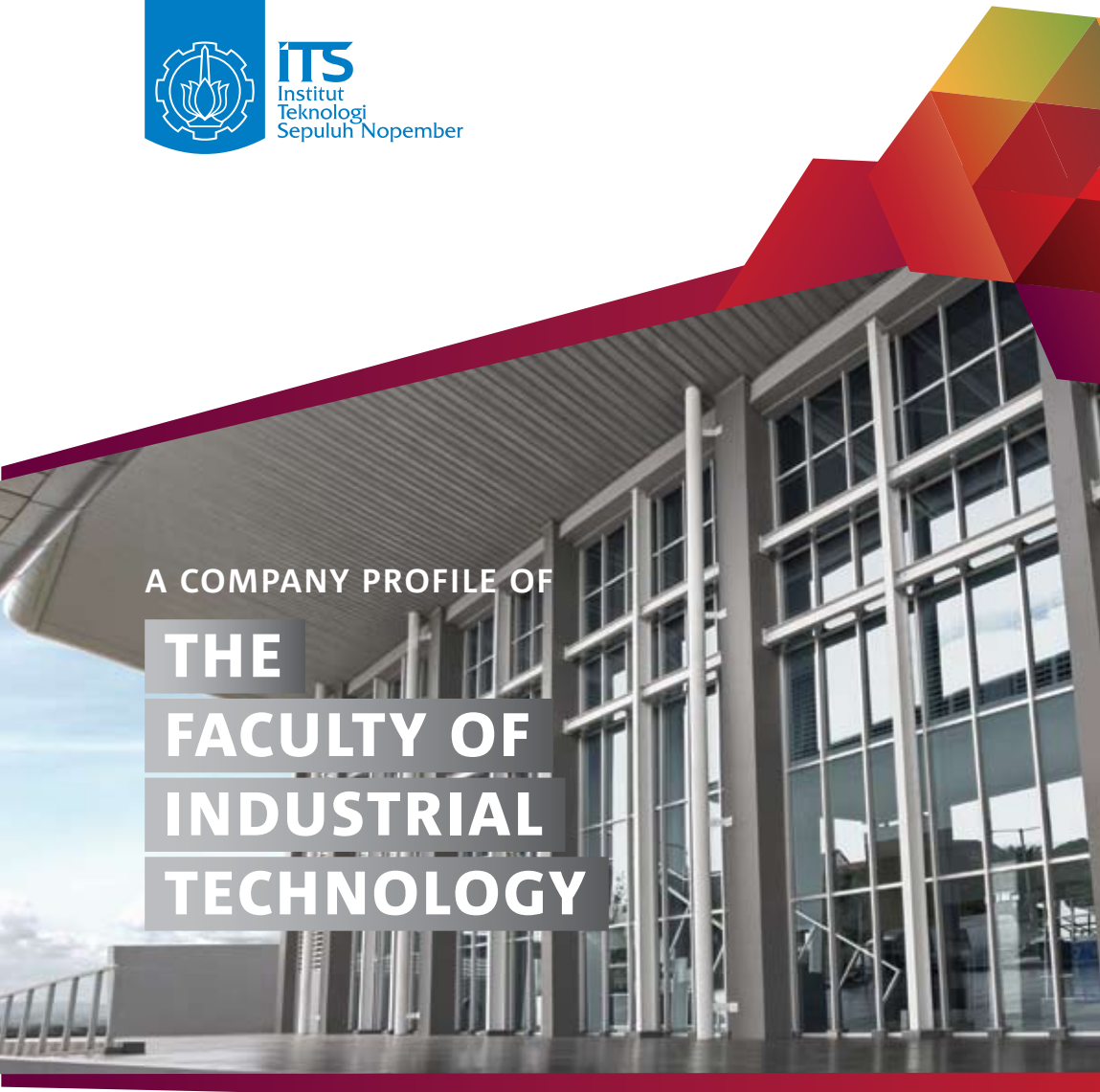
ITS
Institut
Teknologi
Sepuluh Nopember



A COMPANY PROFILE OF

THE FACULTY OF INDUSTRIAL TECHNOLOGY

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BACK COVER

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CONTENT.

PREFACE.

A company profile of the Faculty of Industrial Technology (FTI) – ITS, is aimed to describe about general description of FTI - ITS. It consists of global information about the departments in FTI - ITS. The company profile is expected to provide the information for other parties in order to doing cooperation with FTI - ITS. The cooperation which is going to be implemented includes educational cooperation, research, and community service which will provide benefits for all parties.

Surabaya, 2014
Faculty of industrial Technology
Institut Teknologi Sepuluh Nopember

BOARD OF FACULTY.

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Department of Multimedia & Network Engineering
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Dr. I Ketut Edy purnama, ST, MT
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Ahmad Zaini, S.T., M.T

- HISTORY.

Faculty of Industrial Technology (FTI) – ITS; was established based on the restructuring of the Ministry of Education and Culture of Indonesia through decree no. 0144/12/1983. FTI is supported by adequate human resource and infrastructure which leads this faculty develops into the largest faculty in ITS. FTI - ITS have many departments with their study programs :

Department of Mechanical Engineering
- Doctoral Program
- Master Program
- Bachelor Program
- Diploma Program

Department of Chemical Engineering
- Doctoral Program
- Master Program
- Bachelor Program
- Diploma Program

Department of Industrial Engineering
- Doctoral Program
- Master Program
- Bachelor Program

Department of Bussiness Management
- Bachelor Program

Department of Electrical Engineering
- Doctoral Program
- Master Program
- Bachelor Program
- Diploma Program

Department of Engineering Physic
- Master Program
- Bachelor Program
- Diploma Program

Department of Material & Metallurgical Engineering
- Master Program
- Bachelor Program

Department of Multimedia & Network Engineering
- Bachelor Program

- VISION.

Faculty of Industrial Technology - ITS develops with an international reputation in the development of Science and Industrial Technology.

- MISSION.

In order to coordinate, foster and encourage elements of the faculty in the implementation of education, research and social empowerment with an international quality in order to improve the nation competitiveness by upholding ethnical and academic moral.

DEPARTMENT OF MECHANICAL ENGINEERING.

Mechanical Engineering learns about Engineering Sciences regarding the application of principles of Physics for analysis, design, manufacturing and maintenance of a mechanical system. This study needs an understanding of the main concept of mechanics, kinematics, thermodynamics, materials science and energy. Experts of mechanical engineering called as an engineer (mechanical engineering), who utilizes the understanding of these techniques for designing and analyzing the manufacturing of vehicle, aircraft, industrial plants, equipment and machinery industries and others.

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Vision & Mission

VISION

Become mechanical engineering institutions with an international reputation, which has role as a reference institution of study program mechanical engineering in Indonesia.

MISSION

Organized mechanical engineering program in order to generate graduates who are capable to compete in the global market, carry out researches and publish the research in the field of scientific engineering which qualified in the national regional and international, and apply the research result to solve the problems of industrial and society.

Program Study

DOCTORAL PROGRAM OF MECHANICAL ENGINEERING.

Doctoral program of mechanical engineering is aimed to generate graduates who are able to create new innovations in the fields of mechanical engineering. Doctoral Study Program of mechanical engineering has areas of expertise :

- Energy Engineering
- Engineering and Manufacturing Design

MASTER PROGRAM OF MECHANICAL ENGINEERING.

Master degree program of mechanical engineering is tended to generate graduates who are able to perform a comprehensive analysis of mechanical engineering. Masters Program in mechanical engineering has areas of expertise :

- Manufacturing System
- Mechanical system design
- Energy conversion engineering

BACHELOR PROGRAM OF MECHANICAL ENGINEERING.

Bachelor program of mechanical engineering is intended to generate high quality scholars of mechanical engineering. The fields of this department are :

- Energy conversion
- Manufacture
- Production engineering
- Metallurgy
- Design

DIPLOMA III PROGRAM OF MECHANICAL ENGINEERING.

Diploma III program of mechanical engineering aims to yield experts of mechanical engineering. The expertise fields of diploma III program are :

- Majors in manufactures
- Energy conversion
- Production engine
- Power plant

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Laboratory

In order to support the teaching activities of Department's program, department of Mechanical Engineering - ITS has 16 laboratories and a library.

1. Mechanics and machinery fluid
2. Thermodynamic and applied
3. Burning and fuel
4. A dynamical system and vibration
5. Mechanics solid body
6. Manufacturing system
7. A manufacturing process
8. Machine tools
9. Cast
10. Metallurgy
11. Industrial automatic process
12. Automotive
13. Design and product development
14. Library
15. CAE Laboratory


TEKNIK MESIN

me.its.ac.id

DEPARTMENT OF ELECTRICAL ENGINEERING.

Department of Electrical Engineering ITS was established in 1960 with originally named " Faculty of Electrical Engineering". In 1984, the faculty was changed to "Department of Electrical Engineering". The deprtment has accredited as "A" (excellent) by the national of Accredited Board of Indonesia. ITS, Institut Teknologi Sepuluh Nopember, has also received accredited "A" referring to the highest rangk of university belongs to Indonesian Government.

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Vision & Mission

VISION

The vision of Department of Electrical Engineering ITS is to become an outstanding, competitive, and world class institution in developing education, research, and implementation of science & technology in the area of :

- Power System Engineering
- Telecommunication Multimedia
- Electronics
- Control System Engineering
- Computer Engineering and Telematics

MISSION

Department of Electrical Engineering has a strong commitment in providing research and innovation, also providing human resources with highly competency in electrical engineering and :

- Having good personality
- High Competitiveness
- Professional
- Able to develop and improve the science technology
- High contribution in implementation of technology

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Program Study

DOCTORAL PROGRAM OF ELECTRICAL ENGINEERING.

Electrical engineering doctoral programme aims to generate Doctoral graduates who are able to paint a new innovation in the fields of electrical engineering. Doctoral study Program electrical engineering have areas of expertise :

- Electric Drive
- Biomedical Engineering
- Power System
- Control Engineering
- Intelligent System
- Computer Engineering
- Multimedia Communication
- Game Technology
- Applied Electronics
- Telematics

MASTER PROGRAM OF ELECTRICAL ENGINEERING.

Electrical engineering master's degree Program aims to generate graduates who are able to perform a comprehensive analysis of electrical engineering. Expertise field of electrical engineering, masters program are :

- Power System Engineering
- Control System Engineering
- Multimedia Telecomunication
- Multimedia Smart Network
- Electronics
- Telematics / Chief Information Officer (CIO)

BACHELOR PROGRAM OF ELECTRICAL ENGINEERING.

Bachelor program of electrical engineering is aimed to generate high quality scholar. The expertise field of Electrical Engineering are :

- Power System Engineering
- Electronics
- Multimedia Telecomunication
- Control System Engineering

DIPLOMA III PROGRAM OF ELECTRICAL ENGINEERING.

This program is aimed to score skilful experts as well as responsible in order to fulfil the common needs of human resources especially for the field of computer engineering controls and electronics.

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Laboratory

In order to support the teaching activities of Undergraduate and Postgraduate programs, Electrical Engineering - ITS has 16 laboratories and a Library.

ENGINEERING POWER SYSTEM
1. Simulation of power system
2. Identification of Measurement power system instrumentation
3. High voltage
4. Electrical energy conversion

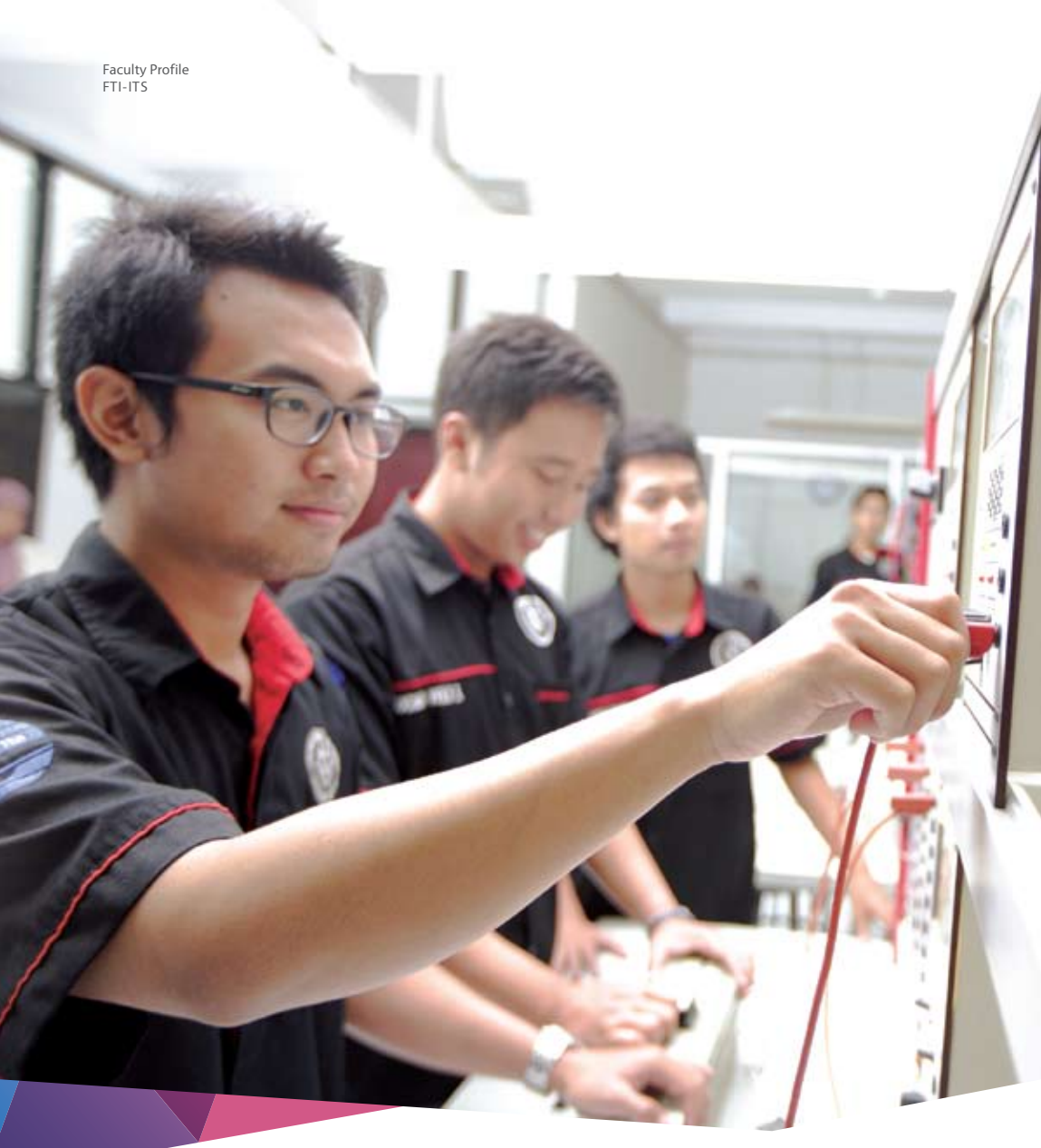
ENGINEERING SYSTEM SETTINGS
1. Techniques of system
2. Automation and Informatics Industry
3. Setting engineering

MULTIMEDIA TELECOMMUNICATIONS
1. Telecommunications network
2. Multimedia communication
3. Antennas and Propagation

COMPUTER ENGINEERING AND TELEMATICS
1. Telematics
2. Digital Informatics
3. Digital Signal Processing

ELECTRONICS
1. Industrial Electronics
2. Biomedical Electronics
3. Basic Electronics

LIBRARY



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DEPARTMENT OF CHEMICAL ENGINERING.

Department of chemical engineering studies about how to process a raw material either become high quality goods or half-finished goods. The sciences of chemical techniques are applied especially in design and maintenance of chemistry process in a small or even large scale such as in a factory. Chemical engineers are responsible about design and maintenance of a chemical process on a factory scale is known as 'process engineer.' In addition, engineer of modern chemical engineering doing researches that are aimed to find new materials and techniques which relate with other interdisciplinary, such as nanotechnology, a fuel cell, and techniques of biomedical.

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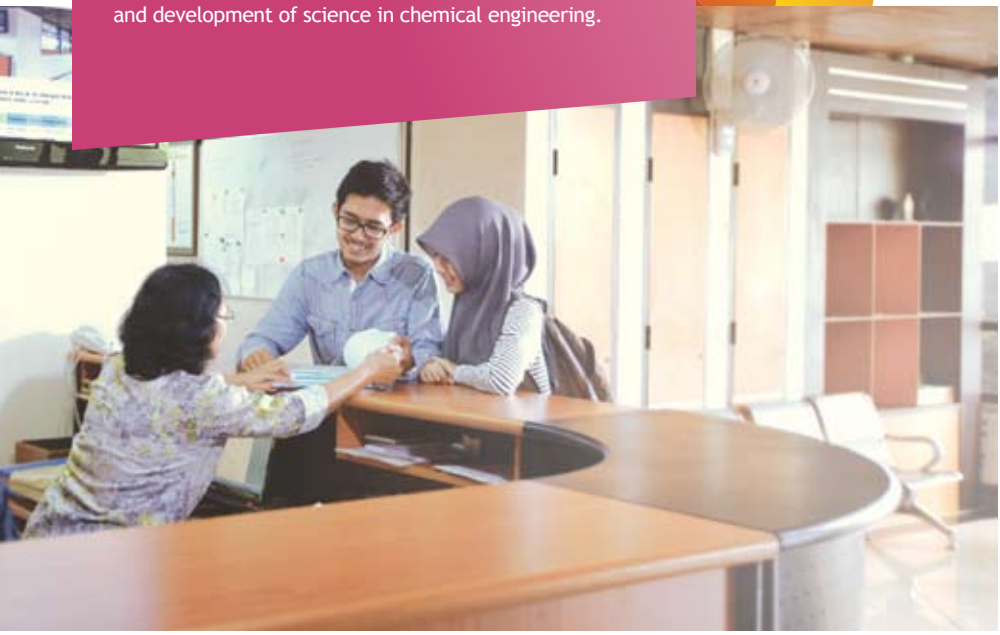
Vision & Mission

VISION

Become an educational institution with an international reputation, which can be a reference institution and as a pre-eminent Centre (centre of excellence) in the transfer and development of science in chemical engineering.



MISSION

Organizing high-quality education and research of chemical engineering to generate graduates who are competent and able to compete in the national market, regional, and international which actively contributing in the development of science, especially in the fields of energy, industry and environment.

Program Study

DOCTORAL PROGRAMS OF CHEMICAL ENGINEERING.

This program has 40 credits for the total load of study as additional credits after finishing master degree program. Generally, the burden of studies can be completed during 6 semesters. The research activities are embodied in an official research report (dissertation), a mandatory international scientific article or two national scientific article which become the mandatory requirement before a scholar is declared eligible to take a dissertation test. After pass the dissertation test; the scholar are allowed to join graduation of doctoral program.

MASTER PROGRAM IN CHEMICAL ENGINEERING.

Master degree Program has a 2-year study period. Students are required to take master's degree Program courses and to write a research report (thesis) with 36 credits in total. The Program focusing to the knowledge of Transport Phenomena, reaction and kinetics, heat exchanger, Thermal Systems Analysis, Catalyse, as well as selected technology. Someone with Bachelor degree can continue his/her study to Master degree.

BACHELOR PROGRAM OF CHEMICAL ENGINEERING.

Graduates of high school who pass the selection system can be accepted as scholars in the chemical engineering with 144 credits. Subjects included 14 college credits, 67 general basis, environmental, and 63 college credits. Final project, research work and the practice became graduation requirement students from the Bachelor Program.

DIPLOMA III PROGRAM OF CHEMICAL ENGINEERING.

Diploma III program aims to generate field manager who is well acquainted with the details of the technology as well as basic tasks in the scope of work and able to operate and care for the hardware industry.

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Laboratory

To support teaching activities of Scholar and Postgraduate Courses, chemical engineering ITS has 17 laboratories, a library completed with more than 6000 books, 18 international journals and free internet access. Department of chemical engineering ITS has two laboratories named research laboratories (research) laboratory and teaching (Ministry).

RESEARCH LAB

1. The displacement mass and heat
2. Designing and controlling process
3. Chemical process
4. Waste processing industry
5. Biomass and energy conversion
6. Technique of a chemical reaction
7. Corrosion and an electrochemical
8. Thermodynamics
9. Biochemistry Technology
10. Fluid mechanics and mixing
11. Material technology

TEACHING LABORATORY

1. Chemical analysis
2. Organic chemistry
3. Chemical physics
4. Microbiology
5. Chemical Technique
6. Computation and Simulation

LIBRARY

chem-eng.its.ac.id

DEPARTMENT OF ENGINEERING PHYSICS.

Engineering Physics studies the fundamental sciences (physics and mathematics) with coverage of Science. There are 5 areas on Engineering Physics, namely Instrumentation engineering, Energy Engineering and conditioning of the environment, the field of Photonics, Acoustics, Building Physics and Material Engineering. This study is going to give you a solid understanding in science and engineering to solve problems and to produce innovative work in technology at this time or in the future. The various high sciences and absorptions in the work field make this major worth to be chosen.

Vision & Mission

VISION

As a major with an international reputation to develop science and technology based on Physical Engineering.

MISSION

- Conducting quality education in the field of Sciences
- Engineering Physics to generate graduates who are able to compete in the global market.
- Conducts research in the field of Engineering Physics that is beneficial for the benefit of mankind.
- Held a public service to support the development of technology based on Engineering Physics.
- Develop networks to improve the quality of Engineering Physics.
- Managing Tridharma activities on each major with economical and accountability principle.

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Program Study

MASTER PROGRAM OF ENGINEERING PHYSICS.
Master program in Engineering Physics aims to generate Technical Magister who are able to analyze comprehensively in Physics. The Engineering Physics programs are :

- Industrial and Instrument Engineering.
- Energy Conservation and Renewable Energy
- Clinical Engineering

BACHELOR PROGRAM OF ENGINEERING PHYSICS.
Bachelor program of Engineering Physics aims to generate expert in Engineering Physics and its expertise areas are :

- Instrumentation Engineering
- Acoustic and building physics
- Photonic Engineering
- Materials engineering
- Energy and environmental condition engineering

DIPLOMA III PROGRAM OF ENGINEERING PHYSICS.
This program aims to generate scholars associate in Engineering Physics. The expertises of this program are :

- Metrology and Instrumentation

Laboratory

In order to support scholars' activities of Undergraduate and Postgraduate programs. Engineering Physics - ITS has 8 laboratories and a library.

1. Instrumentation and control Laboratory
2. Laboratory of acoustics and physical building
3. Laboratory of materials
4. Laboratory of energy and conditioning of the environment
5. Laboratory of Photonics
6. Physical Measurement laboratory
7. Simulation and computation laboratory
8. Instrumentation Workshop Laboratory
9. Library

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DEPARTMENT OF INDUSTRIAL ENGINEERING.

Industrial engineering is a discipline of environmental science and management science that studies about the design, installation, and repair as well as the development of an integral system of humans, materials, equipment, energy, and information in order to achieve an effective and efficient operation procedures/work systems. Hence this study can be classified as a barrier between environmental science and social sciences.

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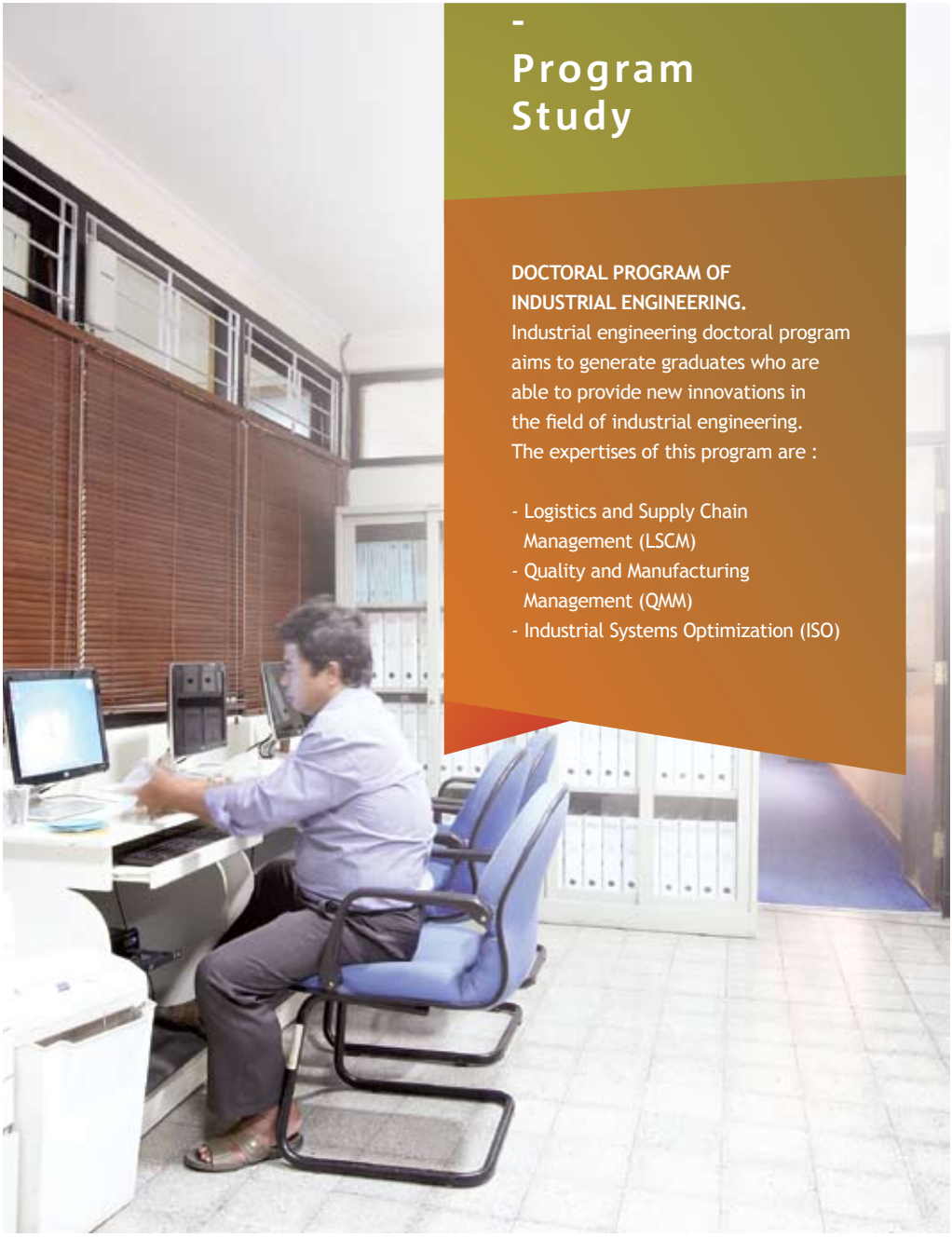
Vision & Mission

VISION

Preparing and generating human resources with professional qualifications in the metrology and instrumentation to fulfil public and industrial necessities.

MISSION

Implementing educational expertise areas of Metrology and Instrumentation based on Applied Physics and generating professional experts in the field of metrology and industrial Instrumentation.



- Program Study

DOCTORAL PROGRAM OF INDUSTRIAL ENGINEERING.

Industrial engineering doctoral program aims to generate graduates who are able to provide new innovations in the field of industrial engineering. The expertises of this program are :

- Logistics and Supply Chain Management (LSCM)
- Quality and Manufacturing Management (QMM)
- Industrial Systems Optimization (ISO)

MASTER PROGRAM OF INDUSTRIAL ENGINEERING.

Master degree Program aims to generate graduates who are able to compose a comprehensive analysis of the field of industrial engineering. Masters Program in engineering physics expertise areas are :

- Logistics and Supply Chain Management (LSCM)
- Quality and Manufacturing Management (QMM)
- Industrial Systems Optimization (ISO)
- Industrial Ergonomic and Safety (IES)
- Strategic Performance Management (SPM)

BACHELOR PROGRAM OF INDUSTRIAL ENGINEERING.

Industrial engineering aims to develop scholar to have a good capacity in designing, installing and repairing a wide and complex industrial system, and also the ability to increase the efficiency, effectiveness, and productivity of industrial systems. In order to fulfil this competence necessary, students who have good competencies in the field of engineering science and social science are needed.

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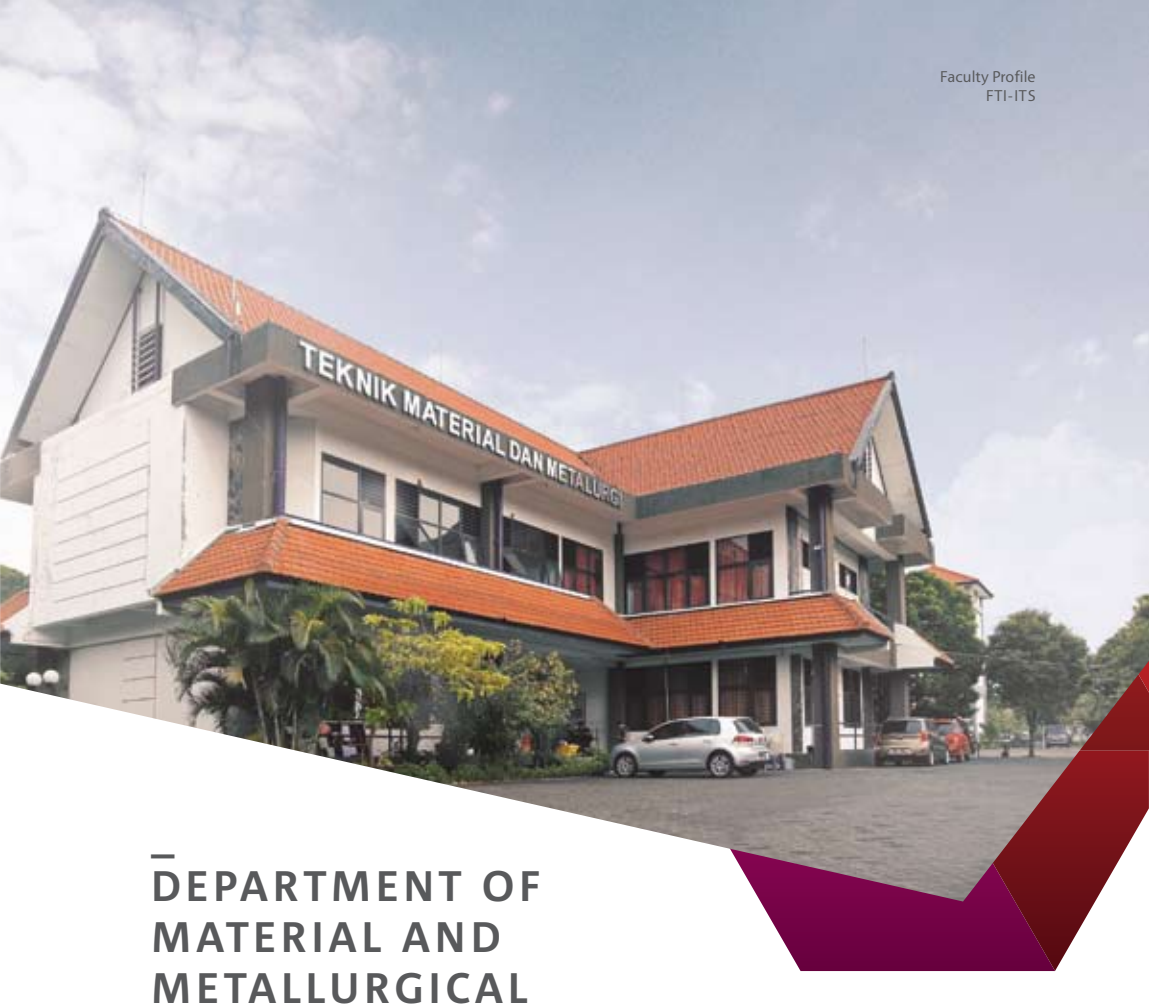
Laboratory

In order to support scholar's activities of Undergraduate and Postgraduate programs. Industrial Engineering - ITS has 5 laboratories and a library.

1. Logistics & Supply Chain Management Laboratory
2. Industrial Computing and Optimization Laboratory
3. Laboratory of Ergonomics and Work System Design
4. Laboratory of System Development and Industrial Management
5. Manufacturing System Laboratory
6. Library

ie.its.ac.id



DEPARTMENT OF MATERIAL AND METALLURGICAL ENGINEERING.

Material and metallurgical engineering is a study in the field of environmental science, which discusses the nature of the material and the relationship between the structure of materials and properties which also learns about the various types of materials (metals, plastics, ceramics, composites) for certain applications and environmental science which discusses about the process of mineral processing (including the processing of coal), the process of extraction of metals and the manufacture of alloys, metal mechanical properties which relate with metal reinforcement process structure, the phenomena of failure and degradation of metals.

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Vision & Mission

VISION

Become a well institution which have an international reputation and capable in supporting national development continuously.

MISSION

- Implementing educational programs and research activities in the field of industrial engineering that have international reputable.
- Providing services of the industrial necessaries and the community to support sustainable national development.
- Built a co-operation network for developing educational and research activities to empower human resources and all resources.
- Providing research and development in the fields of industrial engineering and contributing for the advancement of science and technology.

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Program Study

MASTER PROGRAM OF MATERIAL AND METALLURGICAL ENGINEERING.
Master Program in Material and Metallurgical Engineering aims to generate graduates who are able to present a comprehensive analysis of the fields of Metallurgy and material engineering. Masters Program in materials science and Metallurgy have areas of expertise below :

- Material and metallurgical enginering

BACHELOR PROGRAM OF MATERIAL AND METALLURGICAL ENGINEERING.

This program aims to generate expert graduates who are competence in Material And Metallurgicall Engineering.
The expertise area of Material and Metallurgical engineering are :

- Manufactures of Metallurgical Engineering
- Corrosion engineering and failure analysis
- Innovative material engineering

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Laboratory

In order to support scholars' activities of Undergraduate and Postgraduate programs. Metallurgical Engineering-ITS has 7 laboratories and a library.

1. Metallurgical Laboratory
2. Manufacturing Laboratory
3. Corrosion and Material Failure Laboratory
4. Laboratory of Mineral processing technology and materials
5. Laboratory of Material Innovation
6. Chemical Material Laboratory
7. Laboratory of Physical material
8. Library

material.its.ac.id

DEPARTMENT OF BUSINESS MANAGEMENT.

Business Management prepares students to have career in the fields of business and management. The program provides fundamental skills and knowledge of how to operate a business in complex and competitive environments. In addition, this program also emphasizes the importance of developing soft-skills integrated in the core management disciplines, including teamwork, analytical thinking, creativity and innovation of presentations and report writing skills.

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Vision & Mission

VISION

Become one of the greatest business and management educational institution in Southeast Asia through the development of human resources based on entrepreneurship.

MISSION

- Preparing human resources with the skills and entrepreneurial spirited through a comprehensive education program by integrating business and management competence.
- Contributing the development of business applications through research and teaching quality and sustainable.

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Program Study

BACHELOR PROGRAM OF BUSINESS MANAGEMENT.

Bachelor Program in Business Management prepares students to have career in the fields of business and management. The program provides fundamental skills and knowledge of how to operate a business in complex and competitive environments. In addition, this program also emphasizes the importance of developing soft-skills integrated in the core management disciplines, including teamwork, analytical thinking, creativity and innovation of presentations and report writing skills.

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Laboratory

To support teaching activities of Scholar and Postgraduate Courses, Business Management - ITS has 5 laboratories and a library (While supported by the Laboratory of Industrial Engineering)

1. Logistics & Supply Chain Management Laboratory
2. Industrial Computing and Optimization Laboratory
3. Laboratory of Ergonomics and Work System Design
4. Laboratory of System Development and Industrial Management
5. Manufacturing System Laboratory
6. Library

DEPARTMENT OF MULTIMEDIA AND NETWORK ENGINEERING.

This study is a part of the clump of electrical engineering which has the biggest development. At first, this clump focuses on electrical system completed with the range material of AC and DC, electric motor, characteristic motor, generator, transformer, distribution system, and telegraph wireless system. Recently, after the invention of vacuum tube, Electrical Engineering adds more communication material to complete the graduates' competences for broadcasting industry, radio communication, and telephony industry. Furthermore, the invention of transistor which is followed by the development of Intergrated Circuit (IC), and also the necessity of electronic equipment in the war, such as radar, microwave, navigation system, and control system; electrical engineering offers all materials in the field of electrical. By the needs of computation and the invention of the computer; thus, the electrical engineering adds computerization materials.

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Vision & Mission

VISION

The vision of Bachelor degree program in Multimedia and Network Engineering, Institute Sepuluh November (PSS TMJ-ITS) is going to be an intitution which generate competent graduates in the field of printers multimedia, intelligent systems and networks, becoming the center of research and development in science and technology (IPTEK) which is known in national and international.

MISSION

Preparing the graduates who are competences in multimedia, networks and intelligent systems that uphold moral, ethics, and honesty in society, as well as having a high competitiveness, dignified and law-abiding. Advancing the science, technology and the Arts (IPTEKS) in multimedia, intelligent systems and networks in order to prosper in society and enhance the dignity of Indonesian in the international level.

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Program Study

BACHELOR PROGRAM OF MULTIMEDIA AND NETWORK ENGINEERING.
Multimedia and Network Engineering is one of the efforts in accelerating the mastery and the potential used of multimedia technology and networking. Some of the benefits which are gained from the mastery of Multimedia and network engineering are :

- Multimedia and networking the nation to unite and empower people
- As the National Information Infrastructure.

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Laboratory

In order to support scholars' activities of Undergraduate program. Multimedia and network engineering has 4 laboratories.

1. Multimedia Networks Laboratory
2. Telematics Laboratory
3. Digital Informatics Laboratory
4. Digital Signal Processing Laboratory, Humanoid Robots, Industrial Robots, Mobile Robots, Vision, Motion Capture.

telematics.its.ac.id

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BACK COVER

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