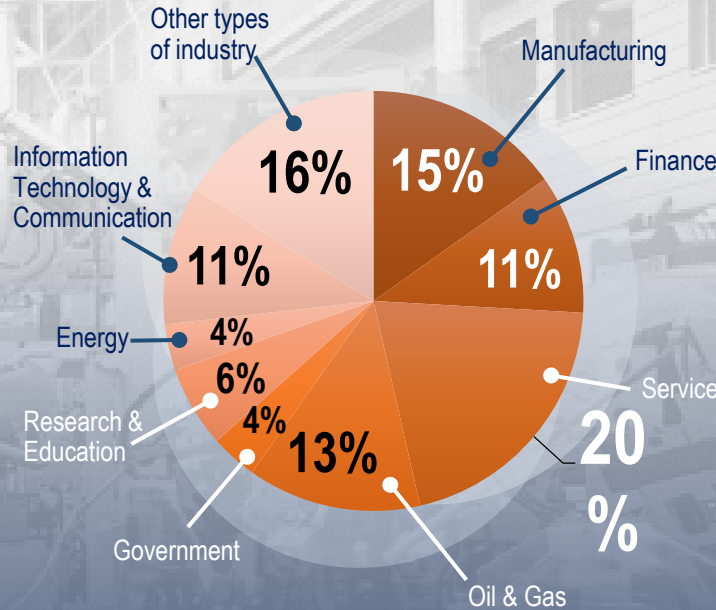


# Career in IE

- Production Engineer
- Quality Engineer
- Safety Engineer
- Business Development & Analyst
- Data Scientist
- Organization & Human Capital Specialist
- Project Manager
- Corporate Planning Specialist
- Consultant
- Marketing System Specialist
- Logistics & Procurement Specialist
- User Experience & Interface Specialist
- Human Factors & Ergonomics Specialist
- Product Developer
- Etc.

## Where IE graduates work? (survey 2017)



# INDUSTRIAL ENGINEERING

Faculty of Industrial Technology (FTI)  
Institut Teknologi Bandung

## Quick facts

IE ITB is the 1<sup>st</sup> IE Program in Indonesia (starting 1971)

IE ITB is the 1<sup>st</sup> international accredited IE Program in Indonesia

IE ITB recruits ±100 students every year

IE is among top 5 most favorite programs in ITB

The need for IE graduates in industry increase 10% till 2026 (US Survey)

IE combines technical and management skills



### Contact us:

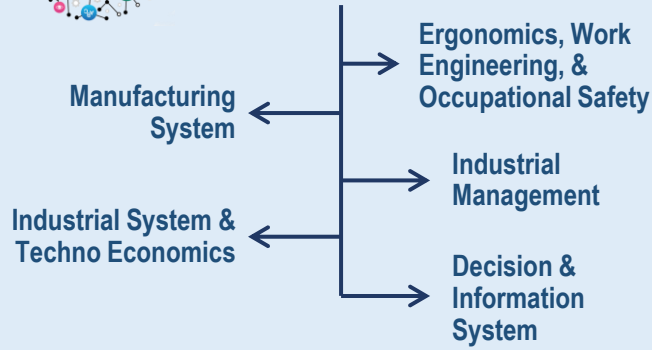
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# Research group



# Body of knowledge



## program educational objectives

Graduates should be competent to work in various industrial sectors by applying various industrial engineering techniques and knowledge

Graduates should demonstrate abilities to play important roles at the operational or managerial level at in various organizations

Graduates should be prepared to pursue advanced degrees in professional or academic oriented education

## student outcomes

an ability to apply knowledge of mathematics, science, and engineering to industrial engineering area

an ability to design and conduct experiments, as well as to analyze and interpret data

an ability to design a system, component, or process which consists of people, materials, equipment, information, and energy to meet desired needs within realistic constraints

an ability to function on multidisciplinary or cross-cultural team

an ability to identify, formulate, and solve industrial engineering problems

an understanding of professional and ethical responsibility

an ability to communicate effectively.

the broad education necessary to understand the impact of industrial engineering solutions in a global, economic, environmental, and societal context

a recognition of the need for, and an ability to engage in life-long learning

a knowledge of contemporary issues relevant to industrial engineering

an ability to use the techniques, skills, and modern engineering tools necessary for industrial engineering practice

## core competencies

Design a work system with an optimum human-system interaction

Design an integrated information system

Design an organization and enterprise management system for various industrial sectors

Design a production system (conventional, intelligent, & sustainable)

Design a logistic system and supply chain

## 1<sup>st</sup> Year

# Curriculum

- Mathematics IA
- Elementary Physics IA
- Basic Chemistry IA
- Intro to Engineering & Design I
- Scientific Writing
- Sports
- Mathematics IIA
- Elementary Physics IIA
- Basic Chemistry IIA
- Intro to Engineering & Design II
- English
- Engineering Drawing
- Intro to Information Tech. B

## 2<sup>nd</sup> Year

- Intro to Industrial Engineering
- Probabilistic Theory
- Intro to Economics
- Pancasila & Civic Education
- Database System
- Engineering Materials
- Engineering Mechanics
- Matrices & Vector Spaces
- Industrial Statistics
- Industrial Electronics
- Operational Research I
- Ergonomics
- Manufacturing Process
- Integrated System Design Practices I
- Calculus III
- Cost Analysis

## 3<sup>rd</sup> Year

- Engineering Economics
- Operational Research II
- System Modelling
- Production Planning & Control
- Quality Assurance & Control
- Work System Engineering
- Production Automation
- Integrated System Design Practices II
- Occupational Health & Safety
- Production System
- Organization and Industrial Management
- Computer Simulation
- Information System Analysis & Design
- Religion & Ethics
- Industrial Psychology
- Integrated System Design Practices III

## 4<sup>th</sup> Year

- Interdisciplinary Engineering Design Project
- Internship & Industrial Engineering Seminar
- Facility Layout Design
- Enterprise System
- Integrated System Design Practices IV
- Final Project I
- Product Development
- Supply Chain System
- Final Project II
- Electives