

Department of **Industrial Engineering**
Undergraduate – Industrial Engineering
FACULTY OF INDUSTRIAL TECHNOLOGY
INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS)

Smt	Code	Courses	Credits
1	IG1106	Concept of Nationalism	3
1	SF1201	Physics I	3
1	SM1203	Calculus I	3
1	TI1201	Introduction to Economics	2
1	TI1202	Engineering Drawing	2
1	TI1203	Introduction to Engineering Materials	3
1	TI1301	Introduction to Industrial Engineering and System	2
2	IG1101	Islam Education*	2
2	IG1102	Protestant Education*	2
2	IG1103	Catholic Education*	2
2	IG1104	Hindu Education*	2
2	IG1105	Buddha Education*	2
2	IG1108	English	3
2	IG1110	Khonghucu Education*	2
2	SM1202	Calculus II	3
2	TI1204	Algorithms and Computer Programming	3
2	TI1205	Physics II	2
2	TI1206	Engineering Mechanics	2
2	TI1302	Industrial Statistics I	3
3	TI1207	Cost Analysis and Estimation	3
3	TI1208	Optimization Mathematics	3
3	TI1209	Industrial Automation	3
3	TI1303	Manufacturing Processing	3
3	TI1304	Industrial Statistics II	3
3	TI1305	Ergonomy for Industry	3
4	TI1210	Industrial Ecology	2
4	TI1211	Thermodynamics	2
4	TI1306	Engineering Economics	3
4	TI1307	Operations Research I	3

Smt	Code	Courses	Credits
4	TI1308	Methods Engineering and Work Measurement	3
4	TI1309	Project Management	2
4	TI1310	Manufacturing System	4
5	IG1107	Concept of Scientific Technology and Communication	3
5	TI1311	System Modeling	3
5	TI1312	Operations Research II	3
5	TI1313	Production Planning and Control	4
5	TI1314	Facilities Planning	3
5	TI1315	Products Design and Development	3
6	TI1212	Organization and Human Resource Management	3
6	TI1316	Quality Control Techniques	3
6	TI1317	Industrial System Simulation	3
6	TI1318	Logistics Management	3
6	TI1319	Industrial Design I	3
6	TI1320	Problem Solving Methodology	2
7	IG1109	Technopreneurship	3
7	TI1321	Reliability Techniques and Maintenance	3
7	TI1322	Information System Design for Business	3
7	TI1323	Industrial Design II	3
7	TI1401	Applied Industrial Ergonomy**	3
7	TI1402	Ergo Safety**	3
7	TI1403	Macro Ergonomics**	3
7	TI1405	Occupational Physiology and Biomechanics**	3
7	TI1406	Human Factors in Product Design**	3
7	TI1407	Visual Ergonomics**	3
7	TI1408	Human Reliability**	3

Smt	Code	Courses	Credits
7	TI1409	Cognitive Ergonomics**	3
7	TI1410	Office Ergonomics**	3
7	TI1421	Productivity Analysis**	3
7	TI1422	Computer Integrated Manufacturing**	3
7	TI1423	Concurrent Engineering**	3
7	TI1424	Technology Management**	3
7	TI1425	Six Sigma**	3
7	TI1426	Sustainable Manufacturing**	3
7	TI1427	Industrial Environmental Management**	3
7	TI1428	Quality Management**	3
7	TI1429	Experiment Design**	3
7	TI1430	Quality Engineering**	3
7	TI1431	Value Engineering**	3
7	TI1441	Multi-Criteria Decision Making**	3
7	TI1443	Data Mining**	3
7	TI1444	Metaheuristic Optimization**	3
7	TI1445	Production Scheduling**	3
7	TI1446	Dynamic System Methodology**	3
7	TI1448	Theory in Constraint**	3
7	TI1449	Game Theory**	3
7	TI1451	Decision Analysis**	3
7	TI1461	Supply Chain Management**	3
7	TI1463	Inventory and Procurement Management**	3
7	TI1465	Distribution Management**	3
7	TI1471	Business Process Engineering**	3
7	TI1472	Service Management**	3
7	TI1473	Performance Management**	3
7	TI1474	Knowledge Management**	3
7	TI1475	Corporation Strategy**	3

* Select one of those with stars

** Elective courses

Smt	Code	Courses	Credits
7	TI1477	Managerial Accounting**	3
7	TI1478	Organizational Behavior**	3
7	TI1481	e-Business and e-Commerce**	3
7	TI1482	Industrial Economics**	3
7	TI1491	Special Topics**	3
7	TI1492	Industrial Internship I**	3

Smt	Code	Courses	Credits
7	TI1493	Industrial Internship II**	3
8	TI1324	Practical Work	2
8	TI1404	Work Method and Station Design**	3
8	TI1442	Large Scale Optimization**	3
8	TI1447	Facilities Layout Modeling**	3
8	TI1462	Enterprise Resource Planning**	3

Smt	Code	Courses	Credits
8	TI1464	Air Transportation Management**	3
8	TI1476	Financial Management**	3
8	TI1479	Corporate Risk Management**	3
8	TI1480	Industrial Cluster**	3
8	TI1501	Final Project	6

* Select one of those with stars

** Elective courses