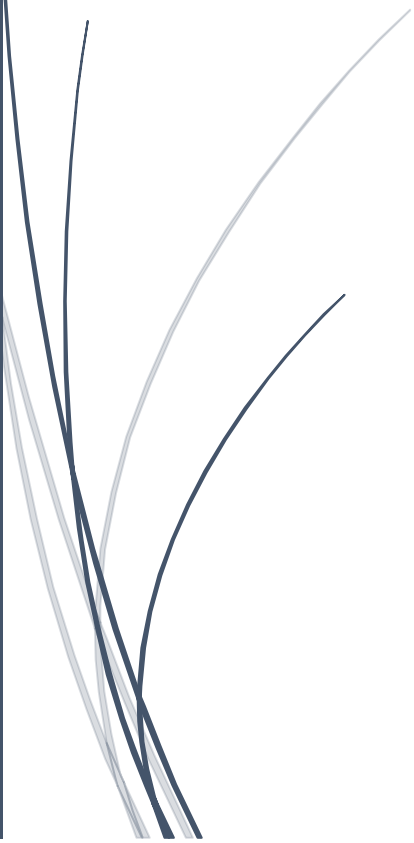




Undergraduate
Program in Industrial
Engineering Faculty of
Industrial Technology

CONVERSION GUIDELINES



UNDERGRADUATE PROGRAM IN INDUSTRIAL
ENGINEERING
FACULTY OF INDUSTRIAL TECHNOLOGY - UNIVERSITAS ISLAM
INDONESIA - 2021

RULES OF CONVERSION

A. COURSES IN ULIL ALBAB CURRICULUM (2016) ARE CONVERTED TO NEW COURSES IN ULIL ALBAB CURRICULUM (2021/CURRICULUM OF INDEPENDENT LEARNING-INDEPENDENT CAMPUS)

The implementation of Ulil Albab curriculum 2016 by the Undergraduate Program in Industrial Engineering has complied with Universitas Islam Indonesia's standard curriculum. Yet, as referred by stakeholders, PU No. 7 of 2018 regarding the adjustment of graduates' learning outcomes, mandatory courses, and core curriculum suggested by BKSTI (*Badan Kerjasama Penyelenggara Pendidikan Tinggi Teknik Industri/Board of Higher Education Provider of Industrial Engineering*), hence the existing courses are adjusted accordingly, as follows:

1. Rule I (Direct Conversion)

The score of the previous mandatory course is directly converted to the new course, including its credits.

Example:

No	Course's Code	New Course	New Score	Credits	Old Course	Course's Code	Credits	Old Score
1	STI101	Calculus 1	B	3	Calculus 1	52213003	3	B
2	STI102	Physics 1	B	2	Physics 1	52213004	2	B

Courses included in this rule I, listed as follows:

a. Courses with static credits

Semester 1

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	UNI600	Islamic Religion	2	Religion Education	52215001	2	1
2	STI101	Calculus 1	3	Calculus 1	52213003	3	1
3	STI102	Physics	2	Physics 1	52213004	2	1
4	STI103	Introduction to Industrial Engineering	3	Introduction to Industrial Engineering	52213005	3	1
5	STI104	Programming Logic	3	Programming Logics	52223002	3	2
6	STI105	Fundamental of Industrial Engineering Design	3	Basic of Industrial Engineering Design	52213007	3	1
7	STI106	Linear Algebra	2	Matrix and Vector	52213008	2	1

Semester 2

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	STI201	Calculus 2	3	Calculus 2	52223003	3	2
2	STI202	Electromagnetism	2	Physics 2	52223004	2	2
3	STI203	Statistics 1	2	Industrial Statistics 1	52223006	2	2
4	STI204	Mechanics	2	Engineering Mechanics	52223007	2	2
5	STI205	Introduction to Economics	2	Introduction to Economics	52223010	2	2
6	STI206	Materials Chemistry	2	Materials Science	52223008	2	2

Semester 3

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	STI302	Manufacturing Process	3	Manufacturing Process	52233003	3	3
2	STI303	Optimization	3	Optimization	52233004	3	3
3	STI304	Statistics 2	3	Industrial Statistics 2	52233005	3	3
4	STI305	Cost Analysis and Estimation	2	Cost Estimation and Analysis	52233006	2	3
5	STI307	Physics Laboratory Works	1	Physics Laboratory	52223005	1	2
6	STI308	Environmental Chemistry	2	Environmental Science	52233008	2	3

Semester 4

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	STI401	Stochastic Model	3	Stochastic Model	52243002	3	4
2	STI402	Engineering Economics	2	Engineering Economics	52243003	2	4
3	STI403	Work System Design & Ergonomics	3	Ergonomics and Work System Engineering	52242004	3	4
4	STI404	Database Management System	3	Database Management System	52243005	3	4
5	STI405	Quality Control and Assurance	3	Quality Control & Assurance	52243006	3	4
6	STI406	System Modeling	2	System Modeling	52252004	2	5
7	STI407	Production Planning and Control 2	2	Production Planning & Control 2	52252003	2	5
8	STI408	Industrial Psychology	2	Industrial Psychology	52235007	2	3

Semester 5

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	UNI605	Sharia Entrepreneurship	2	Islamic Entrepreneurship	52272001	2	7
2	STI501	Decision Analysis & Data Mining	3	Decision Analysis & Data Mining	52252005	3	5
3	STI504	Intelligent System	2	Intelligent System	52262001	2	6
4	STI505	Industrial Organization Design	2	Design of Industrial Organization	52242007	2	4
5	STI506	Project Management	2	Project Management	52252007	2	5
6	STI507	Product Design	3	Product Design	52252008	3	5
7	STI508	Management Information System	2	Management Information System	52252006	2	5

Semester 6

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	STI601	Facility Layout Design	3	Facility Planning & Layout	52252002	3	5
2	STI602	Enterprise Resource Planning	3	Enterprise Resource Planning	52262002	3	6
3	STI603	Enterprise Analysis and Design	3	Enterprise Analysis & Design	52262003	3	6
4	STI604	Integrated Industrial System Design	3	Design of Integrated Industrial System	52262004	3	6
5	STI605	Computer Simulation	3	Computer Simulation	52262005	3	6
6	STI606	Basic Research Methodology	2	Basic Research Methodology	52273002	2	7
7	STI607	Supply Chain Management	3	Supply Chain Management	52272004	3	7

Semester 7

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	UNI608	Community Service	2	Regular Community Service 1	52225608	2	7
2	STI9XX	Elective Course 1	3	Elective Course 1		3	6
3	STI9XX	Elective Course 2	3	Elective Course 2		3	7
4	STI9XX	Elective Course 3	3	Elective Course 3		3	7

Semester 8

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	STI801	Undergraduate Thesis	5	Undergraduate Thesis	52282001	5	8
2	STI802	Internship	3	Internship	52262007	3	6

Courses with 0 credit

No	Course's Code	New Course	Credits	SKP (Satuan Kredit Partisipasi/Credits for Participation)	New Semester	Old Course	Course's Code	Credits	Old Semester
1		Qur'an-Based Self-Development	0	20	1	Quran Reading and Writing	10000317	0	
2		Training of Self-Development	0	5		Orientation of Islamic Basic Values	10000217	0	
3		Training of Leadership and Dakwah	0	5		Basic Islamic Leadership Training	10000417	0	
4		Extensive Islamic Basic Values	0	20	1				
5		Student Soft Skills Development	0		3	Student Soft Skills Development	52021001	0	3

b. Courses with additional credits

Semester 2

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	UNI601	Islam Ulil Albab	3	Ibadah & Akhlaq	52225001	2	2

c. Course with a credit reduction

Semester 3

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	STI306	Production Planning and Control 1	2	Production Planning & Control 1	52242001	3	4

Semester 5

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	STI503	Productivity Engineering	2	Productivity Engineering	52272003	3	7

Semester 7

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	UNI602	Islam Rahmatan lil Alamin	3	Islamic Leadership	52235001	2	3
				Islamic Civilization & Thoughts	52255001	2	2
In which, the best score out of two courses will be employed.							

2. Rule II (Conversion of Separation)

A score of old courses will be converted to new courses, with credits being adjusted to new course credits.

No	Course's Code	New Course	Credits	Semester	Old Course	Course's Code	Credits	Semester
1	STI107	Biology: Anatomy and Physiology	2	1	Physiology and Work Measurement	52232002	4	3
2	STI301	Work Method and Measurement	2	3				
3	UNI607	Scientific Writing	2	2	Academic Writing and Communication	52215006	3	1
4	UNI606	English	2	3				
5	UNI603	Pancasila	2	2	Pancasila and Civil Education	52215002	3	1
6	UNI604	Civic Education	2	7				

3. Rule III (Conversion with the Addition of New Course)

This rule is designed to accommodate the new mandatory course of "Occupational Safety and Health (OSH)" as the replacement of "Chemistry". The old course is omitted and substituted by the new course, with score arrangement determined under the following terms:

- 1) Students who have not taken/will re-take the Chemistry must register OSH at the accessible semester.
- 2) Students who have taken Chemistry and unwilling to re-take the OSH must join the OSH short course, which will be organized by the Undergraduate Program in Industrial Engineering. While the score of OSH will be originated from the score of Chemistry.

- 3) Students who have taken both Chemistry and OSH, in case of unsatisfying Chemistry scores, are allowed to use OSH's score (elective course) as the replacement. Yet, they must take another elective course for the course substitution.
- 4) For students who earn satisfying scores both for Chemistry and OSH, the score of Chemistry will be converted to OSH score. Whereas, the score of OSH (Elective Course) will be converted to the course of Environment, Health, and Safety (EHS).

Semester 5

No	Course's Code	New Course	Credits	Old Course	Course's Code	Credits	Semester
1	STI502	Occupational Safety and Health (OSH)	2	Chemistry	52223009	2	2
				Occupational Safety and Health (OSH)	52262014	3	Elective Course

**CONVERSION FORM
COURSES OF OLD CURRICULUM (2016)
TO COURSES OF NEW CURRICULUM (2021)**

Semester 1

No	Course's Code	New Course	Credits	New Score	Old Course	Course's Code	Credits	Sem	Old Score
1	UNI600	Islamic Religion	2		Religion Education	52215001	2	1	
2	STI101	Calculus 1	3		Calculus 1	52213003	3	1	
3	STI102	Physics	2		Physics 1	52213004	2	1	
4	STI103	Introduction to Industrial Engineering	3		Introduction to Industrial Engineering	52213005	3	1	
5	STI104	Programming Logic	3		Programming Logics	52223002	3	2	
6	STI105	Fundamental of Industrial Engineering Design	3		Basic of Industrial Engineering Design	52213007	3	1	
7	STI106	Linear Algebra	2		Matrix and Vector	52213008	2	1	
8	STI107	Biology: Anatomy and Physiology	2		Physiology and Work Measurement	52232002	4	3	
		Total Credits	20				22		

Semester 2

No	Course's Code	New Course	Credits	New Score	Old Course	Course's Code	Credits	Sem	Old Score
1	UNI601	Islam Ulil Albab	3		Ibadah & Akhlaq	52225001	2	2	
2	UNI603	Pancasila	2		Pancasila and Civil Education	52215002	3	1	
3	UNI607	Scientific Writing	2		Academic Writing and Communication	52215006	3	1	
4	STI201	Calculus 2	3		Calculus 2	52223003	3	2	
5	STI202	Electromagnetism	2		Physics 2	52223004	2	2	
6	STI203	Statistics 1	2		Industrial Statistics 1	52223006	2	2	
7	STI204	Mechanics	2		Engineering Mechanics	52223007	2	2	
8	STI205	Introduction to Economics	2		Introduction to Economics	52223010	2	2	
9	STI206	Materials Chemistry	2		Materials Science	52223008	2	2	

		Total Credits	20				21		
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Semester 3

No	Course's Code	New Course	Credits	New Score	Old Course	Course's Code	Credits	Se m	Old Score
1	UNI606	English	2		Academic Writing and Communication	52215006	3	1	
2	STI301	Work Method and Measurement	2		Physiology and Work Measurement	52232002	4	3	
3	STI302	Manufacturing Process	3		Manufacturing Process	52233003	3	3	
4	STI303	Optimization	3		Optimization	52233004	3	3	
5	STI304	Statistics 2	3		Industrial Statistics 2	52233005	3	3	
6	STI305	Cost Analysis and Estimation	2		Cost Estimation and Analysis	52233006	2	3	
7	STI306	Production Planning and Control 1	2		Production Planning & Control 1	52242001	3	4	
8	STI307	Physics Laboratory Works	1		Physics Laboratory	52223005	1	2	
9	STI308	Environmental Chemistry	2		Environmental Science	52233008	2	3	
		Total Credits	20				24		

Semester 4

No	Course's Code	New Course	Credits	New Score	Old Course	Course's Code	Credits	Se m	Old Score
1	STI401	Stochastic Model	3		Stochastic Model	52243002	3	4	
2	STI402	Engineering Economics	2		Engineering Economics	52243003	2	4	
3	STI403	Work System Design & Ergonomics	3		Ergonomics and Work System Engineering	52242004	3	4	
4	STI404	Database Management System	3		Database Management System	52243005	3	4	
5	STI405	Quality Control and Assurance	3		Quality Control & Assurance	52243006	3	4	
6	STI406	System Modeling	2		System Modeling	52252004	2	5	
7	STI407	Production Planning and Control 2	2		Production Planning & Control 2	52252003	2	5	

8	STI408	Industrial Psychology	2		Industrial Psychology	52235007	2	3	
		Total Credits	20				20		

Semester 5

No	Course's Code	New Course	Credits	New Score	Old Course	Course's Code	Credits	Sem	Old Score
1	UNI605	Sharia Entrepreneurship	2		Islamic Entrepreneurship	52272001	2	7	
2	STI501	Decision Analysis & Data Mining	3		Decision Analysis & Data Mining	52252005	3	5	
3	STI502	Occupational Safety and Health (OSH)	2		Chemistry	52223009	2	2	
					Occupational Safety and Health (OSH)	52262014	3	Elective Course	
4	STI503	Productivity Engineering	2		Productivity Engineering	52272003	3	7	
5	STI504	Intelligent System	2		Intelligent System	52262001	2	6	
6	STI505	Industrial Organization Design	2		Design of Industrial Organization	52242007	2	4	
7	STI506	Project Management	2		Project Management	52252007	2	5	
8	STI507	Product Design	3		Product Design	52252008	3	5	
9	STI508	Management Information System	2		Management Information System	52252006	2	5	
		Total Credits	20				24		

Semester 6

No	Course's Code	New Course	Credits	New Score	Old Course	Course's Code	Credits	Sem	Old Score
1	STI601	Facility Layout Design	3		Facility Planning & Layout	52252002	3	5	
2	STI602	Enterprise Resource Planning	3		Enterprise Resource Planning	52262002	3	6	
3	STI603	Enterprise Analysis and Design	3		Enterprise Analysis & Design	52262003	3	6	

4	STI604	Integrated Industrial System Design	3		Design of Integrated Industrial System	52262004	3	6	
5	STI605	Computer Simulation	3		Computer Simulation	52262005	3	6	
6	STI606	Basic Research Methodology	2		Basic Research Methodology	52273002	2	7	
7	STI607	Supply Chain Management	3		Supply Chain Management	52272004	3	7	
		Total Credits	20				20		

Semester 7

No	Course's Code	New Course	Credits	New Score	Old Course	Course's Code	Credits	Sem	Old Score
1	UNI602	Islam Rahmatan lil Alamin	3		Islamic Leadership	52235001	2	3	
					Islamic Civilization & Thoughts	52255001	2	2	
2	UNI604	Civic Education	2		Pancasila and Civil Education	52215002	3	1	
3	UNI608	Community Service	2		Regular Community Service 1	52225608	2	7	
4	STI9XX	Elective Course 1	3		Elective Course 1		3	6	
5	STI9XX	Elective Course 2	3		Elective Course 2		3	7	
6	STI9XX	Elective Course 3	3		Elective Course 3		3	7	
		Total Credits	16				18		

Semester 8

No	Course's Code	New Course	Credits	New Score	Old Course	Course's Code	Credits	Sem	Old Score
1	STI801	Undergraduate Thesis	5		Undergraduate Thesis	52282001	5	8	
2	STI802	Internship	3		Internship	52262007	3	6	
		Total Credits	8				8		

LIST OF ELECTIVE COURSE**Expertise Group : Industrial Management**

Code	Course Subject (New)	CREDITS	Course Subject (Previous)	Code	CREDITS
STI901	Human Capital Management	3	Human Capital Management	52262001	3
STI902	Strategic Management	3	Strategic Management	52262002	3
STI903	Knowledge Management	3	Knowledge Management	52262003	3
STI904	Technology Management	3	Technology Management	52262004	3
STI905	Risk Management	3	Risk Management	52262005	3
STI906	Financial Engineering	3	Financial Engineering	52262006	3
STI907	Asset Management	3	Asset Management	52262007	3
STI908	Service Management	3	Service Management	52262008	3
STI909	Decision Support System	3	Decision Support System	52262009	3
STI910	Industrial Marketing	3	Industrial Marketing	52262010	3
STI911	Analysis and Design in MIS	3	-	-	-
STI912	Business Process Management	3	Special Topics	52272017	3
STI913	Business Process Integration	3	Business Proces Integration	52272008	3

Expertise Group : Operational Research

Code	Course Subject (New)	CREDITS	Course Subject (Previous)	Code	CREDITS
STI914	Six Sigma	3	Six Sigma	52272011	3
STI915	Multivariate Analysis	3	Multivariate Analysis	52272012	3
STI916	Advanced Simulation	3	System Dynamics	52272013	3
STI917	Data Science	3	Agent Based Modeling & Simulation	52272014	3
STI918	Quality Engineering	3	Quality Engineering	52272015	3
STI919	Business Intelligence	3	Business Inteligent	52272016	3
STI950	Metaheuristic	3	-	-	-

Expertise Group : Production System

Code	Course Subject (New)	CREDITS	Course Subject (Previous)	Code	CREDITS
STI921	Advanced Automation	3	Advanced Automation	52272001	3
STI922	Lean and Green Manufacturing	3	Lean Manufacturing	52272002	3
STI923	Halal Supply Chain Management	3	Halal Supply Chain Management	52272003	3
STI924	Intelligent Manufacturing Sytem	3	Intelligent Manufacturing Sytem	52272004	3
STI925	Maintenance Management	3	Maintenance Management	52272006	3
STI926	Humanitarian Logistics	3	Humanatarian Logistics	52272009	3
STI927	TRIZ for Product Design	3	-	-	-
STI928	Logistics Management	3	Logistics Management	52272012	3

STI929	SCM Performance Management	3	-	-	-
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Expertise Group : Ergonomics

Code	Course Subject (New)	CREDITS	Course Subject (Previous)	Code	CREDITS
STI930	Human Computer Interaction	3	Human Computer Interaction	52262015	3
STI931	Man Machine System	3	Man Machine System	52262016	3
STI932	Industrial Ergonomics	3	Industrial Ergonomics	52262017	3
STI933	Enviromental Ergonomics	3	Enviromental Ergonomics	52262018	3
STI934	Ergonomics Design for Special Purpose	3	Ergonomics Design for Special Purpose	52262019	3
STI935	Cognitive Ergonomics	3	Cognitive Ergonomic	52262020	3
STI936	Macro Ergonomics	3	Macro Ergonomic	52262021	3
STI937	Environment Occupational Health and Safety	3	Occupational Health and Safety	52262014	3
STI938	Transport safety	3	-	-	-

Special Elective Course

Code	Course Subject (New)	CREDITS
STI939	Special Topics in Industrial Management	3
STI940	Special Topics in Operational Research	3
STI941	Special Topics in Production System	3
STI942	Special Topics in Ergonomics	3
STI943	Operations Research	3
STI944	Production System	3
STI945	Advanced System Modelling	3
STI946	The Philosophy of Industrial Engineering	3
STI947	Capita Selecta	3
STI948	Industrial System Analysis	3
STI949	Technopreneurship	3