

Master of Industrial Engineering

Introduction

The graduates of the Master Program of Industrial Engineering will possess skill sets related to human capital, machines, methods, finances, materials, information technology, and environment. With those, the graduates can manage all forms of organizational resources to achieve organizational goals efficiently.

Besides, the graduates should also have the capability to provide companies with constructive mindsets, adding values to companies, and increasing the organization's competitiveness. With those skill sets, the graduates are expected to contribute to the areas of organizational management and others related to logistic and supply management. Those parts of organizations are well known to be the backbone of any modern organization to compete globally.

BINUS UNIVERSITY is the leading educational institution not only in Indonesia but in the world, ranked 7th among all universities in Indonesia, according to QS World University Ranking. Industrial Engineering is a part of the university graduate programs.

The graduate education program in industrial engineering is designed to meet the industrial needs to become the leaders in logistics, supply chain, and quality management industries. BINUS Graduate Program provides a curriculum that emphasizes subjects mixing engineering and information technology to facilitate the development of analytic and strategic thinking.

The graduates of the Industrial Engineering Program will have the competency to become a leader in industrial management and supply chain engineering. Besides, the graduates may also play significant roles as consultants for solving issues in any organization, including performing assessment and evaluation to the effectiveness and efficiency of industrial systems.

Vision

The most prestigious and dynamic Industrial Engineering School in Indonesia by producing globally competitive graduates.

Mission

The mission of Master of Industrial Engineering are to:

1. Produce the graduates who have comprehensive knowledge as global leader in industrial engineering field and capable to apply the principles of science engineering, information and communication technology (ICT) to understand, communicate, and synergize the team work in solving the industrial within their profession based on national and international curriculum standard;
2. Produce the graduates who involved in research, communication, leadership and sustainability with multidiscipline approach with the highest standard of profession and ethical practice in the area of industrial engineering to increase the quality life of society in national and international;
3. Produces the graduates who have advanced industrial engineering skills, information communication and technology, and entrepreneurship to contribute to the field of engineering, economy, and environment globally.

Program Objective

The objectives of the program are:

1. To provide students with industrial engineering best practices in order to attain the global competitiveness as Supply Chain and Industrial Management Leaders;
2. To provide students with advanced knowledge in Industrial Engineering for strategic advantage;
3. To provide students with information technology skills in industrial engineering to leverage the knowledge and technology.

Student Outcomes

After completing the study, graduates are:

1. Able to solve the problems of engineering and technology and design integrated systems by utilizing other scientific fields (if necessary) and taking into account economic, health and public safety, cultural, social and environmental factors;
2. Able to develop knowledge in design, operation, and improvement of integrated systems to give an original contribution that is tested through research independently;
3. Able to formulate new ideas (new research question) from the results of research to develop technology design, operation, and integrated improvement systems;
4. Able to adapt to the changes of science or technology occurred in the implementation process and substance of research of design, operation, and integrated systems improvement;
5. Able to propose alternative solutions to solve the problems of the service industry through research in design, operation, and integrated systems improvement;
6. Able to design innovative industrial systems and proven by integrated information technology through multi / interdisciplinary approach;
7. Able to propose alternative solutions to resolve the problems of supply chain with industrial engineering science approach;
8. Able to design systems in the industry supply chain integrated with information technology through multi / interdisciplinary approach.

Prospective Career of the graduates

The graduates of Master Program of Industrial Engineering have the opportunity to fill the positions at prestigious firms for various roles, such as the Industrial Engineering Function Division Top Management, Supply Chain Engineer, Engineering Consultant, Project Manager, Quality Engineer, Manufacturing Engineer, Production Engineer, Human Resources Management, Lecturer, and Researcher.

Curriculum

The Master Program of Industrial Engineering is designed to comply with national and international curriculum standards related to Industrial Engineering. The curriculum emphasizes on courses that provide students with the hard and soft skills required to perform responsibilities in management, leadership, and engineering of the modern era of Industry 4.0.

Course Structure

SEMESTER 1

1st Period

Course		SCU
STAT8006	Statistical Analysis & Research Methodology	4
ISYE8022	Engineering Optimization	4
Total SCU		8

2nd Period

Course		SCU
ISYE8014	Quality Assurance & Total Quality Management	4
ISYE8015	Selected Topic in Industrial Engineering	4
Total SCU		8

SEMESTER 2

1st Period

Course		SCU
MGMT8045	Operation Management	4
Streaming : Industrial Management		
ISYE8016	Industrial System Design	4
Streaming : Supply Chain Engineering		
ISYE8017	Supply Chain and Logistics	4
Total SCU		8

2nd Period

Course		SCU
ISYE8018	Human-Integrated System & Occupational Safety and Health Administration	4
RSCH8088	Pre Thesis	0
Streaming : Industrial Management		
ISYE8019	Service Engineering	4
Streaming : Supply Chain Engineering		
ISYE8020	Supply Chain Modeling	4
Total SCU		8

SEMESTER 3

1st Period

Course		SCU
ISYE8021	System Simulation and Modeling	4
Total SCU		4

2nd Period

Course		SCU
RSCH8011	Thesis	6
Total SCU		6
Cumulative SCU		42