

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

Smt	Code	Courses	Credits
1	TM3305	Dynamic System Modeling	3
1	TM3311	Dynamics of Machine Tools	3
1	TM3343	Numerical Methods and Computing Techniques	3
1	TM3345	Combustion Technique	3
1	TM3448	Heat Transfer Conduction**	3
1	TM3449	Profile Aerodynamics**	3
1	TM3450	Perpan and Fluid Computing**	3
1	TM3451	Heat Transfer Convection**	3
1	TM3471	Viscous Flow**	3
1	TM3472	Scientific Methods and Professional Ethics**	3
1	TM3473	Planning and Manufacture Engineering**	3
1	TM3474	Thermo-Fluid Dynamics**	3
1	TM3475	Advanced Radiation**	3
1	TM3476	Combustion Thermodynamics**	3
1	TM3477	Heat Transfer for Combustion**	3
1	TM3478	System Modeling**	3
2	TM3302	Finite Element Method	3
2	TM3303	Advanced Chemistry & Dynamics	3
2	TM3304	Advanced Material Mechanics	3
2	TM3306	Machinery Vibration	3
2	TM3307	Machining Processing	3

2	TM3308	Product Design	3
2	TM3309	Statistics & Experiment Planning	3
2	TM3310	Manufacture Control and Planning System	3
2	TM3341	Thermodynamics	3
2	TM3342	Fluid Mechanics	3
2	TM3344	Heat and Mass Transfer	3
2	TM3401	Product Design**	3
2	TM3402	Vehicle Dynamics**	3
2	TM3403	Plate & Shell Analysis**	3
2	TM3404	Composite Mechanics**	3
2	TM3405	Corrosion and The Control**	3
2	TM3406	Design Optimization**	3
2	TM3407	Failure Analysis: Material**	3
2	TM3408	Linear System & Optimal Control**	3
2	TM3409	Nonlinear System and Control**	3
2	TM3410	Vibration Based Damage Analysis**	3
2	TM3411	Vibration Energy Recovery**	3
2	TM3412	Vehicle Comfort and Vibration**	3
2	TM3413	Special Topics**	3
2	TM3421	Manufacture System Simulation and Modeling**	3
2	TM3422	Tool Machine Performance and	3

		Design**	
2	TM3423	Manufacture Metallurgy**	3
2	TM3424	Modern Manufacturing System and Method**	3
2	TM3425	Manufacturing Automation**	3
2	TM3426	Operational Research**	3
2	TM3427	Quality Engineering**	3
2	TM3428	Maintenance Management and Reliability**	3
2	TM3429	Formation Processing**	3
2	TM3430	Material Noncontinuum**	3
2	TM3431	Special Topics**	3
2	TM3441	Energy Management and Economy**	3
2	TM3442	Piston Combustion Motor**	3
2	TM3443	Gas Dynamics**	3
2	TM3444	Solar Energy**	3
2	TM3445	Compressible Turbomachinery**	3
2	TM3446	Environmental Pollution Analysis**	3
2	TM3447	Flow of Two Phase Fluid**	3
2	TM3452	Turbo Engine Machinery**	3
2	TM3453	Special Topics**	3
6	TM3501	Dissertation	30

* Select one of those with stars

** Elective courses