw, Poland (Erasmus Program)
5. E-Geos (Una Societa ASI/Telespazio) Kasetsart University, NUCE Vietnam
6. TU Graz, National Cheng Kung University, Taiwan
7. Tarlac State University, Philipine
8. University of Southern Denmark, Denmark
9. Shibaura Institute of Technology, Japan
10. University of Tabriz, Iran.



more information contact/
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Official Department of Geomatics Engineering

☎ 031-5929486 031-5929487 geomatika@its.ac.id

GEOPHYSICAL ENGINEERING

EN **The Department of Geophysics Engineering (DGcE)** is visioned to be the center of research in earth science and technology that have international reputation. This department supports industry in energy, natural resources marine engineering, and the construction of environmentally infrastructure. The DGcE is equipped with exploratory geophysical laboratory, petrophysics and environmental geophysics.

IN **Departmen Teknik Geofisika (DTGfis)** memiliki visi untuk menjadi pusat pendidikan tinggi berbasis riset bereputasi internasional dalam ilmu pengetahuan dan teknologi kebumian, terutama untuk menunjang industri bidang energi dan sumber daya alam serta rekayasa kelautan, pembangunan infrastruktur yang berwawasan lingkungan. DTGfis dilengkapi dengan berbagai laboratorium antara lain laboratorium geofisika eksplorasi, petrofisika dan geofisika lingkungan.

Course Structure

- **Semester 1-2** (Preparation Phase)
- **Semester 3-8** (Undergraduate Phase)

Year 1

Semester 1	Mathematics I	Physics I	Physical Geology	Introduction to Geophysical Engineering	Indonesian Language	Civics	Religion
Semester 2	Mathematics II	Physics II	Chemistry I	Geophysical Computing	Introduction to Geospatial Information	English	Pan-casila

Year 2

Semester 3	Fundamental Electronics	Rock Physics	Mathematical Geophysics	Structural Geology	Sedimentology and Stratigraphy	Seismology
Semester 4	Digital Data Analysis	Gravity & Magnetic Exploration	Ore Deposit	Geostatistics	Geodynamics	Rock Mechanics

Year 3

Semester 5	Geolectrical Exploration	Seismic Exploration	Inversion Methods	Geological Disaster Mitigation	Thermodynamics	Capita-Selecta
Semester 6	Insights and Technology Applications	Well Log Data Analysis	Geotechnical	Electromagnetic Exploration	Elective Course	

Year 4

Semester 7	Geothermal Exploration	Geotomography	Seminar	Integrated Field Lecture	Enrichment Course	Technopreneur
Semester 8	Final Project	Elective Course				

Specializations

1. **Geophysics Exploration:** Groundwater Exploration, Hydrogeologic Mapping, Mineral Exploration.
2. **Petrophysics:** Hydrofracturing, Geothermal Exploration, Rock Magnetism.
3. **Geophysicaland Environmental Engineering:** Natural, Soil Contamination, Sea Water Intrusion, Sedimentation, Geo-Archeology, Disaster Mitigation, Geotourism.

Career Options

1. Oil and Gas Sector
2. Geothermal
3. Mining Sector
4. Environment and Natural Disaster
5. Mitigation
6. Occupational Health and Safety

   And others

Partner Universities and International Exposure

In collaboration with our overseas partners, students at the Geophysics Engineering Department have opportunities to study abroad through our various mobility programs. The IUP in Geophysics Engineering provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

1. Curtin University, Australia
2. Universiti Teknologi Petronas, Malaysia
3. Universiti Sains Malaysia

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Official Department of Geophysical Engineering

(031) 5953476 (031) 5953476 geofisika@its.ac.id

INDUSTRIAL ENGINEERING

EN **Department of Industrial Engineering (DIE),** which combines management and engineering, is an ideal space to develop skills to build careers across sectors, manufacturing, services, or government agencies. DIE concern on several research and concentration such as manufacturing, logistics, supply chain management, modeling system, optimization, ergonomics, and industrial management. DIE is equipped with various laboratories including ergonomics laboratory, manufacturing system, calculation and optimization, industrial management, and other laboratories. IE graduates are Bachelor of Engineering with outstanding ability in thinking system that able to work in wide range of profession, such as engineer, planner, system analyst, manager, entrepreneur, researcher, and lecturer. The industrial workplace for IE graduates ranging from manufacturing, mining, banking, education, to governmental. Currently, IE alumnies dedicate themselves for government or private sector domestically or even abroad.

IN **Departemen Teknik Industri (DTI),** yang mengkombinasikan manajemen dan teknik, merupakan sebuah tempat ideal untuk mengembangkan kemampuan mahasiswa dalam membangun jalan karir di berbagai sektor, manufaktur, jasa atau lembaga pemerintahan. DTI terdiri dari beberapa bidang riset/konsentrasi seperti sistem manufaktur, logistik, manajemen rantai pasok, permodelan sistem, optimasi, ergonomi, dan manajemen industri. DTI dilengkapi dengan berbagai laboratorium antara lain laboratorium ergonomi, sistem manufaktur, komputasi dan

optimasi, manajemen industri, dan lain-lain. Lulusan DTI adalah sarjana teknik dengan kemampuan yang menonjol pada aspek system thinking dapat bekerja di jenis profesi yang cukup luas, diantaranya adalah sebagai insinyur, perencana, analis sistem, manajer, entrepreneur, peneliti maupun dosen. Sektor industri dimana lulusan DTI bekerja pun cukup luas mulai dari manufaktur, pertambangan, perbankan, pendidikan, sampai dengan pemerintahan. Saat ini, alumi DTI mendedikasikan dirinya di dalam maupun di luar negeri, dalam bidang pemerintahan maupun swasta.

Course Structure

- **Semester 1-2** (Preparation Phase)
- **Semester 3-8** (Undergraduate Phase)

Year 1

Semester 1	Mathematics I	Physics I	Chemistry I	Introduction to Industrial and System Engineering	Indonesian Language	Civics	Religion
Semester 2	Mathematics II	Physics II	Engineering Materials	Engineering Drawing	Engineering Statistics 1	English	Pan-casila

Year 2

Semester 3	Introduction to Economics	Engineering Statistics 2	Cost Analysis & Estimation	Manufacturing Process	Ergonomics	Operation Research 1
Semester 4	Algorithm & Computer Programming	Industrial Automation	Manufacturing System	Method Engineering & Work Measure-ment	Engineering Economy	Operation Research 2

Year 3

Semester 5	Quality Control Techniques	Production Planning and Inventory Control	Basic Mechanics Engineering	Product Design & Development	Organization & Human Resource Management	Industrial System Simulation
Semester 6	Maintenance & Reliability Engineering	Facility Planning	System Modeling	Logistics System	Elective Course 1	Elective Course 2

Year 4

Semester 7	Industrial Ecology	Supply Chain Management	Industrial Planning	Concept of Technology	Elective Course 3	Enrichment Course
Semester 8	Project Management	Business Information System Design	Practical Work	Techno-preneurship	Elective Course 4	Final Project

Specializations

During their education, students of Industrial Engineering can choose one of the five specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Manufacturing System
2. Ergonomics and Work System Design
3. Industrial Management and System Design
4. Logistics and Supply Chain Management
5. Quantitative Modelling and Industrial Policy Analysis

Career Options

1. Product Analyst
2. Engineering Manager/Project Manager
3. Project Management Analyst
4. Sales Engineer
5. Cost Control Engineer
6. Health and Safety Environment Engineer
7. Quality Control Engineer or Quality Controller
8. Logistic Specialist

Partner Universities and International Exposure

In collaboration with our overseas partners, students at the Industrial Engineering Department have opportunities to study abroad through our various mobility programs. The IUP in Industrial Engineering provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

Double/ Joint Degree Partner :

1. Department of Industrial and System Engineering – **Curtin University, Australia**
2. Department of Manufacturing Engineering – **University Teknikal Malaysia Melaka (UTeM), Malaysia**

Exchange Program :

1. **University Bourgogne Franche - Comté** (UBFC) - France
2. **Coventry University** – United Kingdom
3. **Istanbul Aydin University (IAU)** - Turkey
4. **Asia University** - Taiwan
5. **University of the Philipinas Los Banos** – Philippina
6. **Mapua University** – Philippina
7. **Universitas Teknologi Malaysia Melaka (UTeM)** - Malaysia

more information contact/
Informasi lebih lanjut hubungi:
Retno Widyaningrum, S.T., M.T., MBA., Ph.D.

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INFORMATICS

EN **The Department of Informatics ITS (DIF ITS)** was founded in 1985, under the Faculty of Industrial Engineering. In 2006, DIF ITS achieved 'A' accreditation from Badan Akreditasi Nasional Perguruan Tinggi (BAN-PT) from the Directorate of Higher Education Indonesia. The DIF ITS received several grants to strengthen our academic competence, such as PHK A3 from the Directorate of Higher Education Indonesia (year 2007), JICA Predict from Japan (year 2009), International ASIIN Accreditation grant and PKKM grant for the Freedom of Study from the Ministry of Education and Culture Indonesia (year 2020 and 2021 respectively). The DIF graduates' competences are in in software programming, network security & infromation technology, etc. The DIF supports the educational process with high qualification lecturers (professor, doctoral and maste), advanced laboratories and workshops, smart classrooms, a reading room, prayer room, multipurpose hall, cafeteria, and sports facilities.

IN **Departemen Informatika ITS (DIF ITS)** didirikan pada tahun 1985, di bawah Fakultas Teknik Industri. Pada tahun 2006, DIF ITS meraih akreditasi 'A' dari Badan Akreditasi Nasional Perguruan Tinggi (BAN-PT) dari Direktorat Pendidikan Tinggi Indonesia. DIF ITS menerima beberapa hibah untuk memperkuat kompetensi akademik kami, seperti PHK A3 dari Direktorat Pendidikan Tinggi Indonesia (tahun 2007), JICA Predict dari Jepang (tahun 2009), hibah Akreditasi ASIIN Internasional (tahun 2020) dan hibah

PKKM untuk program Merdeka Belajar dari Kementerian Pendidikan dan Kebudayaan Indonesia (masing-masing tahun 2021 sampai 2023). Kompetensi lulusan DIF di bidang pemrograman perangkat lunak, keamanan jaringan & teknologi informasi, dll. DIF mendukung proses pendidikan dengan dosen berkualifikasi tinggi (profesor, doktor dan master), laboratorium dan bengkel canggih, ruang kelas pintar, ruang baca, doa ruangan, aula serbaguna, kafetaria, dan fasilitas olahraga.

Course Structure

- **Semester 1-2** (Preparation Phase)
- **Semester 3-8** (Undergraduate Phase)

Year 1

Semester 1	Mathematics I	Physics I	Chemistry I	Fundamental Programming	Indonesian Language	Pancasila	
Semester 2	Mathematics II	Physics II	Data Structure	Digital System	Religion	English	Civics

Year 2

Semester 3	Linear Algebra	Numerical Computation	Discrete Mathematics	Computer Organization	Object Oriented Programming	Database System
Semester 4	Analysis and Design of Information Systems	Artificial Intelligence	Database Management	Desain & Analysis Algorithms	Probabilistic & Statsitic	Operating System

Year 3

Semester 5	Software Design	Computational Intelligence	Computer Graphics	Web Programming	Computer Networks	Software Project Management
Semester 6	Human-Computer Interactions	Network Programming	Requirement Engineering	Graph Theory & Automata	Framework Programming	Elective Course 1

Year 4

Semester 7	Techno-preneurship	Network & Information Security	Pre-Final Project	Elective Course 2	Elective Course 3	Elective Course 4
Semester 8	On-Job Training	Final Project	Elective Course 5	Knowledge and Technological Applications	Enrichment Course	

Specializations

During their education, students of Informatics can choose one of the eight specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Algorithm and Programming
2. Computer Network Architecture
3. Applied Computing and Modelling
4. Graphics, Interactions, and Game
5. Net Centric Computing
6. Intelligent Computing and Vision
7. Intelligent Information Management
8. Software Engineering

Career Options

1. Software Engineer/Developer:
2. System Developer:
3. Web Engineer/Developer:
4. Computer Network Specialist:
5. Database Specialist:
6. IT Consultant:
7. IT Trainer:
8. Game Engineer/Developer:
9. Mobile Apps Developer:
10. Security Specialist:
11. Data Analyst:
12. Software Project Manager:

Partner Universities and International Exposure

In collaboration with our overseas partners, students at the Informatics Department have opportunities to study abroad through our various mobility programs. The IUP in Informatics provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

Joint Degree (JD) partners:

1. **University of Queensland (UQ),** Australia
2. **Tomsk State University (TSU),** Russia
3. **Universiti Teknologi Petronas (UTP),** Malaysia

Student exchange partnerts (some):

1. Cardiv University, UK
2. Thessaloniki, Greece
3. naka No Mado, Sasayama, Jepang
4. Kanagawa Institute of Technology
5. Dankook, University
6. Fontys University
7. Kumamoto University
8. Ajoo University
9. Codebrick, Korea Selatan
10. Hiroshima
11. Shibaura Institute of Technology, Tokyo
12. Chulalangkorn University, Thailand
13. NTUST, Taiwan
14. Asia University Taichung, College of Information and Electrical Engineering
15. Hanze University
16. Kumamoto University
17. Okanagan College
18. Asia University
19. Hiroshima University
20. Istanbul Aydin University
21. NTU, NUS, Lasalle
22. Universiti Malaya
23. University of Fukui
24. University of Applied Sciences in Nysa
25. National Chung Cheng University
26. Chung Ang Uni
27. Memorial University of Newfoundland
28. University of Granada
29. University of Pisa
30. Amari Pattaya, Chonburi
31. National Taiwan University of Science and Technology
32. Universiti Teknologi Malaysia

more information contact/
Informasi lebih lanjut hubungi:
Official Department of Informatics

tinformatika@its.ac.id

INFORMATION SYSTEM

EN **The Department of Informatics Systems** is intended to be the center of excellence for information system to improve the performance of company. This department is equipped with various laboratories such as enterprise systems laboratory, information systems management, data engineering, and others. Graduates obtain a bachelor degree on Computer (S. Kom), and mostly work as in System Analyst, Database expert, IT & Business Consultant, IT Auditor, Data Scientist, Digital Startup, educational sector (lecturers and researchers), consultants, and surveyors.

IN **Departemen Sistem Informasi (DSI)** ditujukan sebagai pusat keunggulan penyelenggaraan pendidikan sistem informasi yang dapat membantu meningkatkan kinerja perusahaan. DSI dilengkapi dengan berbagai laboratorium antara lain laboratorium sistem enterprise, manajemen sistem informasi, rekayasa data, dan lain-lain. Lulusan DSI memperoleh gelar Sarjana Komputer (S. Kom), dan memiliki kemampuan dalam system analyst, database expert, IT & business consultant, auditor IT, data scientist, digital startup, edukasi (dosen dan peneliti), konsultan dan surveyor.

Course Structure

Semester 1-2
(Preparation Phase)

Semester 3-8
(Undergraduate Phase)

Year 1							
Semester 1	Mathematics 1	Physics 1	Chemistry 1	Logic and Discrete	Information System Concepts	Indonesian	Pancasila
Semester 2	Mathematics 2	Physics 2	Algorithm and Programming	Business Functional Organization	English	Religion	Civics
Year 2							
Semester 3	Statistics	Database systems	Web Programming	IT Process & Management	Software Requirement Engineering	Business Process Management	
Semester 4	Concept of Technology	Computer Network Management and Design	Software Development	IT Process & Management	Business Process Management		
Year 3							
Semester 5	Operation Research	Business Intelligence	IT Service Management	Software Deployment	IT Strategic Planning	Techno preneurship	
Semester 6	Business Analytics	Database Management	User Experience Design	Information Asset Protection	IT Investment Management	Digital Startup	
Year 4							
Semester 6	Pre-Final Project	IT Evaluation & Audit	IT Professional Ethics	Elective Course 1	Elective Course 2	Elective Course 3	
Semester 6	Final Project	Elective Course 4	Elective Course 5	Elective Course 1	Enrichment Course 1	Enrichment Course 2	

Specializations

During their education, students of Information System can choose one of the six specializations provided. Specialization is highly related to the elective courses and the topic of final project.

6

1. Management of Information Systems
2. Enterprise Systems
3. Data Engineering and Business Intelligence
4. Data acquisition and Information Dissemination
5. Information Technology Infrastructure and Security
6. Digital Business Start-up

Career Options

1. Business Analyst
2. Business Information Manager
3. IT Project Manager
4. System Analyst
5. Data And Information Manager
6. IT Startup Initiator

Joint Degree (JD) partners:

Universiti Teknologi Petronas, Malaysia (Bachelor of Information Systems and Bachelor of Information Technology)

Fontys University, Holland (Bachelor of Sciences in Information and Communication Technology)

Student exchange partnerts (some):

- Kumamoto University
- Asia University
- Cardiff Metropolitan University
- Frankfurt University of Applied Sciences
- University of Technology of Troyes Taiwan Tech
- Institut Supérieur d'Electronique de Paris (ISEP)
- Dankook University
- etc.

More information contact/ Informasi lebih lanjut hubungi:

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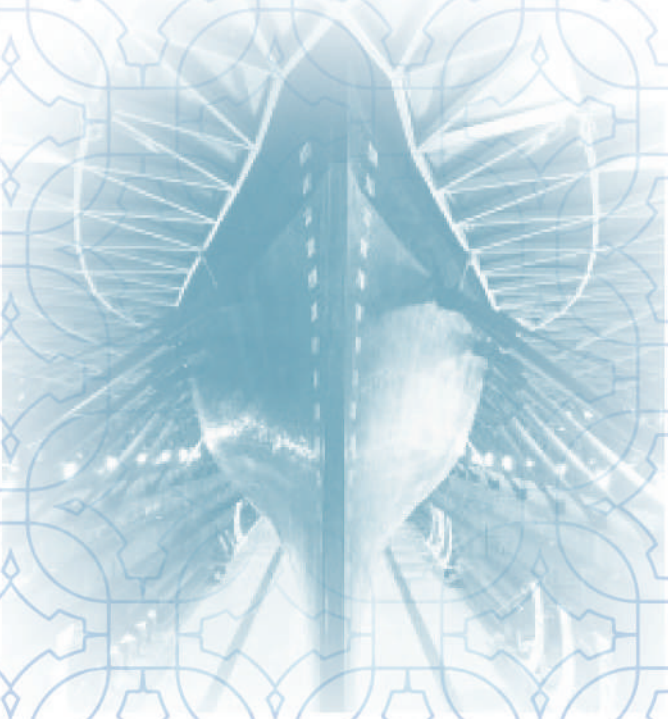
MARINE ENGINEERING

EN **The Department of Marine Engineering** is competent in construction and engineering system in floating structure or offshores. This department is equipped with various laboratories including design and manufacturing, ship electricity, ship engines, safety systems, and others. The graduates of work in Shipyard or Offshores, marine industries, shipping companies, oil & gas, class society, and several other fields.



IN **Departemen Teknik Sistem Perkapalan** (DTSP) merupakan departemen yang mempunyai kompetensi utama di bidang rancang-bangun dan rekayasa sistem-sistem yang berada pada bangunan di atas air (floating structures)/lepas pantai (offshores). DTSP dilengkapi dengan berbagai laboratorium antara lain laboratorium perancangan dan manufaktur, listik kapal, mesin kapal, keselamatan sistem, dan lain-lain. Lulusan DTSP rata-rata bekerja di shipyard/offshores, marine industry, pada shipping company, oil & gas, class society, dan sejumlah bidang yang lain.

Course Structure

Semester 1-2 (Preparation Phase)
Semester 3-8 (Undergraduate Phase)

Year 1							
Semester 1	Mathematics 1	Physics 1	Chemistry 1	English	Drawing Techniques and CAD	Pancasila	Introduction to Marine Technology
Semester 2	Mathematics 2	Physics 2	Civics	Ship Building Theory	Religion	Indonesian	
Year 2							
Semester 3	Numerical Analysis and Computer Programming	Ship Electronics	Fluid Mechanics	Engineering Mechanics	Statistics Engineering	Thermo dynamics	
Semester 4	Design 1 : Lines Plan	Ship Construction	Marine Diesel	Deck Machinery & Cargo Handling System	System Transmission and Marine Machineries Vibration	Ship Resistance and Propulsiom	
Year 3							
Semester 5	Design 2 : Propeller and Shafting System	Marine Savety	Fluid Mechinery	Introduction to Marine Savety (Enrichment)	Heat Transfer	Technopreneur-ship	Elective Course 1
Semester 6	Design 3 : General Arrangement, Fire, and Safety plan	System Reliability	Marine Electrical	Refrigeneration, Heating, Ventilation, and Air Condi-tioning	Marine Piping System	Concept of Technology	Elective Course 2
Year 4							
Semester 7	Maritime Business	Boiler, Stema and Gas Turbines	Design 4 : Marine Machinery System and Electrical	Research Methodology	Machinery Repair	Elective Course 3	
Semester 8	Marine Survey and Welding Inspection	On-The-Job Training	Maintenance Management	Elective Course 4	Elective Course 5		

Specializations

During their education, students of Marine Engineering can choose one of the ten specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Ship Performance & Energy Efficiency
2. Condition Monitoring & Condition Based Maintenance
3. Damage Analysis & Trouble Shooting
4. Maritime Law
5. LNG Technology
6. Risk Management
7. Flag states' relations with Industry and Class
8. Future and Change in International Legislation
9. ILO Convention
10. Introduction to Ship Automation

Career Options

Marine Production and Installation Engineer
Marine Maintance and Repair
Marine Surveyor
Marine Regulator & Authority
Marine Appraisal and Analyst
Marine Entrepreneur

Partner Universities and International Exposure

Double Degree program for Bachelor degree in Marine Engineering is held by colaboration between Department of Marine Engineering – ITS with Hochschule Wismar University – Germany

more information contact/
Informasi lebih lanjut hubungi:

Official Department of Marine Engineering
Phone: +62 31-5994251 or
visit website www.ne.its.ac.id

MATERIAL ENGINEERING

EN **The Department of Materials Engineering (DMtE)** focuses on the nature, modification, and aplication of metals, ceramics, polymers, and composites materials. Our study concentrated on engineering technology in materials development and application, which is determined by mechanical, physical, chemical, thermal, electrical, and other important properties. DMtE covers fields such as Metallurgical Manufacturing Techniques, Corrosion Engineering, and Innovative Materials Engineering. The laboratories in DMtE are Metallurgical, Manufacturing, Corrosion, Mineral Processing, Materials physics, Materials Chemistry, and Innovation Materials laboratory. The prospective career of our Graduates includes professional engineer, practical field engineer, failure analysis and corrosion engineer, metallurgists, as well in research and development.

IN **Departemen Teknik Material (DMtE)** berfokus untuk mempelajari sifat, modifikasi, dan aplikasi material logam, keramik, polimer, dan komposit. Studi kami berkonsentrasi pada teknologi rekayasa dalam pengembangan dan aplikasi material, yang ditentukan oleh sifat mekanik, fisik, kimia, termal, listrik, dan lainnya. DMtE mencakup bidang-bidang seperti Teknik Manufaktur Metalurgi, Teknik Korosi, dan Teknik Material Inovatif. Laboratorium yang ada di DMtE adalah Laboratorium Metalurgi, Manufaktur, Korosi, Pengolahan Mineral, Fisika Material, Kimia Material, dan Laboratorium Material Inovasi. Karir prospektif Lulusan kami meliputi insinyur profesional, insinyur lapangan praktis, analisis kegagalan dan insinyur korosi, ahli metalurgi, serta dalam penelitian dan pengembangan.

Course Structure

Semester 1-2 (Preparation Phase)

Semester 3-8 (Undergraduate Phase)

Year 1							
Semester 1	Mathematics 1	Physics 1	Chemistry 1	Introduction to Materials	Indonesian	Religion	Civics
Semester 2	Mathematics 1	Physics 2	Material Chemistry	Engineering Drawing	Engineering Mechanic	English	Pancasila
Year 2							
Semester 3	Computer Programming	Machine Design	Material Thermodynamics	Advanced Engineering Mathematics	Phase Diagram and Transformation	Metallurgy 1	
Semester 4	Statistic and Experimental Design	Manufacturing Process	Corrosion and Control	Numerical Analysis and Modeling	Material Characterization	Metallurgy 2	
Year 3							
Semester 5	Occupational Safety and Health	Casting Technology	Fracture Mechanics and Failure Analysis	Deformation and Forming Processes	Ceramics and Glass Materials	Heat Treatment	
Semester 6	Techno-preneurship	Welding Technology	Transport Phenomena	FiniteElement Method	Polymer Material	Iron and Steel Making	
Year 4							
Semester 7	Knowledge and Application of Technology	Non-Destructive and Risk Based Inspection	On-JobTraining	Composite Material	Production Management	Extractive Metallurgy and Refining Process	
Semester 8	Industrial Process Design	Final Project	Elective Course 1	Elective Course 2	Elective Course 3		

Specializations

During their education, students of Material Engineering can choose one of the four specializations provided. Specialization is highly related to the elective courses and the topic of final project.

4

1. Extractive Metallurgy
2. Manufacturing Metallurgy
3. Corrosion and Failure
4. Innovative Materials

The student can choose areas as professional engineers in a field of expertise, with good theoretical background and mastering in engineering principles and safety practices

Career options

Non-Destructive Testing (NDT) Analysis
Welding Engineer
Materials Engineer
Manufacturing Engineer
Metallurgist
Computational Modelling

Partner Universities and International Exposure

In collaboration with our overseas partners, students at the Material Engineering Department have opportunities to study abroad through our various mobility programs. The IUP in Material Engineering provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

- **Universiti Teknologi Petronas, Malaysia**
- **Ecole Supérieure du Bois, Franch**
- **Kumamoto University, Japan**

  (under confirmation)

more information contact/
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MECHANICAL ENGINEERING

EN **The Department of Mechanical Engineering (DME)** consists of several interest groups, such as energy conversion, design, manufacturing, and metallurgy. The department is committed to develop a relevant academic atmosphere through efficient internal management and sustainable education processes. DME is equipped with various laboratories such as solid-body mechanics laboratory, fluid mechanics, metallurgy, casting, industrial automation, and others. DME graduates work in industrial sector such as fuel, mining, power generation, manufacturing, and others, or in educational sector (lecturers and researchers), or being consultants and surveyors, as well as being government employees.

IN **Departemen Teknik Mesin (DTM)** terdiri dari beberapa kelompok minat, seperti: konversi energi, desain, manufaktur, dan metalurgi. Departemen ini bertekad untuk mengembangkan suasana akademik yang relevan melalui manajemen internal yang efisien dan proses edukasi yang berkelanjutan. DTM dilengkapi dengan berbagai laboratorium antara lain laboratorium mekanika benda padat, mekanika fluida, metalurgi, cor, otomasi industri, dan lain-lain. Lulusan DTM bekerja di bidang industri (bahan bakar, pertambangan, pembangkit , manufaktur dan lain-lain), edukasi (dosen dan peneliti), konsultan dan surveyor, serta pegawai pemerintahan.

Course Structure

Semester 1-2 (Preparation Phase)
Semester 3-8 (Undergraduate Phase)

Year 1							
Semester 1	Mathematics 1	Basic Physics	Chemistry	Introduction to Mechanical Engineering	Civil	Indonesian Language	Religion
Semester 2	Mathematics 2	Basic Physics	Programming Algoritm	Engineering Drawing	Static	English	Pancasila
Year 2							
Semester 3	Engineering Mathematics	Thermo-dynamics 1	Basic Fluid Mechanics 1	Mechanics of Material	Kinematics and Dynamics	Metallurgy 1	
Semester 4	Instrumentation and Measurement	Thermo-dynamics 2	Basic Fluid Mechanics 2	Machine Element 1	Mechanical Vibration	Metallurgy 2	
Year 3							
Semester 5	Numerical Analysis	Heat Transfer	Dynamics System and Control	Machine Element 2	Manufacture Process 1	Industrial Metrology	
Semester 6	Statistic and Design Experiment	Energy Conversion Machine	Mechatronics	Machine Element Design	Manufacture Process 2	Techno-preneurship	
Year 4							
Semester 7	Final Project Proposal	Maintenance Engineering and Management	Operational Management	Technology and Application Insights	Elective 1	Elective 2	
Semester 8	Final Project	Practical work	Enrichment Elective	Elective 3	Elective 4		

Specializations

During their education, students of Mechanical Engineering can choose one of the seven specializations provided. Specialization is highly related to the elective courses and the topic of final project.

- Solid Mechanics
- Fluid Mechanics and Machinery
- Metallurgy
- Systems Engineering and Control
- Vibration Engineering and Automotive Systems
- Production Engineering
- Thermal Engineering and Energy Systems

Career options

Advanced Manufacturing
Advanced Manufacturing

Robotics and Automation
Robotics and Automation

Power Generation
Power Generation

Automotive Industry
Automotive Industry

Partner Universities and International Exposure

1. Ecole Centrale de Nantes, Nantes, Perancis
2. Hanze University of Applied Science, Groningen, Belanda
3. HZ University of Applied Science, Vissingen, Belanda
4. Chunga-Ang University, Seoul, Korea Selatan
5. SIIT Thammasat University, Phatum Thani, Thailand
6. Universiti Malay, Kuala Lumpur, Malaysia
7. Universiti Malaysia Pahang, Pekan Pahang, Malaysia

more information contact/
Informasi lebih lanjut hubungi:

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NAVAL ARCHITECTURE

EN The department of naval architect was established in 1960 as one of the first departments at Institut Teknologi sepuluh Nopember (ITS). Naval Architect provides a comprehensive naval education based on naval science and engineering. This department is equipped with various laboratories such as hydrodynamics, ship design, ship construction, shipping management, and another laboratory. The graduates work in maritime industries including shipyards, cruise, port, ship design consultant, the oil and gas industry, classification, and handle strategic positions in government such as the ministry of transportation, etc.

IN Departemen Teknik Perkapalan (DTP) didirikan pada tahun 1960 sebagai salah satu departemen "angkatan pertama" di Institut Teknologi Sepuluh Nopember (ITS). DTP menyediakan pendidikan tinggi yang komprehensif dalam bidang perkapalan berdasarkan pengetahuan ilmu pengetahuan dasar dan rekayasa perkapalan. DTP dilengkapi dengan berbagai laboratorium antara lain laboratorium hidrodinamika, desain kapal, kontruksi kapal, manajemen perkapalan, dan lain-lain. Lulusan DTP bekerja di industri maritim yang meliputi galangan kapal; pelayaran; pelabuhan; konsultan desain kapal; industri minyak dan gas; klasifikasi; posisi-posisi strategis di pemerintahan seperti pada Kementrian Perhubungan, dll.

Course Structure

Semester 1-2 (Preparation Phase)
Semester 3-8 (Undergraduate

Year 1							
Semester 1	Mathematics 1	Physics 1	Chemistry	Introduction to Marine echnology	Engineering Drawing	Pancasila	English
Semester 2	Mathematics 2	Physics 2	Fluid Mechanics	Basic Ship Theory 1	Religion	Indonesian	Civics
Year 2							
Semester 3	Engineering Mechanics 1	Material Science and Mechanics	Ship Structure and Strength 1	Basic Ship Theory 2	Ship Resistance and Propulsion	Marine Engineering	
Semester 4	Engineering Mechanics 2	Ship Design Theory	Ship Structure and Strength 2	Ship System and Outfitting	Welding Technology	Lines Plan	
Year 3							
Semester 5	Statistic and Probability	Numerical Method for Computational Engineering	Optimization Theory	Finite Element Methods	Ship Production Technology	Ship Design	
Semester 6	Statutory Regulation	Ship Dynamics	Ship Survey and Inspection	Ship Repair and Conversion Technology	Ship Production Management	Ship Structure Design	
Year 4							
Semester 7	Concept of Technology	Research Methodology	Ship Hydrodynamics	Ship Production Planning	Elective 1	Elective 2	
Semester 8	Techno-preneurship	Internship	Final Project	Elective 3	Elective 4		

Specializations

During their education, students of Naval Architecture can choose one of the four specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Ship Design
2. Hydrodynamics
3. Ship Construction and Strength
4. Ship Production Technology and Management

Career Options

Marine Transportation Industry
Offshore Oil and Gas Industry
Fishing Industry
Floating Power Generation Industry
Tourism Industry
Defense Industry
Port Industry

Partner Universities and International Exposure

In collaboration with our overseas partners, students at the Naval Architecture Department have opportunities to study abroad through our various mobility programs. The IUP in Naval Architecture provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course,

Tianjin University -
School of Marine Sciences & Technology, China

Kobe University, Japan

Istanbul Technical University (ITU), Turkey

Memorial University of Newfoundland (MUN), Canada

Mokpo National University, South Korea

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more information contact/
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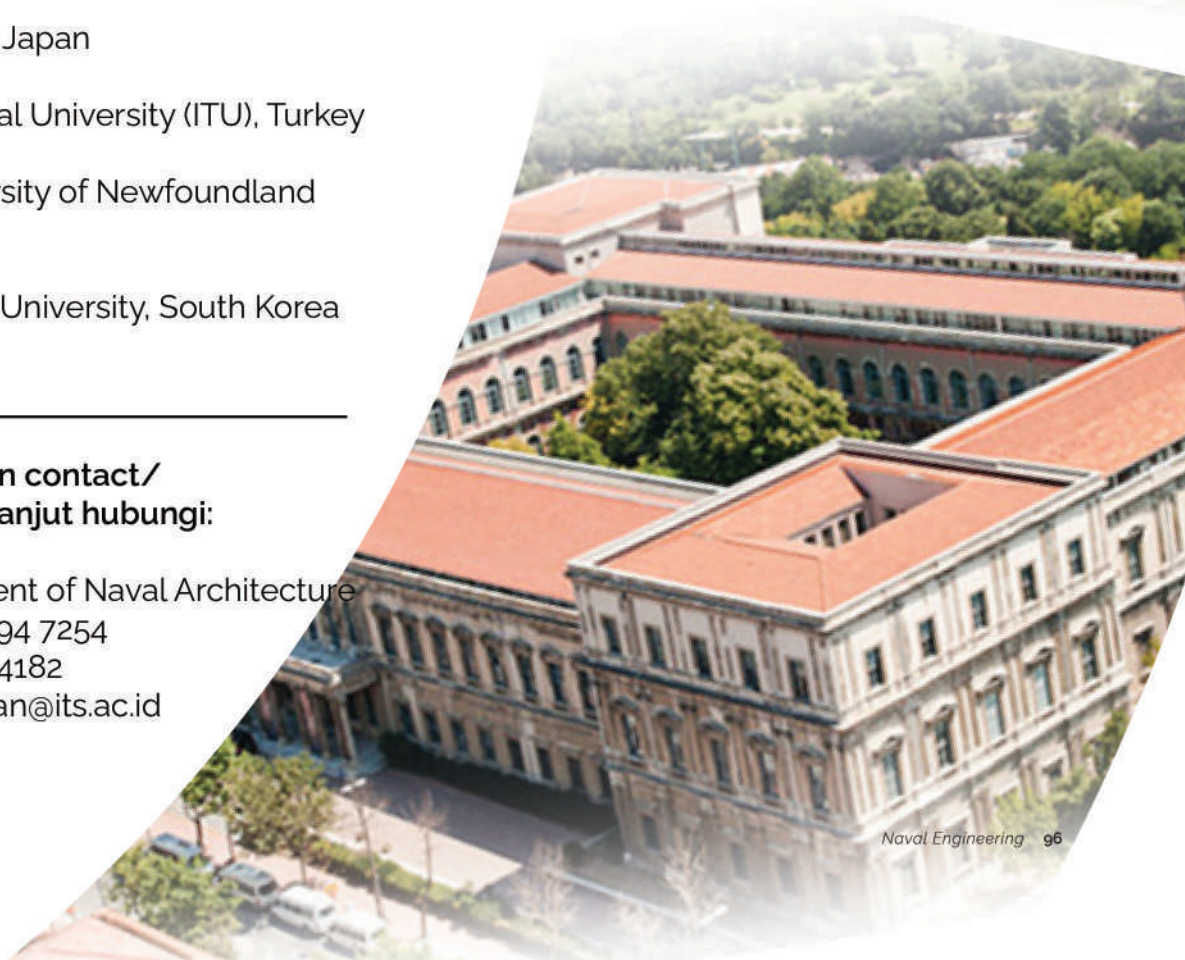

STATISTICS

EN In 1983, The Department of Statistics was officially established after being part of the Department of Mathematics. In 1985, The Department of Statistics established the Diploma III Program. Later, in 1999, Statistics opened Master Program (S-2) and Doctoral Program (S3). Statistics is equipped with various laboratories such as computational statistics laboratory, business, social, environmental statistics, industry, and others. Graduates mostly working in research, quality assurance, research & development, data analysis, government and private banks, market research, Central Bureau of Statistics (BPS), local government, industries (PT Philips, JVC, Astra, Petrokimia, Djarum), and others.

IN Tahun 1983, Departemen Statistika (DS) berdiri setelah sebelumnya menjadi bagian dari Jurusan Matematika. Pada tahun 1985, DS mendirikan program diploma III statistika. Selanjutnya pada tahun 1999, DS membuka program master (S-2) dan program doktor beberapa tahun kemudian. DM dilengkapi dengan berbagai laboratorium antara lain laboratorium statistika komputasi, bisnis, sosial, statistika lingkungan, industri, dan lain-lain. Lulusan DS di antaranya bekerja di instansi bidang konsultan riset, quality assurance, research&development, analisis data, bank pemerintah dan swasta, market research, Badan Pusat Statistik (BPS), pemerintah daerah, industri (PT Philips, JVC, Astra, Petrokimia, Djarum), dan lain-lain.

Course Structure

Semester 1-2
(Preparation Phase)

Semester 3-8
(Undergraduate Phase)

1st Year

Semester 1	Chemistry	Introduction to Economy Theory	Mathematics I	Introduction to Statistical Method	Physics I	English
Semester 2	Bahasa Indonesia	Physics II	Sampling and Survey Techniques	Mathematics II	Computer Programming	Religion

2nd Year

Semester 3	Numerical Analysis	Introduction to Economy Theory	Pancasila (Five Basic Principles)	Regression analysis	Linear Algebra	Mathematics III	Probability Theory
Semester 4	Explorative Data Analysis	Physics II	Experimental Design	Mathematics IV	Mathematical Statistics I	Statistical Computation	Operation

3rd Year

Semester 5	Technopreneurship	Non-Parametric Statistics	Mathematical Statistics II	Stochastic Process	Statistical Quality Control	Elective Course I
Semester 6	Multivariate Analysis	Categorical Data Analysis	Time Series Analysis	Research Methodology	Data Mining	Elective Course II

4th Year

Semester 7	Official Statistics	Simulation Techniques	Econometrics	Data Analysis	Practical Work	Elective Course III
Semester 8	Insight and Technology Application	Statistical Consulting	Civics	Survival Analysis	Final Project	Elective Course IV

Specializations

During their education, students of Statistics can choose one of the five specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Business and Industrial Statistics
2. Computational Statistics and Data Science
3. Economics and Financial Data Analytics
4. Social Statistics and Population Studies
5. Health and Environmental Statistics

Career Options

1. Marketing Analyst
2. Manager of Production Planning Inventory Control
3. Quality Control
4. Quality Assurance
5. Reliability Engineer
6. System Engineer
7. Quality by Design
8. Stock Market Analyst
9. Bank Credit/Insurance Analyst
10. Actuary
11. Tax Analyst
12. Customs Analyst
13. Financial Analyst
14. System Analyst/Programmer/SIM
15. IT Consultant
16. IT Infrastructure Planner
17. Data Science
18. Analyst in Government
19. Development Planner
20. Government Consultant
21. Development Control Technical Staff
22. Population Analyst
23. Research Consultant
24. Researcher
25. Academics/Educators
26. Administration
27. HRD Manager
28. Government Institution

Partner Universities & International Exposure

In collaboration with our overseas partners, students at the Statistics Department have opportunities to study abroad through our various mobility programs. The IUP in Statistics provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

1. **University of Technology Malaysia (UTM), Malaysia**
2. **Prince Songkla University, Thailand**
3. **Institute of Statistics, National Chiao Tung University (NCTU) Taiwan**
4. University of California Davis
5. Tokyo University of Science Japan
6. University Technology Mara (UiTM), Malaysia
7. University Tun Hussein Onn Malaysia (UTHM)

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URBAN AND REGIONAL PLANNING

EN The Department of Urban and Regional Planning (PWK) was established in 2002, and since then, has becoming the best urban planning study in eastern part of Indonesia. PWK is equipped with various laboratories such as Laboratory of city planning, regional planning, spatial analysis and transportation. Graduates of PWK work in spatial planning sector, Urban Design (Building and Environmental design, corridor arrangement, master plan), sectoral planning formulation, researcher and academicians and others.

IN Departemen Perencanaan Wilayah dan Kota (DPWK) dibentuk pada tahun 2002, dan sejak itu, telah menjadi yang teratas dalam edukasi perencanaan kota di Indonesia timur. DPWK dilengkapi dengan berbagai laboratorium antara lain laboratorium perencanaan kota, perencanaan wilayah, analisa spasial dan transportasi. Lulusan DPWK bekerja di bidang penyusunan rencana tata ruang (skala nasional, wilayah, provinsi, kabupaten, kota, kawasan khusus), perancangan kota (tata bangungan dan lingkungan, penataan koridor, masterplan), penyusunan rencana sektoral, peneliti dan akademisi, dan lain-lain.

Course Structure

Semester 1-2
(Preparation Phase)

Semester 3-8
(Undergraduate Phase)

1st Year

Semester 1	Planning Statistics	Natural Resources and Environmental System	Intro to Urban and Regional Planning	Religion	Physic	English	Civics
Semester 2	Social System and Demography	Planning Process	Planning Computation	Bahasa Indonesia	Mathematics	Built Environment	Pancasila Management

2nd Year

Semester 3	Urban Morphology and Design Theory	Transportation System	Land Use Planning and Development	Planning Information System	Planning Analysis Method (PAM)	Applied Planning Process
Semester 4	Urban Planning	Urban and Regional Infrastructure	Urban Economics	Location and Spatial Analysis	Site Planning	Applied Transportation Planning

3rd Year

Semester 5	Coastal Planning	Regional Planning	Regional Economics	Research Methods	Applied Urban Planning	Applied Urban Design
Semester 6	Housing And Settlement	Community Development	Urban Management	Applied Coastal Planning	Applied Regional Planning	Technology Insights

4th Year

Semester 7	Elective Course	Elective Course*	Elective Course*	Internship	Seminar	Technopreneurship
Semester 8	Planning Policies and Administration	Development Evaluation Techniques	Development Financing	Planning Theories	Final Project	

Specializations

During their education, students of Urban and Regional Planning can choose one of the seven specializations provided. Specialization is highly related to the elective courses and the topic of final project.

1. Urban Planning
2. Regional Planning
3. Urban Design
4. Coastal Planning
5. Spatial Analysis
6. Transportation Planning

6

Career Options

1. Government Staff in Urban Planning
2. Consultant
3. Community Developer
4. Project Supervisor
5. Property Contractor and Developer

Partner Universities & International Exposure

In collaboration with our overseas partners, students at the Urban and Regional Planning Department have opportunities to study abroad through our various mobility programs. The IUP in Urban and Regional Planning provides opportunities for students to take part in any international mobility in one of our partner universities, in the form of; Short Academic Program/Course, International Internship, Joint/Double Degree, Semester Exchange.

1. Radboud University, The Netherlands
2. **Shibaura Institute of Technology, Japan**
3. Curtin University, Australia

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