Master of Industrial Engineering

Introduction

The graduate program in Master of Industrial Engineering has the ability to contribute significantly in bridging the organizational goals through an optimal operational performance, by involving all the elements of human, machines, methods, money, materials, information technology and environment. They are expected to be able to bring a constructive breakthroughs and value added to the competitiveness of the organization, through analysis, design, innovation, implementation and continuous improvement of the system and operational as well as to increase the organization performance. Practitioners in Industrial Engineering are expected to be able to lead the industrial management and make the logistic and supply chain divisions as one of the major forces that bring the company to be a winner in the world business competition.

As one of the leading IT-based educational institution that has been experienced, Binus University Graduate Program dedicates the graduate education programs in industrial engineering 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 the lectures in information technology field to offset the formation of strategic thinking and analytical patterns that equip the students with a range of competencies in industrial engineering and managerial fields to become future leaders.

The graduates of Industrial Engineering Program will have competency as a leader in supply chain engineering and industrial management which able to control the function of man, material, machine, money, method/system and information technology in order to reach the vision and mission of companies. In addition, he/she able to act as industrial engineering consultant for organization in solving the problems, including the assessment and evaluation to effectiveness and efficiency of the system in industry.

Vision

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

Mission

1. To 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. To 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. To 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

1. To provide students with industrial engineering best practices in order to attain the global competitivenessas 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 Outcome

1. Able to solve the problems of engineering and technology and designing integrated systems utilizing other scientific fields (if necessary) noticed to economic factors, health and public safety, cultural, social and environmental.
2. Eble to expand of knowledge in design, operation, and improvement of integrated systems to give original contribution and tested through research independently.
3. Able to formulate new ideas (new research question) the results of research to develop technology design , operation , and integrated improvement systems
4. Able to adapt the changes of science or technology occurred in the implementation process and substance of research of design, operation , and integrated systems improvement.
5. Mastering the theory of engineering science, engineering design, the latest methods and techniques required for the analysis and design of integrated systems.
6. Mastering the theory of system and current mathematical optimization aplication
7. Mastering the interdisciplinary approach contextual and up to date associated with the integrated system design
8. Able to propose alternative solutions to solve the problems the service industry through research in design, operation, and integrated systems improvement.
9. Able to design innovative industrial systems and proven by integrated information technology through multi / interdisciplinary approach
10. Able to propose alternative solutions to resolve the problems of supply chain with industrial engineering science approach.
11. Able to design systems in the industry supply chain are integrated with information technology through multi / interdisciplinary approach

Prospective Career of the graduates

Master of Industrial Engineering graduates have the opportunity to fill the positions at prestigious firms 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.

Course Structure

SEMESTER 1

Periode 1

Course Name	SCU
STAT8001 – Statistical Analysis & Research Methodology	3
ISYE8001 – Engineering Optimization	3

Periode 2

Course Name	SCU
ISYE8002 – Quality Assurance & TQM	3
Stream: Industrial Management	
ISYE8003 – Risk and Industrial Management	3
Stream: Supply Chain Engineering	
ISYE8004 – Global Supply Chain	3

SEMESTER 2

Periode 1

Course Name	SCU
MGMT8005 – Operation Management	3
ISYE8006 – Human-Integrated System	3
ISYE8007 – Human Performance Technology	3

Periode 2

Course Name	SCU
RSCH8010 – Thesis Proposal	0
Stream: Industrial Management	
ISYE8008 – Service Engineering	3
ISYE8009 – Industrial System Design	3
Stream: Supply Chain Engineering	
ISYE8010 – Logistics	3
ISYE8011 – Supply Chain Modelling	3

SEMESTER 3

Periode 1

Course Name	SCU
ISYE8012 – System Simulation And Modeling	3
ISYE8013 – Occupational Safety & Health Management	3
MGMT8006 – Human Capital Management	3

Periode 2

Course Name	SCU
RSCH8011 – Thesis	6