

**Struktur dan Sillabus Mata Kuliah
Kurikulum 2025
Program Studi Teknik Industri (S-1)
Institut Teknologi Kalimantan**

SEMESTER I						SEMESTER I				
No.	Kode MK	Nama MK	sks	Prasyarat		No.	Course Code	Course	ECTS	Prasyarat
1	KU2511001	Bahasa Indonesia	2			1	KU2511001	Bahasa Indonesia	3,02	
2	KU2512026	Fisika 1	3			2	KU2512026	Physics 1	4,53	
3	TI2514001	Fisiologi	2			3	TI2514001	Physiology	3,02	
4	KU2512019	Kimia	4			4	KU2512019	Chemistry	6,04	
5	KU2512025	Matematika 1	3			5	KU2512025	Mathematics 1	4,53	
6	TI2514002	Pengantar Teknik Industri	2			6	TI2514002	Introduction to Industrial Engineering	3,02	
7	TI2514003	Teori Probabilitas	3			7	TI2514003	Probability Theory	4,53	
		Total	19					Total	28,71	
SEMESTER II						SEMESTER II				
No.	Kode MK	Nama MK	sks	Prasyarat		No.	Course Code	Course	ECTS	Prasyarat
1	KU2512110	Algoritme dan Pemrograman	3			1	KU2512110	Algorithms and Programming	4,53	
2	TI2514004	Aljabar Linier	3			2	TI2514004	Linear Algebra	4,53	
3	TI2514005	Analisis dan Estimasi Biaya	3			3	TI2514005	Cost Estimation and Analysis	4,53	
4	KU2513001	Bahasa Inggris	2			4	KU2513001	English	3,02	
5	KU2512028	Fisika 2	3	Fisika 1		5	KU2512028	Physics 2	4,53	Physics 1
6	KU2512027	Matematika 2	3	Matematika 1		6	KU2512027	Mathematics 2	4,53	Mathematics 1
7	TI2514006	Statistika	3			7	TI2514006	Statistics	4,53	
		Total	20					Total	30,22	
SEMESTER III						SEMESTER III				
No.	Kode MK	Nama MK	sks	Prasyarat		No.	Course Code	Course	ECTS	Prasyarat

1	TI2514007	Ekologi	3			TI2514007	Ecology	4,53	
2	TI2514008	Ekonomika	3			TI2514008	Economics	4,53	
3	TI2514009	Ergonomika	3			TI2514009	Ergonomics	4,53	
4	TI2514010	Gambar Teknik	3			TI2514010	Engineering Drawing	4,53	
5	TI2514011	Ilmu Material	2			TI2514011	Material Science	3,02	
6	TI2514012	Mekanika Teknik	2			TI2514012	Engineering Mechanics	3,02	
7	TI2514013	Riset Operasi 1	3			TI2514014	Operations Research 1	4,53	
		Total	19				Total	28,71	
SEMESTER IV					SEMESTER IV				
No.	Kode MK	Nama MK	sks	Prasyarat	No.	Course Code	Course	ECTS	Prasyarat
1	TI2514014	Perancangan Sistem Kerja	3	Ergonomika	1	TI2514013	Work System Design	4,53	Ergonomics
2	TI2514015	Analisis Multivariat	3	Statistika	2	TI2514015	Multivariate Analysis	4,53	Statistics
3	TI2514016	Kesehatan dan Keselamatan Kerja	3		3	TI2514016	Occupational Health and Safety	4,53	
4	TI2514017	Manajemen Organisasi dan Sumber Daya Manusia	3		4	TI2514017	Organization and Human Resources Management	4,53	
5	KU2511002	Pancasila	2		5	KU2511002	Pancasila	3,02	
6	TI2514018	Proses dan Sistem Manufaktur	3	Ilmu Material, Mekanika Teknik	6	TI2514018	Manufacturing Processes and Systems	4,53	Material Science, Engineering Mechanics
7	TI2514019	Riset Operasi 2	3	Riset Operasi 1	7	TI2514019	Operations Research 2	4,53	Operations Research 1
		Total	20				Total	30,22	
SEMESTER V					SEMESTER V				
No.	Kode MK	Nama MK	sks	Prasyarat	No.	Course Code	Course	ECTS	Prasyarat

1	TI2514020	Analisis Keputusan	3	Riset Operasi 1	1	TI2514020	Decision Analysis	4,53	Operations Research 1
2	TI2514021	Manajemen Proyek	3	Manajemen Organisasi dan Sumber Daya Manusia, Analisis dan Estimasi Biaya	2	TI2514021	Project Management	4,53	Organization and Human Resources Management, Cost Estimation and Analysis
3	KU2513002	Manajemen Sumber Daya	2		3	KU2513002	Resource Management	3,02	
4	TI2514022	Pemodelan dan Simulasi Sistem	3	Riset Operasi 1	4	TI2514022	Systems Modeling and Simulation	4,53	Operations Research 1
5	TI2514023	Perancangan dan Pengembangan Produk	3	Gambar Teknik	5	TI2514023	Product Design and Development	4,53	Engineering Drawing
6	TI2514024	Perencanaan dan Pengendalian Produksi	3	Proses dan Sistem Manufaktur	6	TI2514024	Production Planning and Control	4,53	Manufacturing Processes and Systems
7	KU2513004	Kewirausahaan Berbasis Teknologi	2		7	KU2513004	Technopreneurship	3,02	
		Total	19				Total	28,71	
SEMESTER VI					SEMESTER VI				
No.	Kode MK	Nama MK	sks	Prasyarat	No.	Course Code	Course	ECTS	Prasyarat

1	TI2514025	Pengendalian dan Penjaminan Mutu	3	Statistika, Proses dan Sistem Manufaktur	1	TI2514025	Quality Control and Assurance	4,53	Statistics, Manufacturing Processes and Systems
2	KU25110-4	Agama	2		2	KU25110-4	Religion	3,02	
3	KU2513003	Inovasi Sosial	2		3	KU2513003	Social Innovation	3,02	
4	TI2514026	Manajemen Kinerja	3	Manajemen Organisasi dan Sumber Daya Manusia	4	TI2514026	Performance Management	4,53	Organization and Human Resources Management
5	TI2514027	Manajemen Rantai Pasok	3	Proses dan Sistem Manufaktur	5	TI2514027	Supply Chain Management	4,53	Manufacturing Processes and Systems
6	TI2514028	Pemodelan Prediktif	3	Statistika	6	TI2514028	Predictive Modeling	4,53	Statistics
7	TI2514029	Perancangan Fasilitas	3	Perancangan Sistem Kerja	7	TI2514029	Facility Design	4,53	Work System Design
		Total	19				Total	28,71	
SEMESTER VII					SEMESTER VII				
No.	Kode MK	Nama MK	sks	Prasyarat	No.	Course Code	Course	ECTS	Prasyarat
1	TI2514030	Desain Riset	2	Bahasa Indonesia, Kerja Praktik	1	TI2514030	Research Design	3,02	Bahasa Indonesia, Internship
2	TI2515031	Kerja Praktik	2	Kesehatan dan Keselamatan Kerja	2	TI2515031	Internship	3,02	Occupational Health and Safety

3	KU2511003	Kewarganegaraan	2		3	KU2511003	Civics	3,02	
4	TI2515xx	Mata Kuliah Pilihan 1	3		4	TI2515xx	Elective Course 1	4,53	
5	TI2515xx	Mata Kuliah Pilihan 2	3		5	TI2515xx	Elective Course 2	4,53	
6	TI2514032	Perancangan Sistem Terpadu	4		6	TI2514032	Integrated Capstone Design	6,04	
		Total	16				Total	24,18	
SEMESTER VIII					SEMESTER VIII				
No.	Kode MK	Nama MK	sks	Prasyarat	No.	Course Code	Course	ECTS	Prasyarat
1	TI2515xx	Mata Kuliah Pilihan 3	3		1	TI2515--	Elective Course 3	4,53	
2	TI2515xx	Mata Kuliah Pilihan 4	3		2	TI2515--	Elective Course 4	4,53	
3	TI2516033	Tugas Akhir	6		3	TI2516033	Undergraduate Thesis	9,07	
		Total	12				Total	18,13	
Mata Kuliah Pilihan (Rekayasa dan Manajemen Manufaktur)					ELECTIVE COURSE (Manufacture Engineering and Management)				
No	Kode	Mata Kuliah	SKS	Prasyarat	No.	Course Code	Course	ECTS	Prasyarat
1	TI2515001	Green Lean Six Sigma	3	Proses dan Sistem Manufaktur	1	TI2515001	Green Lean Six Sigma	4,53	Manufacturing Processes and Systems

2	TI2515002	Manajemen Pergudangan	3	Proses dan Sistem Manufaktur	2	TI2515002	Warehouse Management	4,53	Manufacturing Processes and Systems
3	TI2515003	Manajemen Persediaan	3	Proses dan Sistem Manufaktur	3	TI2515003	Inventory Management	4,53	Manufacturing Processes and Systems
4	TI2515004	Manufaktur Berkelanjutan	3	Proses dan Sistem Manufaktur	4	TI2515004	Sustainable Manufacturing	4,53	Manufacturing Processes and Systems
5	TI2515005	Pemeliharaan dan Teknik Keandalan	3	Statistika	5	TI2515005	Maintenance dan Reliability Engineering	4,53	Statistics
6	TI2515006	Standarisasi Mutu	3	Proses dan Sistem Manufaktur	6	TI2515006	Quality Standardization	4,53	Manufacturing Processes and Systems
7	TI2515007	Rekayasa Produktivitas	3	Perancangan Sistem Kerja	7	TI2515007	Productivity Engineering	4,53	Work System Design
8	TI2515008	Rekayasa Kualitas	3	Statistika	8	TI2515008	Quality Engineering	4,53	Statistics
		Total					Total		
Mata Kuliah Pilihan (Ergonomi Industri)					ELECTIVE COURSE (Ergonomic)				
No	Kode	Mata Kuliah	SKS	Prasyarat	No.	Course Code	Course	ECTS	Prasyarat
1	TI2515009	Ergonomika Kognitif Lanjut	3	Ergonomika	1	TI2515009	Advanced Cognitive Ergonomics	4,53	Ergonomics

2	TI2515010	Ergonomika Fisik Lanjut	3	Ergonomika	2	TI2515010	Advanced Physical Ergonomics	4,53	Ergonomics
3	TI2515011	Topik Mutakhir di Bidang Ergonomika	3	Ergonomika	3	TI2515011	Current Topics in Ergonomics	4,53	Ergonomics
4	TI2515012	Ergonomika Lingkungan	3	Ergonomika	4	TI2515012	Environmental Ergonomics	4,53	Ergonomics
5	TI2515013	Ergonomika makro	3	Ergonomika	5	TI2515013	Macroergonomics	4,53	Ergonomics
6	TI2515014	Antropometri dalam Desain Kerja	3	Ergonomika	6	TI2515014	Anthropometry in Work Design	4,53	Ergonomics
Mata Kuliah Pilihan (Analitika Data Dan Riset Operasi)					ELECTIVE COURSE (Data Analitic and Operation Research)				
No	Kode	Mata Kuliah	SKS	Prasyarat	No.	Course Code	Course	ECTS	Prasyarat
1	TI2515015	Analitika Pemasaran	3	Statistika	1	TI2515015	Marketing Analytics	4,53	Statistics
2	TI2515016	Analitika Pembangunan Berkelanjutan	3	Riset Operasi 1	2	TI2515016	Sustainable Development Analytics	4,53	Operations Research 1
3	TI2515017	Aplikasi Kecerdasan Buatan	3	Statistika	3	TI2515017	Artificial Intelligence Applications	4,53	Statistics
4	TI2515018	Dinamika Sistem	3	Riset Operasi 1	4	TI2515018	System Dynamics	4,53	Operations Research 1
5	TI2515019	Metaheuristika	3	Riset Operasi 1	5	TI2515019	Metaheuristics	4,53	Operations Research 1

6	TI2515020	Pemodelan Berbasis Agen	3	Riset Operasi 1	6	TI2515020	Agent-Based Modelling	4,53	Operations Research 1
7	TI2515021	Pemrograman Matematis Terapan	3	Riset Operasi 1	7	TI2515021	Applied Mathematical Programming	4,53	Operations Research 1
8	TI2515022	Penjadwalan	3	Riset Operasi 1	8	TI2515022	Scheduling	4,53	Operations Research 1
9	TI2515023	Teori Permainan	3	Riset Operasi 1	9	TI2515023	Game Theory	4,53	Operations Research 1
10	TI2515024	Visualisasi Data	3	Statistika	10	TI2515024	Data Visualization	4,53	Statistics
Mata Kuliah Pilihan (Manajemen Industri)					ELECTIVE COURSE (Data Analitic and Operation Research)				
No	Kode	Mata Kuliah	SKS	Prasyarat	No.	Course Code	Course	ECTS	Prasyarat
1	TI2515025	Manajemen Hubungan Pelanggan	3	Manajemen Organisasi dan Sumber Daya Manusia	1	TI2515026	Customer Relationship Management	4,53	Organization and Human Resources Management
2	TI2515026	Manajemen Strategi	3	Manajemen Organisasi dan Sumber Daya Manusia	2	TI2515027	Strategy Management	4,53	Manajemen Organisasi dan Sumber Daya Manusia
3	TI2515027	Pemasaran Digital	3	Ekonomika	3	TI2515028	Digital Marketing	4,53	Economics

4	TI2515028	Rekayasa Proses Bisnis	3	Manajemen Organisasi dan Sumber Daya Manusia	4	TI2515030	Business Process Engineering	4,53	Organization and Human Resources Management
5	TI2515029	Sistem Informasi Manajemen	3	Algoritma Pemrograman	5	TI2515031	Management Information System	4,53	Algorithms and Programming
6	TI2515030	Manajemen Kinerja	3	Manajemen Organisasi dan Sumber Daya Manusia	6	TI2515032	Performance Management	4,53	Organization and Human Resources Management
7	TI2515031	Manajemen Pengetahuan	3	Manajemen Organisasi dan Sumber Daya Manusia	7	TI2515033	Knowledge Management	4,53	Manajemen Organisasi dan Sumber Daya Manusia
Non-Bidang Minat					ELECTIVE COURSE Manufacture Engineering and Management				
No	Kode	Mata Kuliah	SKS	Prasyarat	No.	Course Code	Course	ECTS	Prasyarat
1	KU2515001	Bahasa Inggris Akademik	3			KU2515001	Academic English	4,53	
2	TI2515032	Kapita Selekta	3			TI2515032	Selected Topics	4,53	
3	TI2518033	Proyek Kemanusiaan	10			TI2518033	Humanitarian Project	15,11	
4	TI2518034	Magang Riset	10			TI2518034	Research Internship	15,11	
5	TI2518035	Magang Profesional	10			TI2518035	Professional Internship	15,11	

6	TI2518036	Kewirausahaan	10			TI2518036	Entrepreneurship	15,11	
7	TI2518037	Studi/Proyek Independen	10			TI2518037	Independent Study/Project	15,11	
8	TI2518038	Kuliah Kerja Nyata Tematik	10			TI2518038	Thematic Community Service Project	15,11	
9	TI2515039	Sertifikasi Kompetensi	2			TI2515039	Competency Certification	3,02	
10	TI2515040	Pendampingan Kompetisi Akademik	2			TI2515040	Academic Competition Mentorship	3,02	
11	TI2515041	Pengembangan Profesional	2			TI2515041	Professional Development	3,02	