



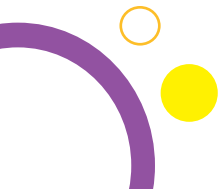
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# ➤ 2021 CURRICULUM

Undergraduate Program in Industrial Engineering,  
Faculty of Industrial Technology,  
Universitas Islam Indonesia

Curriculum of 2021 is designed by referring to the Outcome-Based Education (OBE) and the program of Independent Learning – Independent Campus (MBKM), to nurture the graduates of Industrial Engineering with noble characters, grow as problem solver and innovative.

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# GRADUATE PROFILES

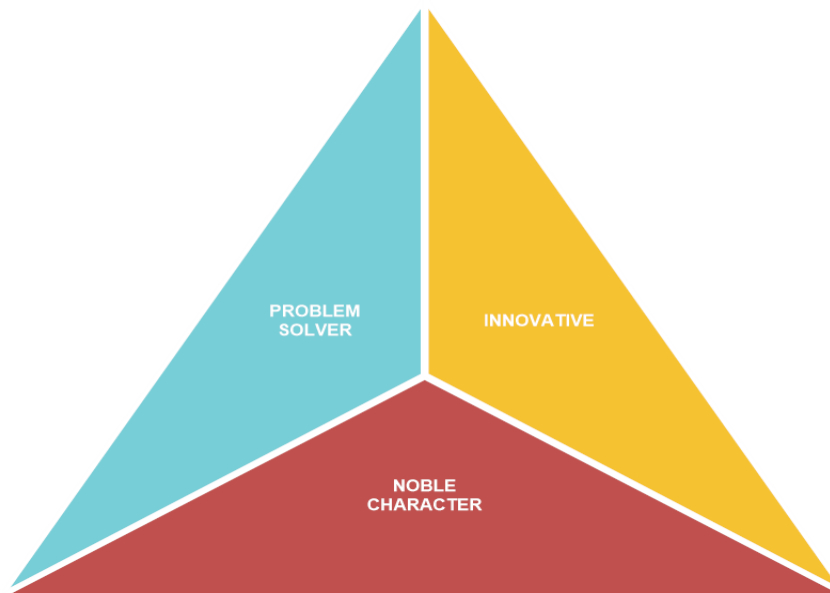
NOBEL CHARACTERS, PROBLEM SOLVER, INNOVATIVE



## Broad Professional Roles

The Graduates of Undergraduate Program in Industrial Engineering play their role in many positions/first job positions, as follows:

Production Analyst, Product Engineer, Health Safety and Environment Engineer, Logistic Specialist, Human Capital Analyst, Cost Control Engineer, Maintenance Engineer, Quality Engineer, Marketing and Sales Engineer, Lean-Manufacturing Excellence Engineer, Data and Information Analyst, Assistant Project Manager, Academics, Supply Chain Officer, Entrepreneur, Business Analyst and Consultant.



# STRONG CHARACTERS

## PROFESIONAL TALENTS



### NOBLE CHARACTERS

The spiritual ability encourages the graduates in practicing the Islamic-based attitude and behavior, such as truthful, trustworthy and well-mannered. Those qualities are expected to help them in providing the positive contribution to the institution, society and environment, in its correlation to national growth and scientific development, which are acknowledged internationally.



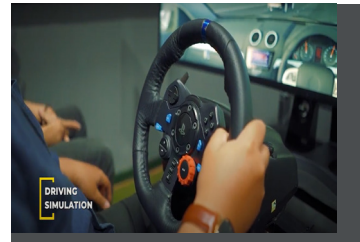
### PROBLEM SOLVER

Capable to identify the problems in industrial system and able to provide comprehensive alternative solution.



### INNOVATIVE

Capable to actualize the insights, imagination and various stimulants in design, installation, and integral system improvement.



# GRADUATE LEARNING OUTCOMES



NATIONAL ACCREDITED **A -**  
NO: 1900/SK/BAN-PT/Akred/S/VII/2018



To maintain various roles as stated in the profile, following are the graduate's learning outcomes (GLO) for Undergraduate Program in Industrial Engineering that are categorized in 4 aspects :



## The Aspect of Attitude

**LO1** : Able to express the attitude of devotion towards One True Almighty God, by applying the sharia in daily life and upholding the universal Islamic ethics (TAQWA)

**LO5** : To have the Islamic-value-based Entrepreneurship character (ENTREPRENEURSHIP)



## The Aspect of Knowledge

**LO2** : Able to apply natural, mathematical, and social sciences to acquire a comprehensive engineering-principle understanding (BASIC SCIENCE & ENGINEERING)



## The Aspect of General Skill

**LO6** : Able to identify, formulate problems, design and conduct appropriate experiment, process, analyze and interpret data, and solve engineering problems (DATA ANALYSIS)

**LO7** : Able to manage teams and organizations and deliver ideas in a global environment (TEAM-WORK)

**LO8** : Becoming an ethical, adaptable, and life-long-learner professional (LONG LIFE LEARNING)



## The Aspect of Special Skill

**LO3** : Able to design and implement modern engineering tools, methods, and skills to elevate information-technology-based integrated systems performance (MODERN ENGINEERING TOOLS & INFORMATION TECHNOLOGY)

**LO4** : Able to evaluate integrated system governance particularly in Supply Chain (SUPPLY CHAIN)

# STRUCTURE OF CURRICULUM

## INTERNATIONAL CERTIFICATION

### AUN-QA

#### ✓ 144 credits

The Curriculum of Undergraduate Program in Industrial Engineering UII covers 144 credits, in which 9 of them are grouped as elective courses and the other 135 credits are classified as mandatory, with the following distribution:

#### ✓ 9 credits as elective courses

#### ✓ 135 credits as mandatory courses

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#### ✓ Innovative Curriculum

The 2021 Curriculum is designed by referring to the Outcome-Based Education (OBE) and the program of Independent Learning – Independent Campus (MBKM), to nurture the graduates of Industrial Engineering with noble characters, grow as problem solver and innovative.

#### Semester 1

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
UNI600	Islamic Religion	2	MPK	-
STI101	Calculus 1	3	MKK	-
STI102	Physics	2	MKK	-
STI103	Introduction to Industrial Engineering	3	MKK	-
STI104	Programming Logic	3	MKK	-
STI105	Fundamental of Industrial Engineering Design	3	MKK	-
STI106	Linear Algebra	2	MKK	-
STI107	Biology: Anatomy and Physiology	2	MKK	-
Total Credits		20		

#### Semester 2

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
UNI601	Islam Ulil Albab	3	MPK	Islamic Religion
UNI603	Pancasila	2	MPK	-
UNI607	Scientific Writing	2	MPK	-
STI201	Calculus 2	3	MKK	Calculus 1
STI202	Electromagnetism	2	MKK	Physics
STI203	Statistics 1	2	MKK	-
STI204	Mechanics	2	MKK	Physics
STI205	Introduction to Economics	2	MKK	-
STI206	Materials Chemistry	2	MKK	-
Total Credits		20		

# STRUCTURE OF CURRICULUM

Semester 3				
Code	Course	Credits	Subject Group	Prerequisite(s) (D)
UNI606	English	2	MPK	-
STI301	Work Method and Measurement	2	MKB	Mechanics
STI302	Manufacturing Process	3	MKK	Introduction to Industrial Engineering
STI303	Optimization	3	MKK	Linear Algebra
STI304	Statistics 2	3	MKK	Statistics 1
STI305	Cost Analysis and Estimation	2	MKK	Introduction to Economics
STI306	Production Planning and Control 1	2	MKB	Introduction to Industrial Engineering
STI307	Physics Laboratory Works	1	MKK	Physics
STI308	Environmental Chemistry	2	MKK	-
Total Credits		20		

Semester 4				
Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI401	Stochastic Model	3	MKK	-
STI402	Engineering Economics	2	MKK	Cost Analysis and Estimation
STI403	Work System Design & Ergonomics	3	MKB	Work Method and Measurement
STI404	Database Management System	3	MKK	Programming Logic
STI405	Quality Control and Assurance	3	MKK	Statistics 2
STI406	System Modelling	2	MKB	Optimization
STI407	Production Planning and Control 2	2	MKB	Production Planning and Control 1
STI408	Industrial Psychology	2	MPK	-
Total Credits		20		

Semester 5				
Code	Course	Credits	Subject Group	Prerequisite(s) (D)
UNI605	Sharia Entrepreneurship	2	MKB	-
STI501	Decision Analysis & Data Mining	3	MKB	Optimization
STI502	Occupational Safety and Health (OSH)	2	MKB	Environmental Chemistry
STI503	Productivity Engineering	2	MKB	Quality Control and Assurance
STI504	Intelligent System	2	MKB	Optimization
STI505	Industrial Organization Design	2	MKB	Industrial Psychology
STI506	Project Management	2	MKB	Engineering Economics
STI507	Product Design	3	MKB	Work System Design & Ergonomics
STI508	Management Information System	2	MKB	Database Management System
Total Credits		20		

# STRUCTURE OF CURRICULUM

## Semester 6

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI601	Facility Layout Design	3	MKB	Production Planning and Control 1
STI602	Enterprise Resource Planning	3	MKB	Production Planning and Control 1
STI603	Enterprise Analysis and Design	3	MKB	Engineering Economics
STI604	Integrated Industrial System Design	3	MKB	Production Planning and Control 2
STI605	Computer Simulation	3	MKB	System Modeling
STI606	Basic Research Methodology	2	MKB	Scientific Writing
STI607	Supply Chain Management	3	MKB	Production Planning and Control 1
Total Credits		20		

## Semester 7

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
UNI602	Islam Rahmatan lil Alamin	3	MPK	
UNI604	Civic Education	2	MKU	-
UNI608	Community Service	2	MBB	>100 credits, GPA>2,25
STI9XX	Elective Course 1	3	MKB	
STI9XX	Elective Course 2	3	MKB	-
STI9XX	Elective Course 3	3	MKB	
Total Credits		16		

## Semester 8

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI801	Undergraduate Thesis	5	MKB	Basic Research Methodology, 1 Elective Course, have taken or taking an internship, > 120 credits
STI802	Internship	3	MBB	> 100 credits, Student soft skills development
Total Credits		8		

# STRUCTURE OF CURRICULUM

## ELECTIVE COURSES

### Elective Courses

#### Field of Interest: Industrial Management

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI901	Human Capital Management	3	MKB	Industrial Psychology
STI902	Strategic Management	3	MKB	Industrial Organization Design
STI903	Knowledge Management	3	MKB	Management Information System
STI904	Technology Management	3	MKB	Production Planning and Control 1
STI905	Risk Management	3	MKB	Engineering Economics
STI906	Financial Engineering	3	MKB	Engineering Economics
STI907	Asset Management	3	MKB	Production Planning and Control 1
STI908	Service Management	3	MKB	Quality Control and Assurance
STI909	Decision Support System	3	MKB	Management Information System
STI910	Industrial Marketing	3	MKB	Cost Analysis and Estimation
STI911	Analysis and Design in MIS	3	MKB	Database Management System
STI912	Business Process Management	3	MKB	Enterprise Resource Planning
STI913	Business Process Integration	3	MKB	Enterprise Resource Planning

#### Field of Interest: Operational Research

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI914	Six Sigma	3	MKB	Quality Control and Assurance
STI915	Multivariate Analysis	3	MKB	Statistics 2
STI916	Advanced Simulation	3	MKB	Computer Simulation
STI917	Data Science	3	MKB	Decision Analysis & Data Mining
STI918	Quality Engineering	3	MKB	Quality Control and Assurance
STI919	Business Intelligence	3	MKB	Decision Analysis & Data Mining
STI950	Metaheuristic	3	MKB	Stochastic Model



# STRUCTURE OF CURRICULUM

## ELECTIVE COURSES

### Field of Interest: Production System

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI921	Advanced Automation	3	MKB	Programming Logic, Production Planning and Control 2
STI922	Lean and Green Manufacturing	3	MKB	Production Planning and Control 2
STI923	Halal Supply Chain Management	3	MKB	Supply Chain Management
STI924	Intelligent Manufacturing System	3	MKB	Production Planning and Control 2
STI925	Maintenance Management	3	MKB	Production Planning and Control 2
STI926	Humanitarian Logistics	3	MKB	Supply Chain Management
STI927	TRIZ for Product Design	3	MKB	Product Design
STI928	Logistics Management	3	MKB	Production Planning and Control 2
STI929	SCM Performance Management	3	MKB	Supply Chain Management

### Field of Interest: Ergonomics

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI930	Human-Computer Interaction	3	MKB	Work System Design & Ergonomics
STI931	Human-Machine System	3	MKB	Work System Design & Ergonomics
STI932	Industrial Ergonomics	3	MKB	Work System Design & Ergonomics
STI933	Environmental Ergonomics	3	MKB	Environmental Chemistry, Work System Design & Ergonomics
STI934	Ergonomic Design for Special Purpose	3	MKB	Work System Design & Ergonomics, Product Design
STI935	Cognitive Ergonomic	3	MKB	Work System Design & Ergonomics
STI936	Macro Ergonomic	3	MKB	Work System Design & Ergonomics
STI937	Environmental Occupational Health and Safety	3	MKB	Occupational Safety and Health (OSH)
STI938	Transport safety	3	MKB	Occupational Safety and Health (OSH)

# STRUCTURE OF CURRICULUM

## ELECTIVE COURSES



### Elective Courses for Special Topics

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI939	Special Topics in Industrial Management	3	MKB	
STI940	Special Topics in Operational Research	3	MKB	
STI941	Special Topics in Production System	3	MKB	
STI942	Special Topics in Ergonomics	3	MKB	

### Mandatory Elective Courses for FAST TRACK PROGRAM

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI943	Operations Research	3	MKB	
STI944	Production System	3	MKB	
STI945	Advanced System Modelling	3	MKB	
STI946	The Philosophy of Industrial Engineering	3	MKB	

### Elective Course for Internship

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI947	Capita Selecta	3	MKB	
STI948	Industrial System Analysis	9	MKB	

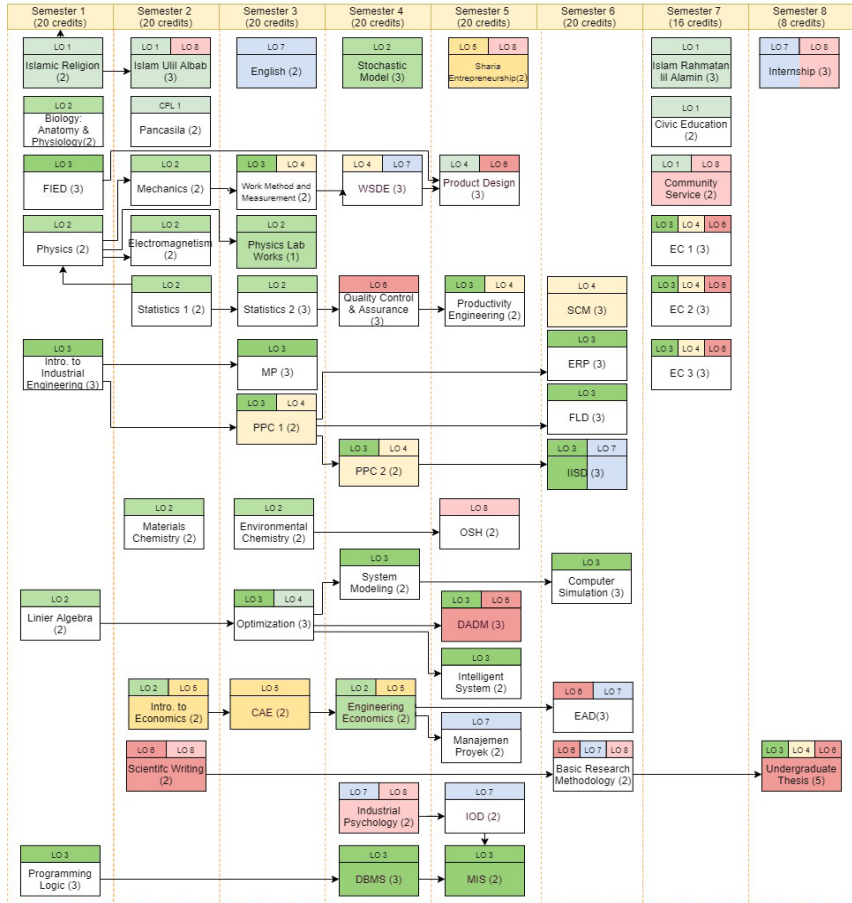
### Elective Course for Business Startup

Code	Course	Credits	Subject Group	Prerequisite(s) (D)
STI949	Technopreneurship	9	MKB	

# REGULAR COURSE PATH

## CURRICULUM MAP

CURRICULUM MAP OF UNDERGRADUATE PROGRAM IN INDUSTRIAL ENGINEERING  
UNIVERSITAS ISLAM INDONESIA



- Description**
- LO 1 LO 8  
Islam Uili Albab (3)  
Course of Islam Uili Albab consists of 3 credits that supports LO1 and LO 8  
Course of Islam Uili Albab is used to measure LO 1
  - LO 3  
Intro. to Industrial Eng (3)  
Course of Introduction to Industrial Engineering consists of 3 credits that supports LO 3  
Course of Introduction to Industrial Engineering measures no LO

Figure 1. Regular Course Path

# MANDATORY ACTIVITIES



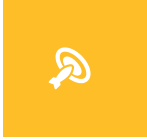
DIPLOMA COMPANION CERTIFICATE



Several activities are facilitated to support graduates' profiles. Those activities will be documented in the Diploma Companion Certificate (**SKPI/Surat Keterangan Pendamping Ijazah**). The table below describes the activity's detail and weight of participation credits (SKP/Satuan Kredit Partisipasi)

Code	Title of Activities	Title of Activities (In Indonesian)	Method of Learning	Weight of SKP
UNI660	Islamic Basic Values Training	<i>Pendalaman Niai Dasar Islam</i>	Boarding Program and sustainable <i>taklim</i>	20 SKP
UNI661	Qur'anic Personal Development Training	<i>Pengembangan Diri Qurani</i>	Boarding Program and sustainable <i>taklim</i>	20 SKP
UNI662	Career and Self-Development Training	<i>Pelatihan Pengembangan Diri</i>	Boarding Program	5 SKP
UNI663	Islamic Leadership and Da'wa Training	<i>Pelatihan Kepemimpinan dan Dakwah</i>	Boarding Program	5 SKP
	Student Soft skills Development	<i>Student Softs kills Development</i>	Soft Skills Training	1 SKP
		Form/type/example of the activities are stated in the PR UII No.24 of 2019		9 SKP

# ACCELERATION & FAST TRACK S1-S2 MTI UII & NTUST (TAIWAN)



## ACCELERATION PROGRAM

The curriculum accommodates the students in completing the bachelor degree in 7 semesters or 3,5 years. The consideration of the acceleration program is based on Permendikbud RI No. 3 of 2020, to provide opportunities for students with high achievement. After accomplishing the first two semesters, they are allowed to register for a maximum of 24 credits per semester. The acceleration could be initiated by students in the third semester.



## FAST TRACK S1-S2 MTI UII - NTUST (TAIWAN)

The curriculum accommodates the students who would like to accomplish both bachelor and master program in 5 years. This program is offered in the collaboration with Master Program in Industrial Engineering UII. The preparation of the program should be initiated from the fifth semester of study, with the specific courses' recommendations as described by Figure 3. The students must register for the program no later than the early sixth semester, by fulfilling the following requirements:



## FAST TRACK S1-S2 REQUIREMENTS

- \* Students have to conduct the course registration (key-in) in semester 3 or 5 by complying with the fast-track path, as suggested by the undergraduate program.
- \* Students must enroll for the fast-track program maximum in the sixth semester (if the quota is still available).
- \* It is mandatory for the students to register for recommended elective courses for the fast-track program in the 7th semester, as suggested by the undergraduate program and lecturers of the master program.
- \* A Minimum GPA of 3,0
- \* The undergraduate thesis supervisor must be a lecturer with minimum qualification of Doctoral Degree Lector, while the defense's examiners must be the lecturers with the minimum title of Doctoral Degree.
- \* The study must be completed and posted before the 8th semester ends.



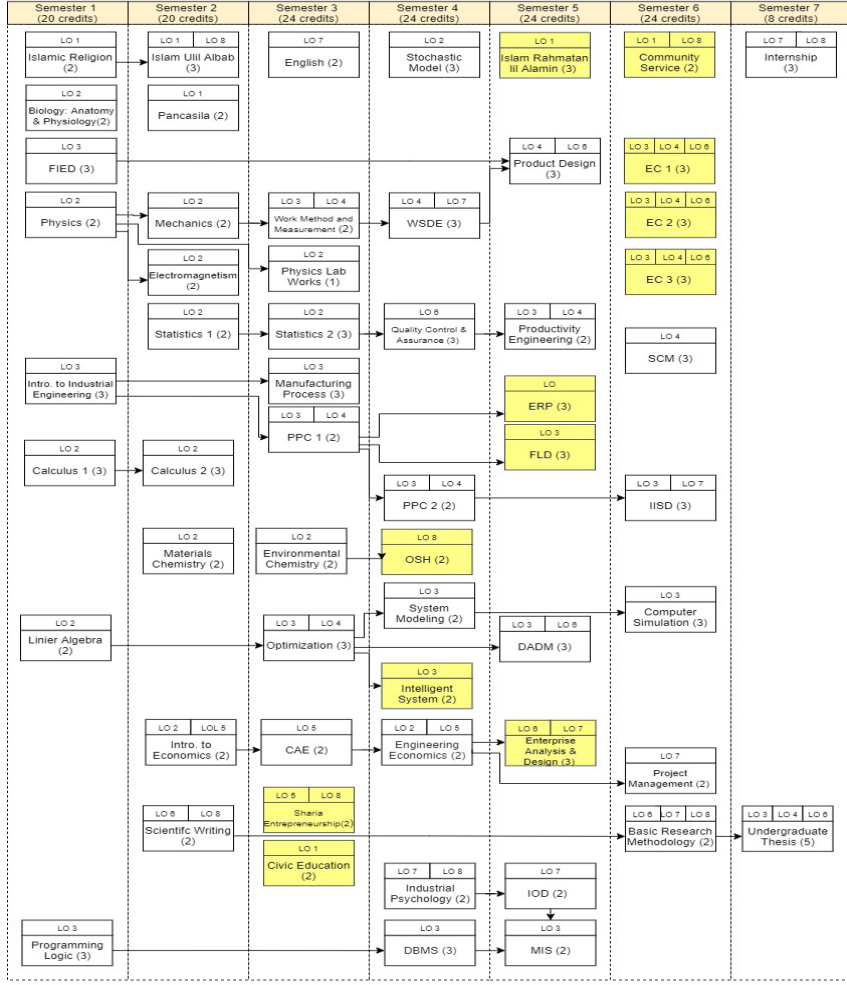
## YOU'RE ACCEPTED

Later, the fast-track program will be started in the 7th semester by selecting four mandatory elective courses assigned for the fast-track program. It takes 147 credits to accomplish the program. In case of failure in the program selection (in the 6th semester), this path could be adjusted for passing the bachelor degree in 3,5 years, by shifting four mandatory elective courses designed for fast-track to three elective courses on the regular path

# ACCELERATION PATH

## CURRICULUM MAP

CURRICULUM MAP OF UNDERGRADUATE PROGRAM IN INDUSTRIAL ENGINEERING  
ACCELERATION PATH  
UNIVERSITAS ISLAM INDONESIA



Note:  
Courses with color   indicate courses that should be taken in advance.

Figure 2. Acceleration Program Course Path

# FAST TRACK S1-S2 PATH

## CURRICULUM MAP

CURRICULUM MAP OF UNDERGRADUATE PROGRAM IN INDUSTRIAL ENGINEERING  
FAST-TRACK PATH (BACHELOR TO MASTER DEGREE)  
UNIVERSITAS ISLAM INDONESIA

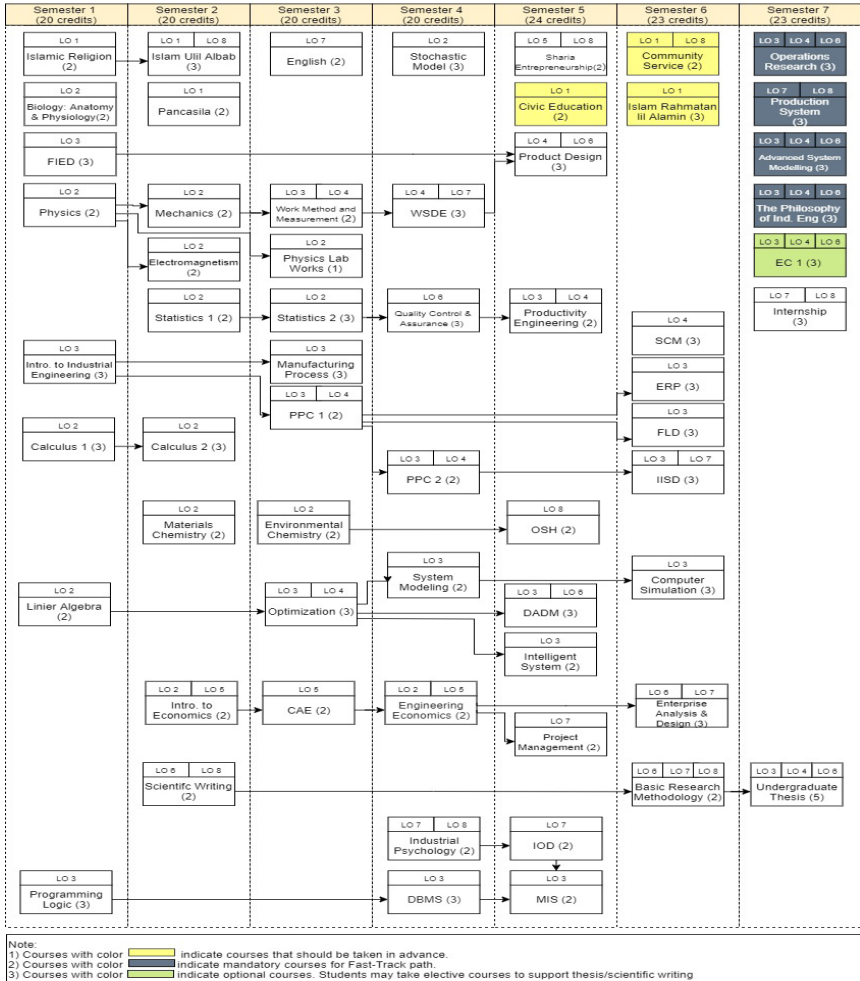


Figure 3. Fast Track S1-S2 MTI UII-NTUST Program Course Path

# STUDENT EXCHANGE / DOUBLE DEGREE

## Term of Distance Learning



The curriculum accommodates the students for accomplishing the bachelor degree by joining the Independent Learning-Independent Campus Program (MBKM/Merdeka Belajar Kampus Merdeka) with three schemes.

The three schemes available for students who would like to participate in Student Exchange/ Double Degree program, as illustrated in Figure 4, with the following programs :

1. inter-undergraduate programs in UII through university's mandatory courses,
2. similar/equivalent undergraduate programs in industrial engineering from different universities both national and international, based on the existing MOU/MOA in the University/ Faculty/Department, and
3. from different universities, based on the existing MOU/MOA in the University/Faculty/Department.

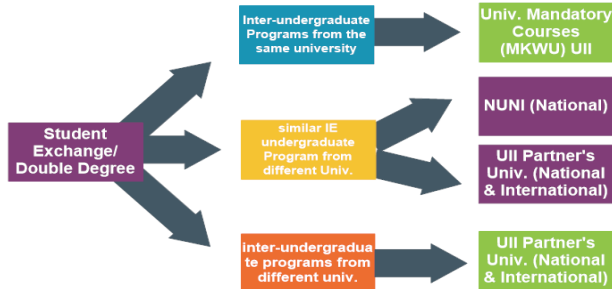


Figure 4. Student Exchange/Double Degree Program Schemes of MBKM

## Eligibility

Due to the implementation, it should be ensured that the curriculum of the assigned university supports the competence of the program and grants approval from the undergraduate program in Industrial Engineering through the existence of MOU/MOA. The course will be converted based on the adjustment of the relevant semester plan (RPS) of a subject. This type of path could be implemented in the 5th semester, yet it is highly suggested to be initiated in the 7th semester, under the following conditions:

1. Students have attained a minimum GPA of 3.0, have accomplished 80 credits. The designated undergraduate program must hold the same grade of accreditation. Particularly for International Program students, they are recommended to select the program, which also runs the international class.
2. The program will be converted to a relevant-weight course, as stated in the current curriculum of the Undergraduate Program in Industrial Engineering. Due to the absence of a relevant-weight course, later it will be converted to an elective course of Special Topics.
3. Students must register the program to Study Plan, so the result of the program is visible for the conversion process.
4. For system approval, the students must consult to Academic Advisor and Head of Undergraduate Program in Industrial Engineering related to the Independent Learning Program by electronic mail (e-mail)
5. Additional conditions apply, based on the policy of the partner university



# DOUBLE DEGREE PROGRAM (DD) & FAST TRACK S1-S2 undergraduate IE UII & UoG UK

ST & B.Eng (DD S1) or ST, B.Eng & M.Eng (S1-S2)

IP Students who have successfully completed the first two years of Bachelor Industrial Engineering program will be considered for admission onto the University of Gloucestershire awards :

- **Industrial Control Engineering (BEng & Meng)** or
- **Mechatronics Engineering (BEng & Meng)**

## Eligibility

### International Mobility

International Program students should demonstrate and must provide evidence that they have attained a level of English equivalent to **IELTS 6.0 overall (with a minimum of 5.5 in each component)**. Alternative acceptable English Language qualifications can be found at [www.glos.ac.uk/international](http://www.glos.ac.uk/international).

## Direct Entry

### International Mobility

Students who have completed the designated course(s) and who have met the requirements detailed above may be considered by the University of Gloucestershire for entry into **level 5** of the following programmes:

- **Industrial Control Engineering** (B.Eng & M.Eng)
- **Mechatronics Engineering** (B.Eng & M.Eng)

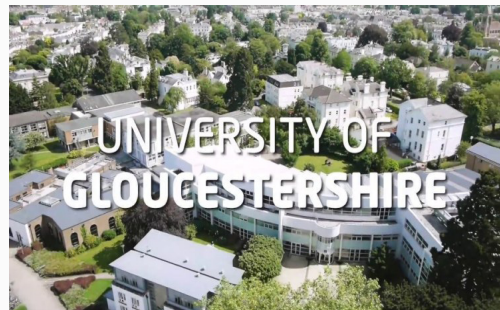
## Great Future

### Curriculum Mapping

Calculus 1&2, Linear Algebra (Matrix&Vector), Calculus 2, Mechanic (Engineering Mechanics), Introduction to Industrial Engineering, Physic 1&2, Physic Lab, Programming Logic, Intelligent Systems, Computer Simulation, Product Design, System Modeling, Fundamental of Industrial Engineering Design, Materials Chemistry, English, Scientific Writing.



Source: <https://studybroad.shiksha.com/uk/universities/university-of-gloucestershire#popupOpen>



Source: <https://konsultanpendidikan.com/2019/05/02/gambaran-singkat-kuliah-di-universiti-of-gloucestershire/>

# BUSINESS STARTUP

## Pre-Startup & Startup



Two schemes are available for this path, as illustrated in Figure 5, which are:

- Pre-Startup, a technology-based product that completed with a prototype, un-commercialized without business legalization.
- Startup with a technology-based product that is ready to be commercialized.

### Eligibility

This path should be settled from the 5th semester with the courses' recommendation, as seen in Figure 6, with the following conditions :

- The students should register and start the path in the early 5th semester.
- Selected courses must meet the scheme of the business startup path.
- Minimum GPA of 3.0
- It could be proposed individually or in the group, but the student must be positioned as the main organizer, such as Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Technology Officer (CTO), Chief Innovation Officer (CIO)
- Minimum one lecturer has to be assigned as supervisor.
- The program activity and conversion will be conducted in the 7th semester with accumulated 20 credits, which include Technopreneurship (Elective Course), Enterprise Analysis and Design, Internship, and Undergraduate Thesis.



Figure 5. Business Startup Schemes of MBKM



# BUSINESS STARTUP PATH

## CURRICULUM MAP

CURRICULUM MAP OF UNDERGRADUATE PROGRAM IN INDUSTRIAL ENGINEERING  
BUSINESS START-UP PATH  
UNIVERSITAS ISLAM INDONESIA

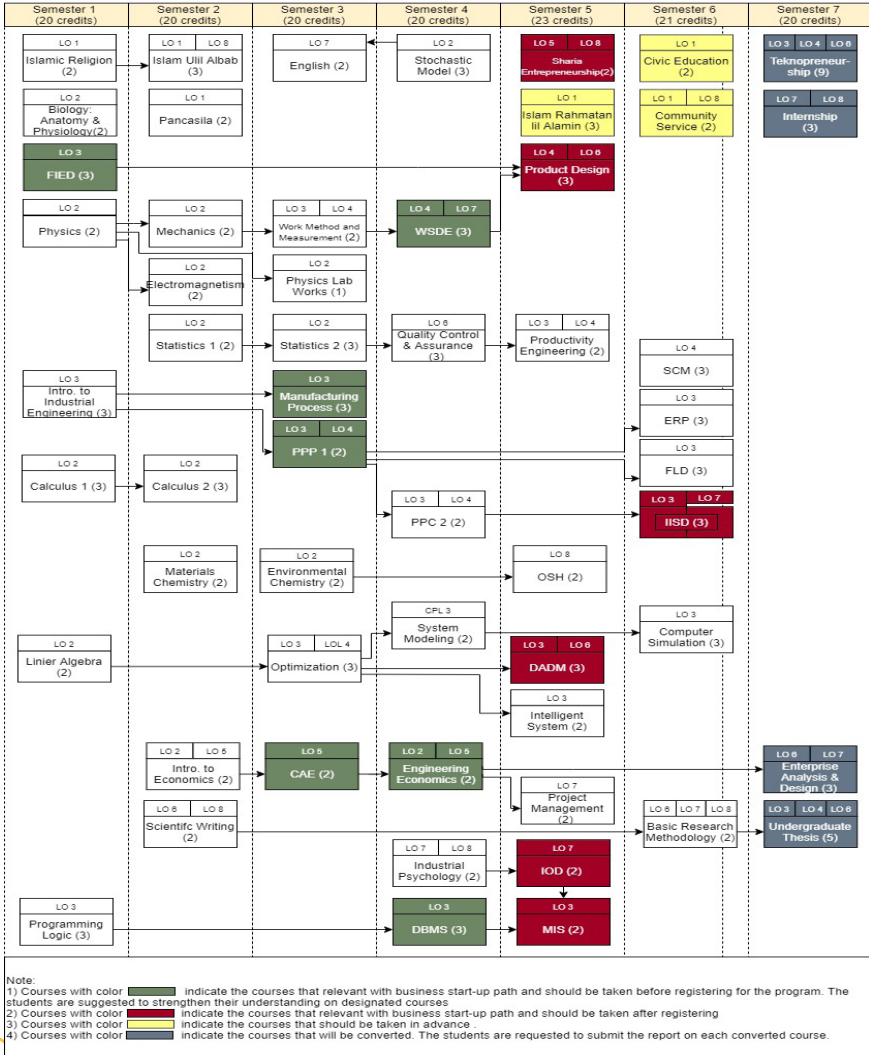


Figure 6. Business Startup Course Path

# INTERNSHIP

6 months, 3 months, and BANGKIT Program 

## Schemes

- A six-months internship is equal to 20 credits, converted to Undergraduate Thesis (5 credits), Internship (3 credits), Enterprise Analysis and Design (3 credits), Elective Course of Industrial System Analysis (9 credits). The recommendation for courses' enrollment per semester could be seen in Figure 7.
- A three-months internship is equal to 11 credits, converted to Undergraduate Thesis (5 credits), Internship (3 credits), Elective Course of Capita Selecta (3 credits). The recommendation for courses' enrollment per semester could be seen in Figure 8.
- Internship by BANGKIT Program as stated in the Circular Letter of Head of Undergraduate Program in Industrial Engineering No. 02/Ka.Prodi S1/10/TI/I/2021, equal to 11 credits, converted to Programming Logic (3 credits), Intelligent System (2 credits), Database Management System (3 credits), elec-

## Preparation

The preparation should be established started from the 5th semester. For its implementation, several alternatives are provided, as follows:

- In 5th semester, the students should register themselves for the **six-months** and **3-months** internship at the administration office of the Undergraduate Program in Industrial Engineering.
- The selection will be performed. Shortlisted candidates will carry out the internship program in the 7th or 8th semester.
- Students who are interested to join internship by **Bangkit** program must register themselves to The Ministry of Education, Culture, Research and Technology, The Republic of Indonesia in the 5th semester. Once they passed the selection, the program will be executed in the 6th semester.

## Eligibility

- The internship is performed at the partner companies of Department, Faculty/University
- The students are encouraged to start the procedure as suggested, started from the 5th semester.
- The internship program is conducted in the 7th or 8th semester.
- Minimum GPA of 3.0 and passed the CEPT
- Minimum one lecturer is assigned as the internship supervisor
- The students must perform the course registration (key-in) with courses previously set as the converted subjects. The registration is held in the same semester of program implementation.
- Specifically for internship by Bangkit Program, the requirements will be adjusted with the conditions stated by The Ministry of Education, Culture, Research, and Technology at <http://g.co/bangkit>

# STUDENT ACHIEVEMENT PROGRAM

## Achievement Scheme



Other than the three internship schemes, the recent curriculum provides appreciation to students who participate in the Students' Creativity Program (PKM/ Program Kreativitas Mahasiswa) and Teaching Campus Program by The Ministry of Education, Culture, Research, and Technology, as well as other scientific competitions

### PIMNAS

The student who earns a gold medal in National Student Scientific Week (PIMNAS/Pekan Ilmiah Mahasiswa Nasional) or earns first place in international competition in Industrial Engineering, achievement will be converted to **1 relevant elective course** and **1 SKP** (participation credit)

### Creativity Program

The student who passes the funding for Students' Creativity Program – Community Service, the program will be converted to **Community Service** and **1 SKP** (participation credit)



### Teaching Campus Program

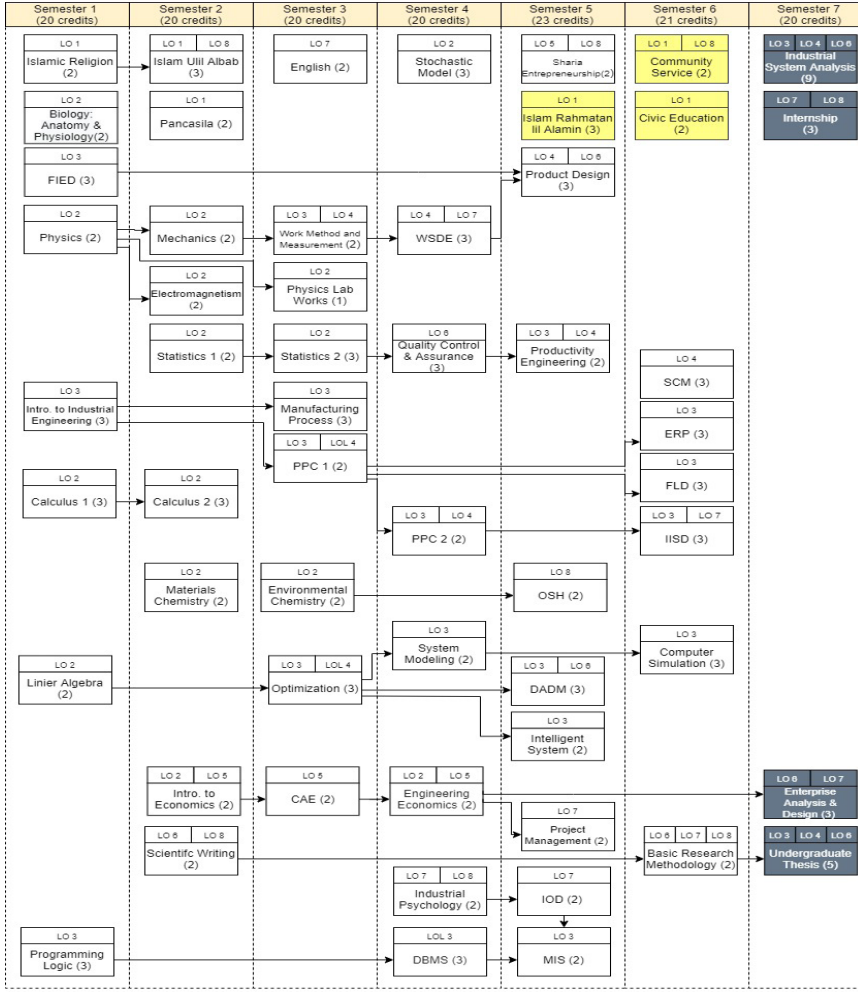
Student who accomplishes the Teaching Campus Program, the program will be converted to **Community Service** and **3 SKP** (participation credit)

# 6-MONTH INTERNSHIP PATH

## Semester 7



CURRICULUM MAP OF UNDERGRADUATE PROGRAM IN INDUSTRIAL ENGINEERING  
SIX-MONTHS INTERNSHIP (7th SEMESTER)  
UNIVERSITAS ISLAM INDONESIA



Note:  
 1) Courses with color   indicate courses that should be taken in advance.  
 2) Courses with color   indicate the courses that will be converted. The students are requested to submit the report on each converted course.

Figure 7. 6-month Internship (7th Semester) Course Path

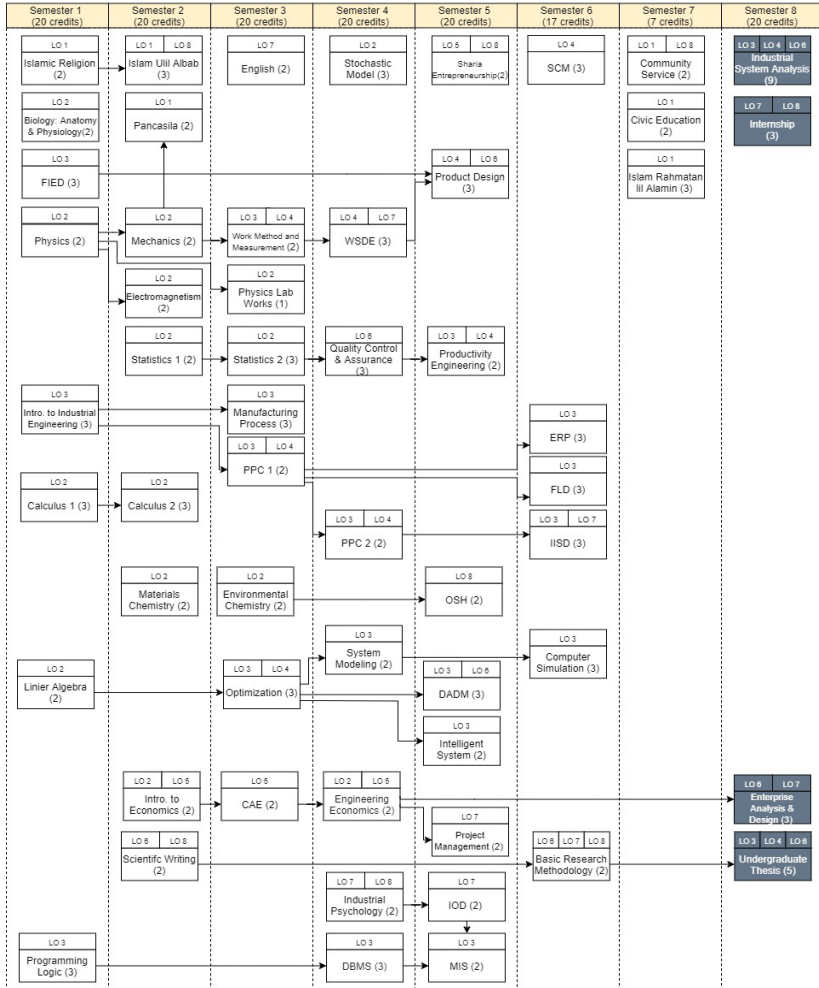


# 6-MONTH INTERNSHIP PATH

## Semester 8



CURRICULUM MAP OF UNDERGRADUATE PROGRAM IN INDUSTRIAL ENGINEERING  
SIX-MONTHS INTERNSHIP (8th SEMESTER)  
UNIVERSITAS ISLAM INDONESIA



Note:  
Courses with color  indicate the courses that will be converted. The students are requested to submit the report on each converted course.

Figure 8. 6-month Internship (8th Semester) Course Path



# 3-MONTH INTERNSHIP PATH

## Semester 8



CURRICULUM MAP OF UNDERGRADUATE PROGRAM IN INDUSTRIAL ENGINEERING  
THREE-MONTHS INTERNSHIP (8TH SEMESTER)  
UNIVERSITAS ISLAM INDONESIA

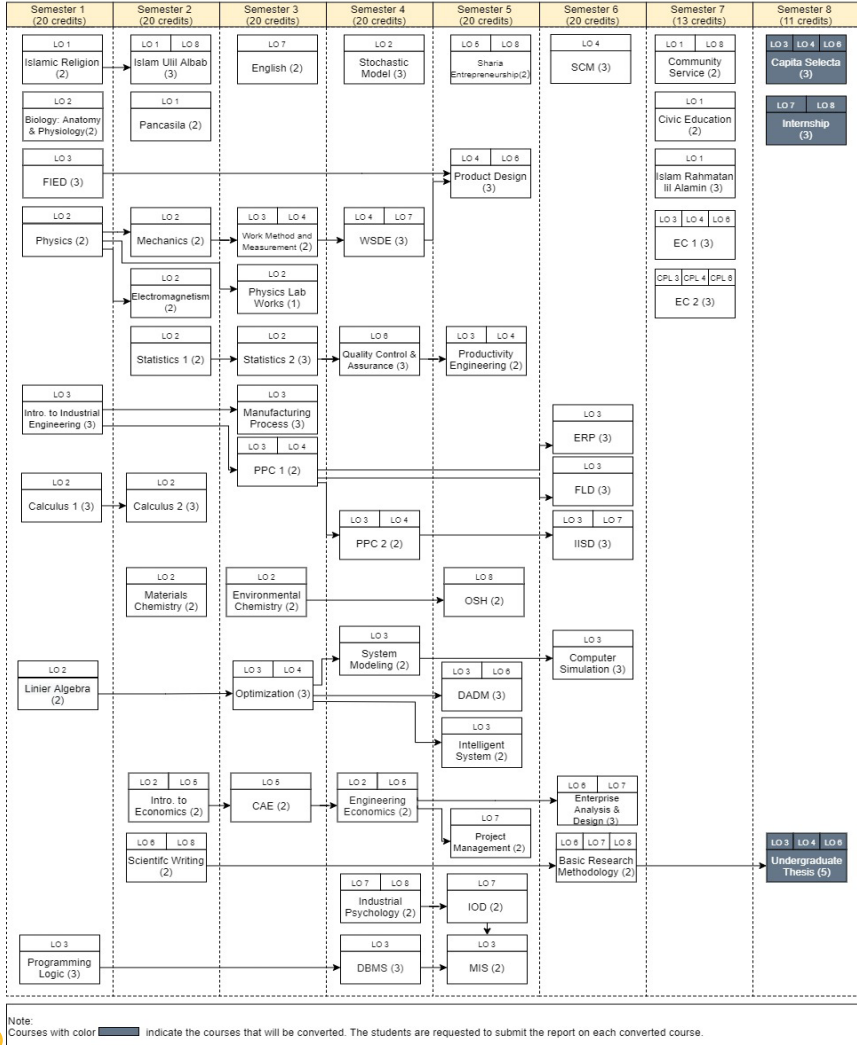


Figure 9. 3-month Internship (8th Semester) Course Path





# LEARNING-OUTCOME CURRICULUM ASSESSMENT DESIGN

LEARNING OUTCOME		INDICATORS	KEYWORDS	METHODS OF ASSESSMENTS	COURSE LEARNING OUTCOME (CLO)	SEMESTER
NO	DESCRIPTION			COURSE		
1	Able to express the attitude of devotion towards One True God, by applying the sharia in daily life and upholding the universal Islamic ethics	Students understand the nature of human creation as Allah servant	Understanding human's nature	Islamic Religion	CLO 1: Explaining the concept of human's nature and hidayah as cited from Al-Qur'an and Hadits	1
		Students could interpret the values of Ullil Albab	Interpreting Ullil Albab value	Islam Ullil Albab	CLO 1: Explaining and reflecting the concept of ullil albab based on Al-Qur'an and Hadits, in daily life	2
		Students could illustrate the integration of Islamic value with the fields of knowledge	Demonstrating Islamic value	Islam Rahmatan Lil Alamin	CLO 3: Demonstrating the thoughts, products and/or work result as the actualization of integration between Islamic value and fields of knowledge	7
2	Able to apply natural, mathematical, and social sciences to acquire a comprehensive engineering-principle understanding	Able to identify the scientific concepts in industrial problems	Applying basic science	Physics Laboratory Work	CLO 2: Able to solve problems related to the physics law	3
		Able to apply the formulas in mathematics in solving industrial problems	Applying Mathematical	Stochastic Model	CLO 3: Able to apply the theories and stochastics model to support decision making in various cases	4
		Able to implement the economic principles to assess the feasibility of industrial investment	Applying economics	Engineering Economics	CLO 2: Able to apply engineering economics in decision making, related to investment	4
3	Able to design and implement modern engineering tools, methods, and skills to elevate information-technology-based integrated systems performance	Students could design a simple system, including identifying the entities involved	Designing system	Database Management System	CLO 2: Students could design a proper and correct database by considering the aspect of engineering and technology	4
		Students could employ IT software that recently developed in Industrial Engineering for system integration	Implementing IT tools	Management Information System	CLO 2: Students understand about Management information System, functionally and structurally, including the application related, which are: data management and knowledge, decision support system, e-business, e-commerce, e-government, artificial intelligence, enterprise resource planning	5
		Students could evaluate system weaknesses and suggest the improvement for productivity enhancement	Improving performance	Integrated Industrial System Design	CLO 2: Students could share the idea on innovation in design and technology-based product prototype	6
4	Able to evaluate integrated system governance particularly in Supply Chain	Students could explain the product flow and information in a company	Understanding model and system	Production Planning and Control 1	CLO 2: Students could make a production plan in industrial case, based on closed-loop MRP II	3
		Students could understand the supply chain system and entities related	Formulating Model	Production Planning and Control 2	CLO 2: Students could understand the concept and application of advanced production system	4
		Students could assess the performance of the supply chain system by using SCOR as a measurement tool	Examining measurement tools	Supply Chain Management	CLO 1: Students could apply SCOR to measure the supplier performance	7

# LEARNING-OUTCOME CURRICULUM ASSESSMENT DESIGN

LEARNING OUTCOME		INDICATORS	KEYWORDS	METHODS OF ASSESSMENTS	COURSE LEARNING OUTCOME (CLO)	SEMESTER
NO	DESCRIPTION			COURSE		
5	To have the Islamic-value-based Entrepreneurship character	Students could determine factors of determination for appropriate production cost	Identifying production cost factors	Introduction to Economics	CLO 3: Students could explain the determination of production cost factor, wage determination, labor market, international trade and open market	3
		Students could estimate the production cost	Estimating the product cost	Cost Analysis and Estimation	CLO 2: Students could calculate the production fix cost using various methods	5
		Students could suggest the business innovation based on Islamic norms	Differentiating business	Sharia Entrepreneurship	CLO 2: Students could arrange the business plan concept for entrepreneurship, as ruled by Islamic sharia on their preferred business field	2
6	Able to identify, formulate problems, design and conduct an appropriate experiment, process, analyze and interpret data, and solve engineering problems	Students could conduct scientific research to settle simple problems	Solving simple problem	Scientific Writing	CLO 2: To write and to perform the presentation, in terms of coherent and structured academic writing that meet the guideline for Indonesian spelling, scientific writing and anti-plagiarism	2
		Students could identify possible problems and select the appropriate method to solve them	Solving engineering problem	Decision Analysis and Data Mining	CLO 3: The students could apply the data mining techniques in real cases	5
		Students could give recommendations or action plans in solving the problems	Solving complex engineering problem	Undergraduate Thesis	CLO 1: Students could design, improve and install the integrated system by employing the knowledge and understanding in Industrial Engineering disciplines based on logical, critical, systematic, and innovative thinking	8
7	Able to manage teams and organizations and deliver ideas in a global environment	Students could collaborate in a team to solve complex problems	Organizing team to solve complex engineering problem	Integrated Industrial System Design	CLO 4: Students could collaborate in a team to solve complex problems.	6
		Students could communicate the ideas in the limited environment	Arguing in a local environment	English	CLO 3: Students could actively describe their profile and topics in a certain field, affectively and impressively in English	3
		Students could communicate the ideas in the global environment	Arguing in global environment	Internship	CLO 1: Students could use the science and present the work result in an integrated way in the broader environment	8
8	Becoming an ethical, adaptable, and lifelong learner professional	Students could reflect work ethics, in terms of profession	Recognizing work ethics	Industrial Psychology	CLO 2: Students could explain the concept of harmony, ethics, and harmonization in human relations, technology, industry, and its environment	4
		Students could adapt and contribute to society	Identifying personal contribution	Community Service	CLO 4: Students could plan, coordinate, carry out, evaluate the program in a preferred field of knowledge that involves society directly	7
		Students could collect information actively and independently	Actively organizing information	Internship	CLO 4: Students could search deeper information regarding problems assigned as a task in the internship program	8

# GRADUATION STANDARD

Undergraduate Program in Industrial Engineering



Graduation standards for students of Undergraduate Program in Industrial Engineering started from batch 2021 and

## Regular Program

- a. Fulfilling 144 credits with a minimum GPA of 2,25
- b. Completing Diploma Companion Certificate (SKPI)
- c. A Minimum score of C for courses
- d. English proficiency of CEPT minimum 425



## International Program

1. Fulfilling 144 credits with a minimum GPA of 2,25
2. Completing Diploma Companion Certificate (SKPI)
3. A Minimum score of C for courses
4. English proficiency of CEPT, minimum 670
5. Al-Qur'an memorizing, minimum Juz 30
6. Proposal of Students' Creativity Program (PKM) that already uploaded at the simbelmawa, The Ministry of Education, Culture, Research, and Technology
7. Accomplishing minimum 2 professional certifications



## CONTACT US

be Smart, be Agile, be Global, be Good, be Innovative (SAGGI)

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