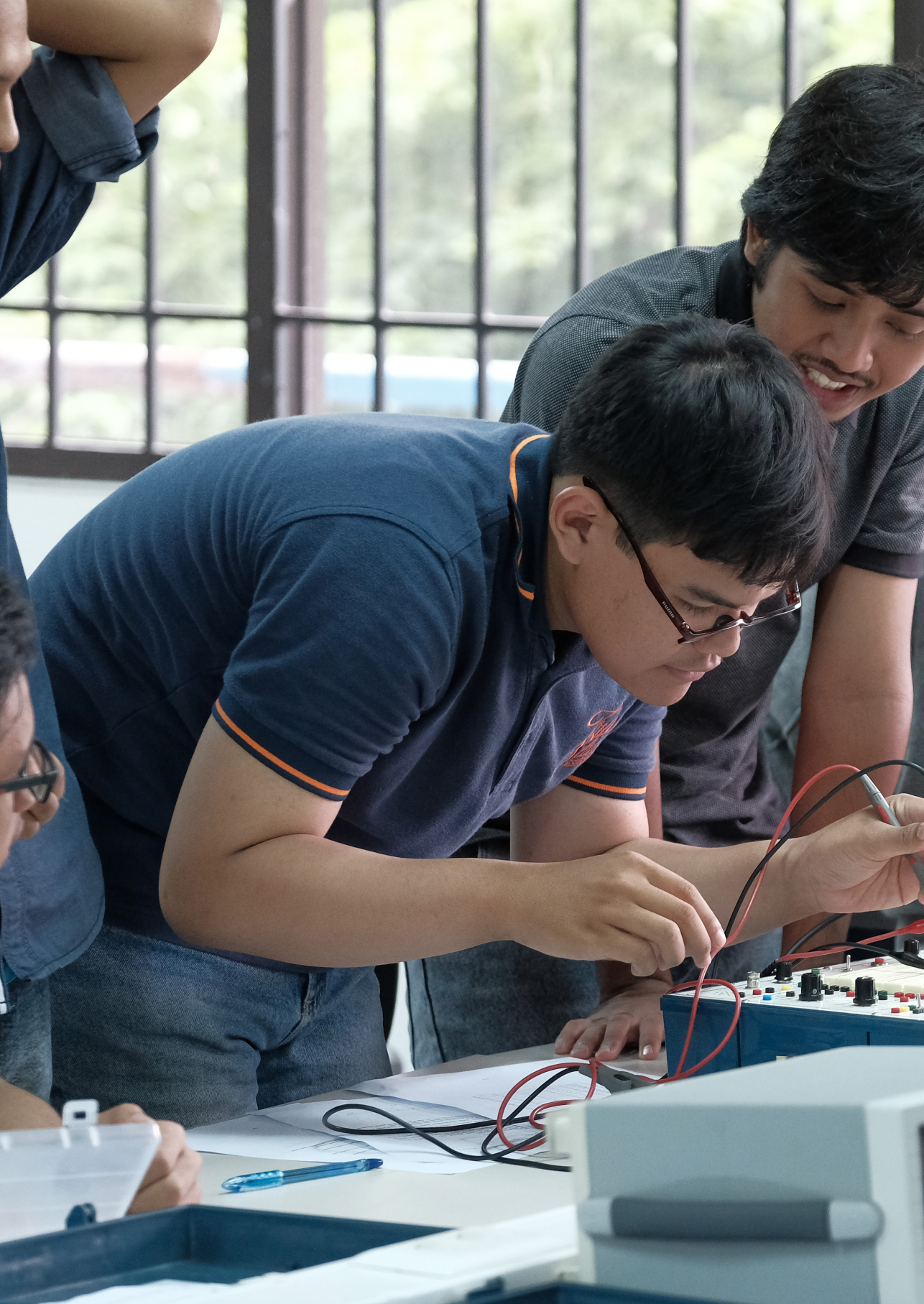
ITS
Institut
Teknologi
Sepuluh Nopember

FACULTY OF **ELECTRICAL TECHNOLOGY**

Institut Teknologi Sepuluh Nopember (ITS)



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ASIA
Philippines
MALAYSIA
INDONESIA
Jakarta
Surabaya
PAPUA
NEW
GUINEA
AUSTRALIA

Prakata

Sebagai kota metropolitan terbesar kedua setelah Jakarta, Surabaya memiliki andil yang besar dalam menopang pembangunan perekeonomian serta menjadi pusat bisnis, perdagangan, industri, dan merupakan barometer pendidikan di kawasan Indonesia timur.

Institut Teknologi Sepuluh Nopember (ITS), merupakan Perguruan Tinggi negeri ternama di wilayah Indonesia Timur. Berlokasi di Surabaya, propinsi Jawa Timur, Indonesia, ITS memiliki 10 fakultas dengan 37 departemen yang menempati area seluas 187 Ha di kampus utama Sukolilo, Kampus Manyar dan Kampus Hos Cokroaminoto.

Fakultas Teknologi Elektro memiliki 3 gedung Utama yaitu gedung AJ, B, dan C.

Foreword

As the second largest metropolitan city after Jakarta, Surabaya has a large share in sustaining the economic development as well as being a center of business, trade, industry, and also as an educational barometer in eastern Indonesia area.

Institute Technology of Sepuluh Nopember (ITS), is a prominent state university in eastern Indonesia. Located in Surabaya, East Java, Indonesia, ITS has 10 faculties with 37 departments occupying an area of 187 Ha in Sukolilo's main campus, Manyar Campus and Hos Cokroaminoto Campus.

The Faculty of Electrical Technology , have 3 main buildings building of AJ, B, and C.

TENTANG FTE

Fakultas Teknologi Elektro (FTE) ITS dibentuk dengan visi membentuk sumber daya manusia yang ekselen dan berkelas dunia dalam pendidikan dan penelitian bidang teknologi elektro dan misi sebagai lembaga yang menghasilkan karya ilmiah bermanfaat bagi masyarakat dan menghasilkan sumber daya manusia yang memiliki kompetensi di bidang Teknologi Elektro dengan berkarakter; bermoral; mempunyai daya saing tinggi; mampu mengembangkan; meningkatkan, dan memajukan IPTEK; mampu memberikan andil pada penerapan IPTEK; dan bermanfaat bagi kepentingan masyarakat.

FTE didirikan dalam rangka mewadahi berkembang pesatnya spektrum bidang elektro dan kedekatan rumpun keilmuan. Departemen dibawah naungan FTE ITS adalah :

ABOUT FTE

Faculty of Electrical Technology (FTE) ITS was formed with the vision to form the world's excellence and world-class human resources in education and research in the field of electrical technology and mission as an institution that produces scientific work benefit the community and produce human resources who have competence in the field of Electrical Technology with character; moral; have high competitiveness; able to develop; enhance, and promote science and technology; able to contribute to the application of science and technology; and beneficial to the public interest.

FTE was established in order to accommodate the rapidly growing spectrum of electro fields and the proximity of scientific clusters.
Departments under the auspices of FTE ITS are :

- Departemen Teknik Elektro
- Departemen Teknik Komputer dan
- Departemen Teknik Biomedik

Berdasarkan Penilaian Badan Akreditasi Nasional Perguruan Tinggi (BAN PT), ketiga Departemen tersebut memperoleh Akreditasi A. Di lingkungan ITS, Departemen dibawah FTE tersebut termasuk departemen yang banyak diminati oleh calon mahasiswa, baik melalui jalur SNMPTN, SBMPTN, PKM (Program Kemitraan Mandiri), dan Beasiswa Bidik Misi.

Dari sisi prestasi mahasiswa FTE, tim Robotika ITS yang dimotori mahasiswa dan dosen pembimbing dari FTE sering memperoleh juara dalam kejuaraan Kontes Robot Nasional maupun internasional.

- *The Department of Electrical Engineering*
- *The Department of Computer Engineering and*
- *The Department of Biomedical Engineering.*

Based on the assessment of the National Accreditation Board of Higher Education (BAN PT), the three departments received Accreditation A. In the ITS environment, the Department under the FTE includes departments of great interest to prospective students through the SNMPTN, SBMPTN, PKM (Independent Partnership Program) and Bidik Misi Scholarship.

In terms of FTE students' achievements, ITS Robotics team led by FTE students and lecturers often win the National and International Robot Contest championships.

Departemen dibawah naungan FTE ITS
The departments that are positioned under the FEE ITS

• Departemen Teknik Elektro

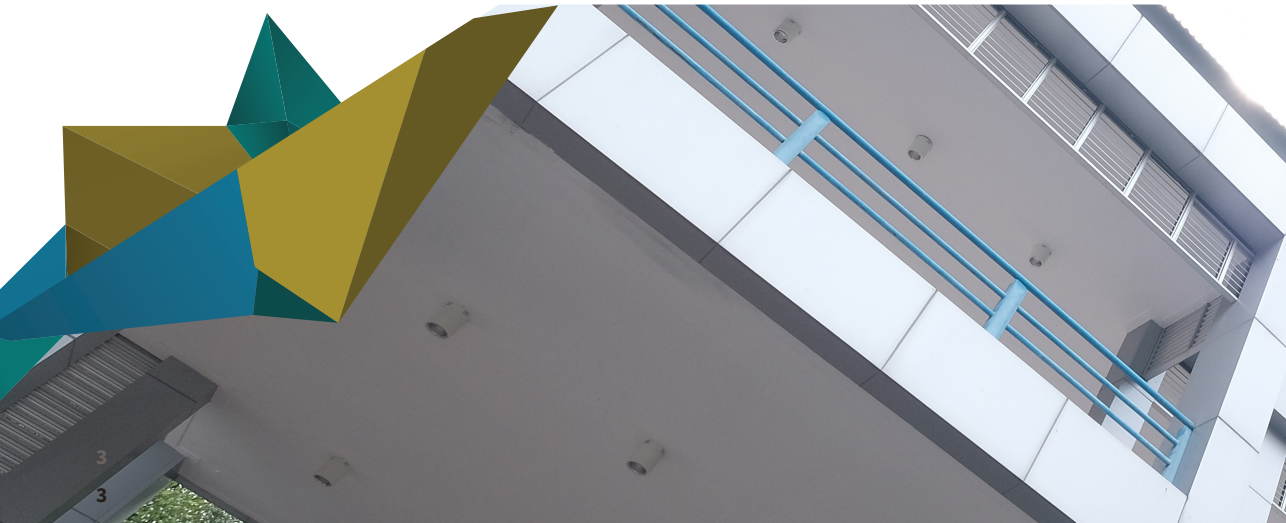
Program Studi Sarjana Teknik Elektro ITS yang selanjutnya disebut dengan PSS TE-ITS merupakan salah satu program studi sarjana yang bernaung dibawah Fakultas Teknologi Industri di Institut Teknologi Sepuluh Nopember. Program studi ini berdiri dengan nomor SK pendirian No. 93367/U.U/1960 tertanggal 3 Nopember 1960 yang ditandatangani oleh Menteri Pendidikan dan Kebudayaan.

Penyelenggaraan program studi ini dimulai pada bulan Nopember 1960 dengan SK ijin operasional terupdate nomer 4783/D/T/K-N/2010 tertanggal 09 Desember 2010. Penyelenggaraan PSS TE-ITS berdasar visi untuk menjadi lembaga yang unggul,

• *Department of Electrical Engineering*

ITS Electrical Engineering Bachelor Degree Program, hereinafter referred to as PSS TE-ITS is one of the undergraduate study programs under the Faculty of Industrial Technology at Sepuluh Nopember Institute of Technology. The study program stood with the number SK of establishment no. 93367 / U.U / 1960 dated 3 November 1960 signed by the Minister of Education and Culture.

The implementation of this study program began in November 1960 with an updated operating license number 4783 / D / T / K-N / 2010 dated December 9, 2010.
The implementation of PSS TE-ITS is based on the vision to become a superior,



kompetitif dan berkelas dunia dalam mengembangkan pendidikan, penelitian, dan implementasi IPTEK pada bidang :

- Teknik Sistem Tenaga
- Telekomunikasi Multimedia
- Elektronika
- Sistem Pengaturan
- Teknik Komputer dan Telematika.

Sedangkan misi dari PSS TE-ITS adalah sebagai lembaga yang menghasilkan karya ilmiah bermanfaat bagi masyarakat dan menghasilkan sumber daya manusia yang memiliki kompetensi dibidang Teknik Elektro dengan karakter: bermoral, mempunyai daya saing tinggi, mampu mengembangkan, meningkatkan, dan memajukan IPTEK, dan mampu memberikan andil pada penerapan IPTEK, serta bermanfaat bagi kepentingan masyarakat.

competitive and world-class institution in developing science, research and implementation of Science and Technology in the areas of :

- *Power System Engineering*
- *Multimedia Telecommunication*
- *Electronics*
- *Regulatory System*
- *Computer Engineering and Telematics.*

While the mission of PSS TE-ITS is as an institution that produces scientific work useful for the community and produce human resources who have competence in the field of Electrical Engineering with the character of: morally, have high competitiveness, able to develop, improve and advance science and technology, contributed to the implementation of science and technology, and beneficial to the interests of society.

1. Program Studi Sarjana (S1)

Program studi sarjana di Departemen Teknik Elektro ITS ditempuh dalam waktu delapan semester atau empat tahun. Untuk memperoleh gelar sarjana, mahasiswa Departemen Fisika ITS perlu menyelesaikan 144 Satuan Kredit Semester (SKS) selama kuliah dan mengikuti ujian TOEFL dengan nilai minimum 477. Pada semester empat, mahasiswa diwajibkan memilih salah satu bidang studi di Departemen Teknik Elektro, yaitu teknik sistem tenaga, telekomunikasi multimedia, elektronika, studi teknik sistem pengaturan.

1. Undergraduate Program

The undergraduate study program in Electrical Engineering Department of ITS is carried out in eight semesters or four years. To earn a bachelor's degree, students of the Physics Department ITS are required to complete 144 credits and pass the examinations. A TOEFL with a minimum score of 477 is also required to obtain the degree. In semester four, students are required to choose one field of study within the Department of Electrical Engineering. Some of the choices include power system engineering, multimedia telecommunications, electronics, and settings engineering systems studies.

2. Program Studi Magister (S2)

Program studi magister di Departemen Teknik Elektro ITS ditempuh dalam waktu empat semester atau dua tahun dengan beban studi 36 Satuan Kredit Semester (SKS). Program magister Teknik Elektro ITS bertujuan untuk meningkatkan taraf penguasaan ilmu dan kemampuan para pesertanya dalam bidang Teknik Elektro.

Mahasiswa diharapkan memiliki kemampuan akademik dan profesional yang dapat dimanfaatkan secara mandiri dalam mengembangkan ilmu dan teknologi elektro di bidang pendidikan, penelitian, dan industri. Program magister di Departemen Teknik Elektro memiliki tujuh peminatan, yaitu teknik sistem tenaga, telekomunikasi multimedia, elektronika, sistem pengaturan,

2. Master Degree

The master's degree program in Electrical Engineering Department ITS is carried out four semesters or two years, with a study load of 36 credits. The Master of Electrical Engineering ITS Program aims to improve the level of expertise of science and the ability of the students in the field of Electrical Engineering.

Students are expected to have academic and professional skills that can be utilized independently within developing electronic science and technology in education, research, and industry. The master program in the Department of Electrical Engineering has seven specializations. Which include power system engineering, multimedia

jaringan cerdas multimedia, telematika, dan telematika untuk pengelola TIK. Bidang minat terakhir dikhususkan bagi mahasiswa program kerja sama dengan Kementerian Komunikasi dan Informatika.

telecommunications, electronics, regulatory system, intelligent network multimedia, telematics, and telematics for ICT managers. The last field of interest is reserved for students of the cooperation program with the Ministry of Communication and Informatics.

3. Program Studi Doktoral (S3)

Bagian pokok program studi doktoral di Departemen Teknik Elektro ITS pada dasarnya adalah kegiatan penelitian, yang memberikan sumbangan baru bagi pengembangan ilmu pengetahuan dan teknologi di bidang elektro. Lama pendidikan adalah tiga tahun dengan bobot mata kuliah total 40 SKS, terdiri dari 28 SKS mata kuliah kompetensi utama dan 12 SKS kompetensi pendukung.

Mata kuliah kompetensi utama meliputi aktivitas disertasi yang mencakup penelitian dan publikasi paling sedikit pada satu jurnal nasional terkreditasi dan satu publikasi pada jurnal internasional. Di akhir masa studi, terdapat ujian akhir dalam bentuk seminar dengan mempertahankan disertasi di hadapan dewan penguji. Informasi lebih lanjut dapat diakses

3. Doctoral Degree (S3)

The main focus of the doctoral program in the Department of Electrical Engineering ITS is mainly on research activities, which provide new contributions to the development of science and technology in the field of Electrical Engineering. The duration of program is three years with a total of 40 credits, consisting of 28 credits of themain courses and 12 credits of supporting courses.

The main courses include dissertation activities that include research and publication of at least one accredited national journal and one publicationin an international journal. At the end of the study period, a final exam in the form of a seminar will be held, by presenting the dissertation in front of the board of examiners. Further information can be accessed.

• Departemen Teknik Komputer

Teknik komputer adalah disiplin ilmu yang mewujudkan ilmu pengetahuan dan teknologi dari mendesain, membangun, mengimplementasikan, dan memelihara perangkat lunak (software) dan perangkat keras (hardware) dari sistem komputasi modern, peralatan yang dikontrol komputer, dan jaringan perangkat cerdas. Ilmu ini mengintegrasikan teknik elektro dan ilmu komputer.

Di Departemen Teknik Komputer ITS, mahasiswa dilatih untuk menyelesaikan persoalan di sekitar menggunakan pendekatan komputer. Adapun peminatan pada departemen ini adalah telematika, teknologi permainan (game technology), sistem real time, dan rekayasa jaringan.

Teknik Komputer hampir selalu menjadi departemen dengan tingkat seleksi paling ketat di ITS. Rata-rata, hanya 5 persen mahasiswa yang diterima di departemen ini setiap tahunnya. Mahasiswa Departemen Teknik Komputer juga banyak berkiprah mengharumkan nama ITS di kancah nasional maupun internasional. Di antaranya adalah terlibat menjadi periset dan meraih juara tiga dalam Kontes Robot Sepak Bola Indonesia, juara satu Kontes Robot Seni Indonesia, dan juara satu kompetisi hacking server SNMPTN.

Di kancah internasional, mahasiswa Departemen Komputer juga berperan dalam kemenangan Tim Robot Ichiro ITS dalam kompetisi bergengsi Federation of

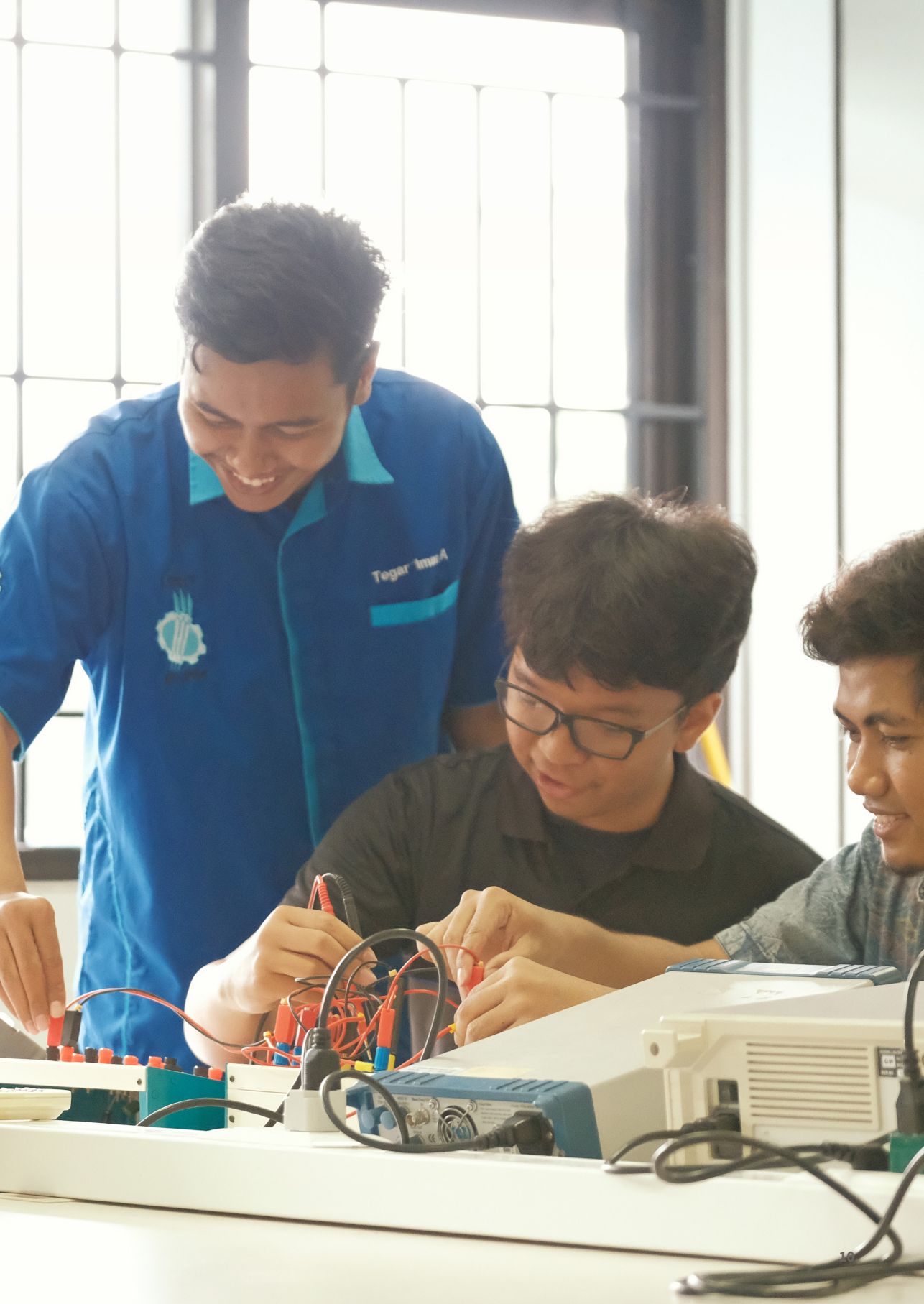
• *Department of Computer Engineering*

Computer engineering is a discipline that embodies science and technology from designing, building, implementing, and maintaining software and hardware (hardware) of modern computing systems, which equipment's are computer-controlled, and intelligent networking devices. This science integrates electrical engineering and computer science. In the Computer

Engineering Department of ITS, students are trained for solve the problem around using a computer approach. As for the specialization in this department is telematics, game technology, real time systems, and network engineering. Computer Engineering is almost always the department with the strictest selection level in ITS. On average, only 5 percent of students are accepted in this department each year.

Students of the Computer Engineering Department also take a great deal in the name of ITS in the national and international arena. Among these are a researcher involved and won the third prize in Indonesian Football Robot Contest, winner of Art Robot Contest Indonesia, and the first winner of the SNMPTN server hacking competition.

In the international arena, Computer Department students also played a role in Ichiro ITS Robot Team's triumph in the prestigious Federation of International Robot-Soccer Association Humanoid


Tegar Imam A

International Robot-Soccer Association Humanoid Robot Cup (FIRA Hurocup) di Beijing, China pada 2016.

Pekerjaan yang berhubungan dengan komputer semakin berkembang di era internet of things. Berbagai ide inovatif untuk membantu memudahkan manusia dan memecahkan permasalahan kompleks semakin bermunculan. Menjamurnya startup yang bergerak di bidang teknologi informasi menjadi ladang karir yang menjanjikan bagi lulusan teknik komputer. Departemen Teknik Komputer ITS memiliki prospek karir yang luas, mulai dari menjadi pengembang software, analis, konsultan IT, ahli jaringan, robotic engineer, hingga keamanan sistem.

competition Robot Cup (FIRA Hurocup) in Beijing, China in 2016.

Computer-related work is growing in the Internet age. Innovative ideas help to facilitate people and solve complex problems that are increasingly emerging. The hype of startups is moving in the field of information technology. Which becomes a promising career field for computer engineering graduates. Computer Engineering Department ITS has wide career prospects, ranging from becoming a software developer, analyst, IT consultant, networking expert, robotic engineer, up to system security.

Program Studi Sarjana (S1)

Mahasiswa program ini akan mendapatkan mata kuliah yang sama pada tahun pertama , sedangkan tahun kedua sampai tahun keempat mahasiswa akan difokuskan pada mata kuliah sesuai bidang minat yang dipilih. Bidang minat yang disediakan oleh Departemen Teknik Komputer adalah :

- Telematika, bidang ini fokus pada sinyal, gambar dan proses video.
- Teknologi Permainan (Games), bidang ini fokus pada teknologi permainan dan aplikasinya
- Real Time System, bidang ini fokus pada real time system dan aplikasinya
- Rekayasa Jaringan, bidang ini fokus pada teknologi jaringan dan internet.

Undergraduate / Bachelor Program

Students of this program will get the same courses in the first year, while the second year until the fourth year students will be focused on lectures according to the field of interest selected. Areas of interest provided by the Department Computer Engineering are:

- *Telematics, this field focuses on signal, image and video process.*
- *Game Technology (Games), this field focuses on game technology and its applications*
- *Real Time System, this field focuses on real time system and its application*
- *Network Engineering, this field focuses on network technology and internet.*

NAMAZ TRAL

• Departemen Teknik Biomedik

Program Studi Teknik Biomedik ITS dibentuk dengan visi dan misi untuk mencetak generasi penerus yang memiliki kemampuan analisa dan sintesa yang kuat dalam bidang spesialisasi Instrumentasi Biomedik, Pengolahan Sinyal Biomedik, Biomekanika, Kontrol Biomedik, Biomaterial, dan lain-lain.

Dengan kemampuan tersebut, diharapkan setiap lulusan akan mampu untuk memenuhi tantangan dunia kerja di bidang disain peralatan medis, pengolahan sinyal dan citra medis, teknik klinis, rehabilitasi medis, serta teknologi bantuan untuk individu yang berkebutuhan khusus.

Kegiatan penelitian pada program studi ini memusatkan perhatian pada mekanisme komputasi, komunikasi dan sistem kontrol pada sistem biologis, dan aplikasinya pada bidang biologi, elektronik dan mekanika.

• *Department of Biomedical Engineering*

The Biomedical Engineering Study Program in ITS aims to create future generations of engineers and scientists with strong analytic and synthetic capability in the fields of Biomedical Instrumentation, Biomedical Signal Processing, Biomechanics, Biomedical Control, Biomaterial, etc..

With those capabilities, the graduates of this program will be expected to be able to face the academic, research and industrial challenges in design of medical instruments, medical signal and image processing, clinical engineering, medical rehabilitation, and development of technologies for helping people with special needs.

Our research focuses on mechanisms of computation, communication and control processes in biological systems and applications in biological, electronic and mechanical systems.

Program Studi Sarjana (S1)

Program Studi Sarjana Teknik Biomedik ITS memiliki kapasitas 50 mahasiswa. Mahasiswa program ini akan dibeirkan kemampuan dalam bidang Instrumentasi Biomedik, Pengolahan Sinyal Biomedik, Biomekanika, Kontrol Biomedik, Biomaterial, dan lainnya.

Undergraduate Program (S1)

Undergraduate Program of Biomedical Engineering ITS has a capacity of 50 students. Students of this program will be able to develop skills in Biomedical Instrumentation, Biomedical Signal Processing, Biomechanics, Biomedical Control, Biomaterials, and others.

VISI

Ekselen dan berkelas dunia dalam pendidikan dan penelitian bidang teknologi elektro

VISI

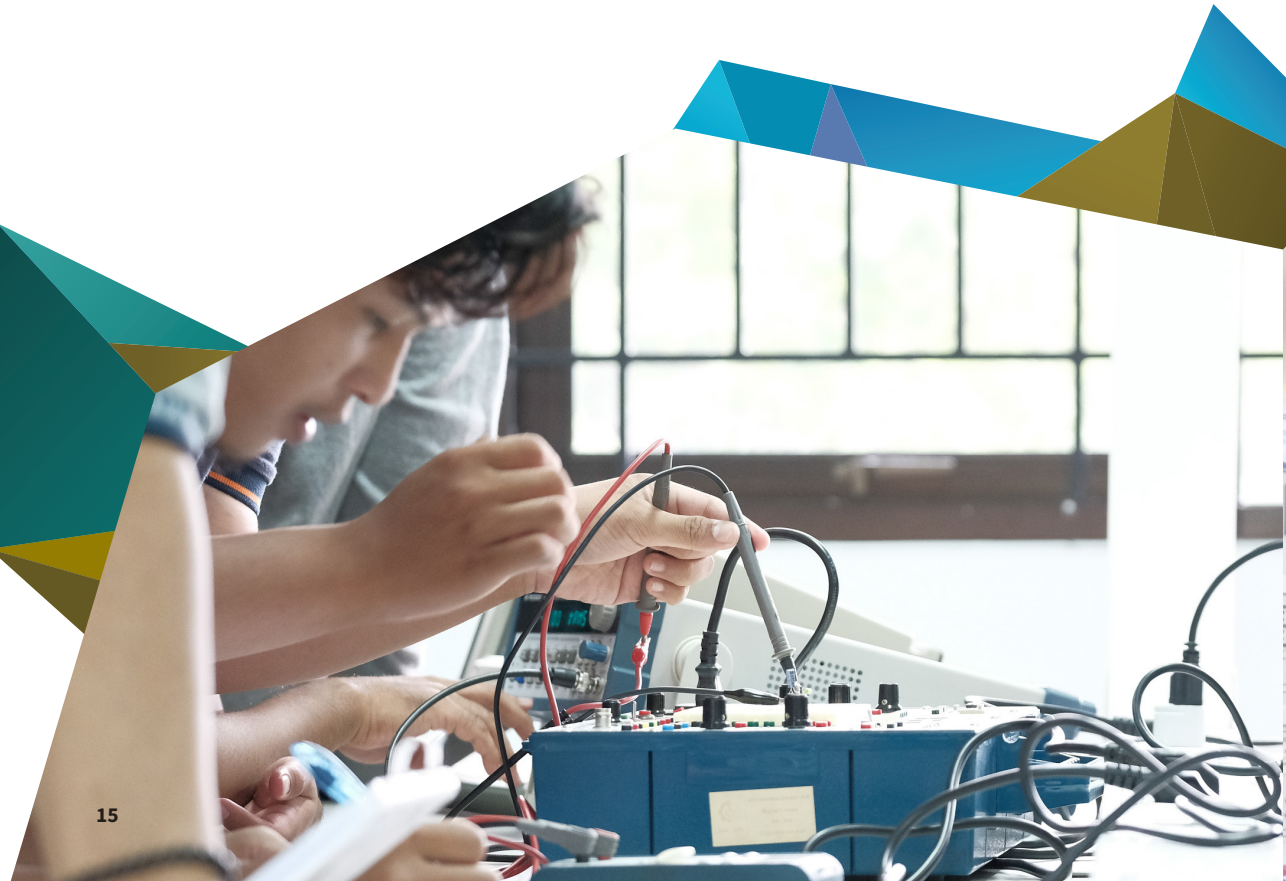
Be Excellent and be world class in education and research in electrical technology field

MISI

Sebagai lembaga yang menghasilkan karya ilmiah bermanfaat bagi masyarakat dan menghasilkan sumber daya manusia yang memiliki kompetensi di bidang Teknologi Elektro dengan berkarakter; bermoral; mempunyai daya saing tinggi; mampu mengembangkan; meningkatkan, dan memajukan IPTEK; mampu memberikan andil pada penerapan IPTEK; dan bermanfaat bagi kepentingan masyarakat.

MISI

As an institution that produces scientific work benefit the community and produce human resources who have competence in the field of Electrical Technology with character; moral; have high competitiveness; able to develop; enhance, and promote science and technology; able to contribute to the application of science and technology; and beneficial to the public interest.



BUDAYA KERJA/ PENGAJARAN ?

Fakultas Teknologi Elektro (FTE) menumbuhkan budaya apresiatif, inovatif dan kolaborasi. Metode pengajaran menerapkan pendekatan Integrative Educative Approach yang tersusun atas tiga pilar, yaitu

- Intellectual Curiosity Exploration (minat intektual, pengetahuan)
- Leadership and Technopreneurship (kepemimpinan, skill organisasi dan bisnis)
- Character development (sikap, mental)

BUDAYA KERJA/ PENGAJARAN ?

Faculty of Electrical Technology (FTE) cultivates an appreciative culture and collaboration. The teaching method applies the Integrative Educative Approach approach consisting of three pillars:

- *Intellectual Curiosity Exploration (minat intektual, pengetahuan)*
- *Leadership and Technopreneurship (kepemimpinan, skill organisasi dan bisnis)*
- *Character development (sikap, mental)*

KOMPETENSI TENAGA AHLI

Sebanyak 85 ilmuwan dan perekayasa menjadi dosen di Fakultas Teknologi Elektro ITS. 11 di antaranya bergelar professor, 51 bergelar doktor, dan 34 dosen bergelar magister. Dosen FakultasTeknologi Elektro juga sangat produktif menghasilkan riset dan publikasi.

Departemen Teknik Elektro ITS, melalui data yang diperbaharui secara real time di Scopus, menempatkan tiga dosennya dalam lima besar dosen ITS dengan publikasi terbanyak dan h-indeks tertinggi Salah satu dosen Teknik Elektro ITS juga pernah dinobatkan menjadi juara pertama dosen berprestasi tingkat nasional. Teknik Elektro juga menjadi departemen yang paling banyak melahirkan doktor di ITS.

Departemen Teknik Komputer ITS memiliki Para dosen mengembangkan penelitian mutakhir untuk menjawab permasalahan

COMPETENCE OF EXPERTS

A total of 85 scientists and engineers become lecturers at the Faculty of Electrical Technology ITS. 11 of them hold professors, 51 hold doctoral degrees, and 34 lecturers holding master degrees. Lecturer of Faculty of Electrical Technology is also very productive to produce research and publication.

Department of Electrical Engineering ITS, through data updated in real time at Scopus, placed three lecturers in the top five lecturers of ITS with the highest publication and h-index highest One lecturer of Electrical Engineering ITS has also been crowned the first winner of national achievement lecturer. Electrical Engineering is also the most doctored department in ITS.

ITS Computer Engineering Department has lecturers developing cutting-edge research to address problems from computer

dari pendekatan komputer. Pada 2017, salah satu dosen Teknik Komputer juga menjadi dosen dengan publikasi ilmiah terbanyak yang terindeks Scopus di ITS dan berada pada lima besar di Indonesia.

Departemen Teknik Biomedik ITS ditunjuk oleh Kementerian Riset, Teknologi, dan Pendidikan Tinggi menjadi pusat keunggulan penelitian biomedik di Indonesia bersama ITB, UGM, dan UI.Beberapa di antaranya adalah guru besar peraih penghargaan dan berpengalaman berkecimpung dalam pemerintahan dan industri. Para dosen juga aktif melakukan penelitian, yang dipusatkan pada mekanisme komputasi, komunikasi dan sistem kontrol pada sistem biologis, dan aplikasinya pada bidang biologi, elektronika dan mekanika

approach. In 2017, one of the lecturers of Computer Engineering is also a lecturer with the most Scopus-indexed scientific publication in ITS and is in the top five in Indonesia.

The Department of Biomedical Engineering of ITS is appointed by the Ministry of Research, Technology and Higher Education to be the center of excellence of biomedical research in Indonesia with ITB, UGM and UI. Some of them are award winning and experienced teachers in government and industry. The lecturers are also actively conducting research, which is centered on computational mechanisms, communication and control systems on biological systems, and their applications in the fields of biology, electronics and mechanics

SOLUSI

Alumni Fakultas Teknologi Elektro banyak berkiprah menyelesaikan persoalan di tanah air. Di antara mereka banyak yang mendudukui jabatan penting sebagai perekayasa profesional, pemimpin industri, politik dan pelayanan publik, akademisi, peneliti, dan birokrasi pendidikan.

Beberapa perusahaan yang dipimpin oleh alumni Fakultas Teknologi Elektro ITS di antaranya adalah PT Semen Baturaja, PT Semen Padang, PT Pertamina, Telkom, Indosat, SAP Indonesia, dan Serambi Ilmu Semesta. Selain tu, di bidang pendidikan, alumni Teknik Elektro ITS, Prof Dr Mohammad Nuh, DEA juga pernah menjabat sebagai Menteri Komunikasi dan Informasi serta Menteri Pendidikan dan Kebudayaan Republik Indonesia.

SOLUTION

Alumni of Faculty of Electrical Technology has much work to solve the problems in the country. Among them many occupy important positions as professional engineers, industry leaders, politics and public services, academics, researchers, and educational bureaucracies.

Some companies led by alumni of Faculty of Electrical Technology ITS include PT Semen Baturaja, PT Semen Padang, PT Pertamina, Telkom, Indosat, SAP Indonesia, and Serambi Ilmu Semesta. In addition to tu, in the field of education, alumnus of Electrical Engineering ITS, Prof. Dr. Mohammad Nuh, DEA also served as Minister of Communication and Information and Minister of Education and Culture of the Republic of Indonesia.

EXIT
MUSHOLA

FASILITAS

a. Laboratorium*

Laboratorium memiliki 3 fungsi utama yaitu, sebagai lab teaching, yaitu penunjang proses pembelajaran (praktikum), sebagai pusat riset bagi mahasiswa, dosen, dan kelompok-kelompok riset, dan sebagai pusat pelayanan kepada masyarakat.

b. Perpustakaan
c. Prasarana Olah Raga dan Seni
d. Sarana ibadah
e. Medical Center ITS
f. Perbankan
g. Kantin
h. Area Parkir
i. Taman
j. Koperasi Departemen Elektro

FACILITY

a. Laboratory

The laboratory has three main functions, namely, as a teaching laboratory, supporting the learning process (practicum), as a research center for students, lecturers, and research groups, and as a service center to the community.

b. Library
c. Sports and Art Infrastructure
d. Place of worship
e. Medical Center ITS
f. Banking
g. Canteen
h. Parking area
i. garden
j. Cooperative Department of Electrical

LABORATORIUM

Laboratorium memiliki 3 fungsi utama yaitu, sebagai lab teaching, yaitu penunjang proses pembelajaran (praktikum), sebagai pusat riset bagi mahasiswa, dosen, dan kelompok-kelompok riset, dan sebagai pusat pelayanan kepada masyarakat. Departemen dibawah Fakultas Teknologi Elektro memiliki masing-masing laboratorium yaitu :

A. Departemen Teknik Elektro Laboratorium

1. Laboratorium Tegangan Tinggi
2. Laboratorium Otomasi dan Informatika Industri
3. Laboratorium Konversi Energi Listrik
4. Laboratorium Simulasi Sistem Tenaga Listrik
5. Laboratorium Teknik Pengaturan
6. Laboratorium Istrumentasi, Pengukuran dan Identifikasi Sistem Tenaga
7. Laboratorium Elektronika Biomedika
8. Laboratorium Elektronika Dasar
9. Laboratorium Antena dan Propagasi
10. Laboratorium Jaringan Telekomunikasi
11. Laboratorium Komunikasi Multimedia
12. Laboratorium Elektronika Industri
13. Laboratorium Sistem dan Sibernetik

LABORATORY

The laboratory has three main functions, namely, as a teaching laboratory, supporting the learning process (practicum), as a research center for students, lecturers, and research groups, and as a service center to the community. Departments under the Faculty of Electrical Technology have their respective laboratories:

A. Department of Electrical Engineering Laboratory

1. *High Voltage Laboratory*
2. *Industrial Automation and Informatics Laboratory*
3. *Electrical Energy Conversion Laboratory*
4. *Electric Power System Simulation Laboratory*
5. *Regulatory Engineering Laboratory*
6. *Laboratory of Istrumentation, Measurement and Identification of Power System*
7. *Biomedical Electronics Laboratory*
8. *h. Basic Electronics Laboratory*
9. *Antenna Laboratory and Propagation*
10. *Telecommunication Network Laboratory*
11. *Multimedia Communication Laboratory*
12. *Industrial Electronics Laboratory*
13. *System and Cybernetics Laboratory*

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Master Airscrew

B. Departemen Teknik Biomedik Laboratorium & Fasilitas Riset

1. Laboratorium Elektronika Biomedika B205:

- o Biomedical Instrumentation
- o Biomedical Signal Processing
- o Rehabilitation Engineering

2. Laboratorium Biocybernetic Engineering AJ204 :

Computation, communication and control processes in biological systems and applications in biological, electronic and mechanical systems.

3. Fasilitas Riset :

1. Full-band EEG measurement system
2. Robust wireless EEG measurement system
3. Human hand prosthetic model
4. Haptic robot control
5. Unmanned vehicle system
6. Intelligent mobile robot
7. Microprocessor training kit
8. Virtual reality technology for physical and mental rehabilitation
9. Human gait learning and prosthetic system
10. Welfare technology

C. Teknik Komputer

a. Telematics Laboratory
b. Digital Signal Processing Laboratory
c. Multimedia Computation Laboratory

B. Department of Biomedical Engineering Laboratory & Research Facility

1. Biomedical Electronics Laboratory B205:

- *o Biomedical Instrumentation*
- *o Biomedical Signal Processing*
- *o Rehabilitation Engineering*

2. Biocybernetic Engineering Laboratory AJ204 :

Computation, communication and control processes in biological systems and applications in biological, electronic and mechanical systems.

3. Research Facility :

1. *Full-band EEG measurement system*
2. *Robust wireless EEG measurement system*
3. *Human hand prosthetic model*
4. *Haptic robot control*
5. *Unmanned vehicle system*
6. *Intelligent mobile robot*
7. *Microprocessor training kit*
8. *Virtual reality technology for physical and mental rehabilitation*
9. *Human gait learning and prosthetic system*
10. *Welfare technology*

C. Computer Engineering

a. Telematics Laboratory
b. Digital Signal Processing Laboratory
c. Multimedia Computation Laboratory

PENCAPAIAN
ACHIEVEMENT

No	Nama Kegiatan dan Waktu Penyelenggaraan	Tingkat (Lokal, Wilayah Nasional, atau Internasional)	Prestasi Yang Dicapai
1	Indonesia Energy Innovation Challenge 2017	Nasional	Juara 2
2	Mate ROV Competition 2017	International	Juara 3
3	10th International Roboboat Competition 2017	International	Juara 4
4	FIRA Robo World Cup & Congress 2017	International	Juara 1
5	KRTI 2017 Divisi VTOL (Vertical Take Off Landing)	Nasional	Juara 1

Keterangan Foto

Mate ROV Competition 2017 2

10th International Roboboat Competition 2017 3

FIRA Robo World Cup & Congress 2017 4

KRTI 2017 Divisi VTOL (Vertical Take Off Landing) 5

2

國立高雄第一科技大學
2017
FIRA RoboWorld Cup & Congress
PPIK
PERHIMPUNAN PELAJAR IND
KAOHSIUNG

4

3

BAYLICA RAK

5

6	The 3rd International Young Inventors Award (IYIA 2016), September 2016, Surabaya Convention Hall oleh IYIA	International	Gold Medal
7	TOTAL CAMPUS 2016, 1 Februauri Oleh TOTAL S.A	International	Juara Kategori Innovate Grant
8	"Make a Difference" (MaD) Forum, 22-24 Januari 2016 di Hongkong Oleh The Hong Kong Computer Society	International	Delegation
9	Winter IT School Program, 25 Januari - 6 Februari 2016 di Rusia oleh Tomsk State University Russia	International	Exchange Student
10	Applied Mathematics in Science and Engineering International Conference (APPEMSE), 26-28 Januari 2016 di Malaysia oleh Malaysia Technical Scientist Association (MALTESAS)	International	Presenter

POWER GENERATION,
OPERATION,
AND CONTROL
Third Edition

PARTNERSHIP

Sebagai salah satu departemen tertua di ITS, Teknik Elektro telah menjalin kerja sama dengan berbagai institusi, baik di dalam maupun luar negeri.

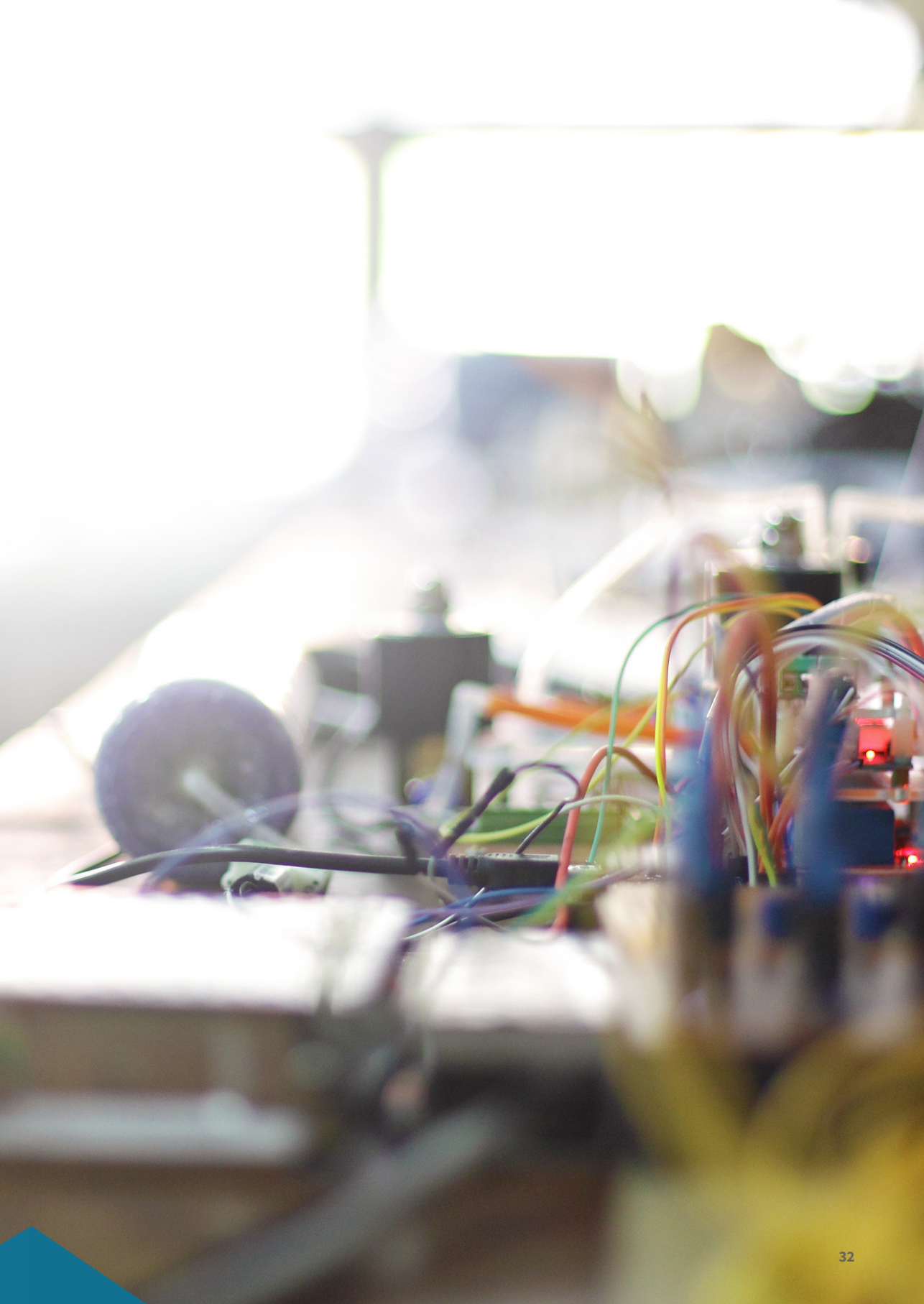
As one of the oldest departments in ITS, Electrical Engineering has established cooperation with various institutions, both at home and abroad.

Instansi Dalam Negeri Yang Menjalin Kerjasama Terkait Dengan Program Studi

Domestic Agencies That Initiate Cooperation Related to Study Program

No.	Nama Instansi
01	Badan Kepegawaian Daerah Pemerintah
02	Provinsi Jawa Timur
03	BKLN, Indonesia
04	Dinas Perhubungan Kota Surabaya
05	PT Hess (Indonesia –Pangkah) Ltd
06	PT JOB Pertamina - Medco E&P Tomori Sulawesi
07	PT JOB Pertamina Talisman Jambi Merang
09	KOMINFO, Indonesia
10	PT PLN, Indonesia
11	PT Hutama Karya
12	PT Kaltim Daya Mandiri
13	PT Krakatau Bandar Samudra

No.	Nama Instansi
14	PT Medco E & P Rimau
15	PT Pembangkitan Jawa Bali
16	PT Pertamina (Persero)
17	PT Semen Indonesia (Persero) Tbk
18	PT. Gresik Power Indonesia
19	PT. Medco E&P Lematang
20	PT. Mulia Sasmita Bhakti - Cabang Surabaya
21	PT. Pelabuhan Indonesia III (Persero)
22	PT. Pembangkitan Jawa - Bali
23	PT. Pupuk Sriwidjaja Palembang
24	PT Saka Indonesia Pangkah Ltd



Instansi Luar Negeri Yang Menjalin Kerjasama Terkait Dengan Program Studi

Overseas Institution In Cooperation Related to Study Program

No.	Nama Instansi
01	Anadolu University
02	ASEA UNINET
03	AUN SEED NET
04	California Polytechnic State University
05	Chulalongkorn University
06	Curtin University of Technology
07	Darmstadt University of Applied Science, Jerman
09	Dong Eui University
10	Ecole Centrale De Lyon
11	Ecole Centrale De Nantes
12	Ecole Internationale des Sciences du Traitement de l'Information (EISTI)
14	Eindhoven University of Technology
15	ERASMUS MUNDUS
16	FONTYS University of Applied Sciences

No.	Nama Instansi
17	Hanzehogeschool Groningen/Hanze Unniversity Groningen, University of Applied Sciences
18	Hiroshima University, Japan
19	Ho Chi Min University of Technology
20	IHE Delft Foundation
21	INP Toulouse
22	Institut National Des Science Apliquees De Rennes
23	King Mongkut's Institute of Technology Ladkrabang
24	Kumamoto University
25	Kyushu University
26	Nagoya University
27	National Cheng Kung University, Taiwan
28	National Taiwan University of Science and Technology
29	NUVOTON Technology Corporation, Taiwan

No.	Nama Instansi
30	Osaka City University
31	Osaka University
32	Queensland University of Technology, Australia
33	Saga University-Faculty of Science and Engineering , Japan
34	Saxion Universities of Applied Sciences
35	Soka University – Japan
36	Suranaree University
37	Tohoku University
38	Tokyo University of Technology
39	Tottori University, Japan
40	Universidade Nacional Timor Lorosa'e (UNTL)
41	Universite de Technologie Compiegne
42	Universiti Malaysia Pahang
43	Universiti Malaysia Perlis

No.	Nama Instansi
44	Universiti Teknikal Malaysia Melaka
45	Universiti Teknologi Petronas (UTP)
46	University de Nantes
47	University of Burgundy
48	University of Malaya
49	Univesite de Toulouse

B

Kontak Kami:

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