

Undergraduate Curriculum

Compulsory Courses

First Year					
Semester 1			Semester 2		
Code	Course Name	Credits	Code	Course Name	Credits
UG1849xx	Religion Studies	2	UG184914	English	2
UG184912	Bahasa Indonesia	2	SF184202	Physics 2	3
SF184101	Physics 1	4	KM184201	Mathematics 2	3
UG184913	Civics	2	TI184202	Engineering Drawing	2
SK184101	Chemistry 1	3	UG184911	Pancasila	2
KM184101	Mathematics 1	3	TI184204	Engineering Materials	3
TI184101	Introduction to Industrial and System Engineering	2	TI184203	Engineering Statistics 1	3
Total credits at Semester 1		18	Total credits at Semester 2		18
Second Year					
Semester 3			Semester 4		
TI184305	Introduction to Economics	3	TI184411	Algorithm and Computer Programming	3
TI184306	Engineering Statistics 2	3	TI184412	Industrial Automation	3
TI184307	Cost Analysis and Estimation	3	TI184413	Method Engineering and Work Measurement	3
TI184308	Manufacturing Process	3	TI184414	Manufacturing System	3
TI184309	Ergonomics	3	TI184415	Engineering Economy	3
TI184310	Operation Research 1	3	TI184416	Operation Research 2	3
Total credits at Semester 3		18	Total credits at Semester 4		18
Third Year					
Semester 5			Semester 6		
TI184517	Quality Control Techniques	3	TI184623	Maintenance and Reliability Engineering	3
TI184518	Production Planning and Inventory Control	3	TI184624	Facility Planning	3
TI184519	Basic Mechanics Engineering	3	TI184625	System Modeling	3
TI184520	Product Design and Development	3	TI184626	Logistics System	3
TI184521	Organization and Human Resource Management	3	TI1849XX	Elective Course 1	3
TI184522	Industrial System Simulation	3	TI1849XX	Elective Course 2	3
Total credits at Semester 5		18	Total credits at Semester 6		18
Fourth Year					
Semester 7			Semester 8		
TI184727	Industrial Ecology	2	TI184830	Project Management	2
TI184728	Supply Chain Management	3	TI184831	Business Information System Design	3
TI184729	Industrial Planning	4	TI184832	Practical Work	2
UG184916	Concept of Technology	3	UG184915	Technopreneurship	2
TI1849XX	Elective Course 3	3	TI1849XX	Elective Course 4	3
	Enrichment Course (Interdepartmental course)	3	TI184833	Final Project	6
Total credits at Semester 7		18	Total credits at Semester 8		18

Elective Courses

No.	Code	Course Name	Coordinator (Laboratory)	Credits
1	TI184901	Applied Ergonomics	EPSK	3
2	TI184902	Ergo Safety	EPSK	3
3	TI184903	Macro Ergonomics	EPSK	3
4	TI184904	Methods and Work System Design	EPSK	3
5	TI184905	Physiology and Work Biomechanics	EPSK	3
6	TI184906	Human Factors in Product Design*	EPSK	3
7	TI184907	Visual Ergonomics*	EPSK	3
8	TI184908	Human Reliability	EPSK	3
9	TI184909	Cognitive Ergonomics	EPSK	3
10	TI184910	Office Ergonomics*	EPSK	3
11	TI184921	Productivity Analysis	SISMAN	3
12	TI184922	Computer Integrated Manufacturing	SISMAN	3
13	TI184923	Concurrent Engineering	SISMAN	3
14	TI184924	Technology Management*	SISMAN	3
15	TI184925	Six Sigma	SISMAN	3
16	TI184926	Sustainable Manufacturing	SISMAN	3
17	TI184927	Industrial Environmental Management	SISMAN	3
18	TI184928	Quality Management*	SISMAN	3
19	TI184929	Experimental Design*	SISMAN	3
20	TI184930	Quality Engineering Learning Design	SISMAN	3
21	TI184931	Value Engineering*	SISMAN	3
22	TI184932	Process Capability Analysis*	SISMAN	3
23	TI184933	Lean Concept & Its Applications	SISMAN	3
24	TI184941	Multi Criteria Decision Making	QMIPA	3
25	TI184942	Large Scale Optimization*	QMIPA	3
26	TI184943	Data Mining	QMIPA	3
27	TI184944	Metaheuristics Optimization	QMIPA	3
28	TI184945	Production Scheduling*	QMIPA	3
29	TI184946	System Dynamics Methodology	QMIPA	3
30	TI184947	Facility Layout Modeling*	QMIPA	3
31	TI184948	Constraint Theory*	QMIPA	3
32	TI184949	Game Theory	QMIPA	3
33	TI184951	Decision Analysis	QMIPA	3
34	TI184952	Applied Discrete Event Simulation	QMIPA	3
35	TI184962	Enterprise Resource Planning	LSCM	3
36	TI184963	Procurement and Material Management	LSCM	3

No.	Code	Course Name	Coordinator (Laboratory)	Credits
37	TI184964	Air Transportation Management	LSCM	3
38	TI184965	Distribution Management	LSCM	3
39	TI184970	Supply Chain Engineering*	LSCM	3
40	TI184966	Retail Supply Chain Management	LSCM	3
41	TI184971	Business Process Re-Engineering	PSMI	3
42	TI184972	Service Management	PSMI	3
43	TI184973	Performance Management	PSMI	3
44	TI184974	Knowledge Management	PSMI	3
45	TI184975	Corporate Strategy*	PSMI	3
46	TI184976	Financial Management	PSMI	3
47	TI184977	Managerial Accounting*	PSMI	3
48	TI184978	Organizational Behavior*	PSMI	3
49	TI184979	Corporate Risk Management	PSMI	3
50	TI184980	Industrial Cluster	PSMI	3
51	TI184981	E-Business and E-Commerce*	PSMI	3
52	TI184982	Industrial Economics*	PSMI	3
53	TI184983	Agent-Based Modelling	PSMI	3
54	TI184984	Business Valuation*	PSMI	3
55	TI184985	Marketing Management*	PSMI	3
56	TI184986	Strategic Management	PSMI	3

Note:

- EPSK : The Ergonomics and Work System Design Laboratory
- SISMAN : The Manufacturing Systems Laboratory
- QMIPA : The Quantitative Modelling and Industrial Policy Analysis Laboratory
- PSMI : The Logistic and Supply Chain Management Laboratory

A course with an asterisk symbol (*) is not offered in the last two (2) years, and its learning plan is not included in this document.