

Peralatan Utama yang Digunakan di Laboratorium

No.	Nama Laboratorium	Jenis Peralatan Utama	Jumlah Unit	Kepemilikan		Kondisi		Rata-rata Waktu Penggunaan (jam/minggu)
				SD	SW	Terawat	Tidak Terawat	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	LABORATORIA KONVERSI ENERGI	Motor Bakar Diesel	1	√		√		3
		Motor Bakar Bensin	2	√		√		3
		Mesin Pendingin Kompresi Uap	1	√		√		3
		Turbin Francis	1	√		√		3
		Turbin Pelton	1	√		√		2
		Air Flowrig	1	√		√		6
		Flowmeter	1	√		√		1,5
		Fluid Friction Aparatus	1	√		√		9
		Hydraulic Bench	1	√		√		9
		Kompresor	1	√		√		2
		Free Vortex	1	√		√		1
		Orifice & Jet Aparatus	1	√		√		1
		Sepeda Motor Honda	3	√		√		1
		Dyno Test	1	√		√		1
		Lab-View Control Air Handling Unit	1	√		√		1
		Real Operating Engines (Petrol Engine)	1	√		√		1
		Real Operating Engines (Diesel Engine)	1	√		√		1
		Temperature Controller	1	√		√		1
		Temperatur, Pressure & Defrost Control Refrigeration Trainer + Program for Performance Measurement	1	√			√	
Mobil eksperimental Toyota VIOS	1	√			√		-	
2	LABORATORIUM KOMPUTER	Komputer	16	√		√ (13)	√ (3)	35
		Printer	1	√		√		15
		Software AutoCAD Inventor 11 (original licence)	11	√		√		5
3	LABORATORIUM DINAMIKA STRUKTUR	Strain Gauge	2	√		√		2
		Multimeter Digital	1	√		√		2
		Conditional Amplifier	1	√		√		6
		Akselerometer	5	√		√		2
		Impact Hammer	1	√		√		1
		Pulse Analyzer	1	√		√		6
		Vibration Generator	1	√		√		2
		Eddy Current Probe dan driver	2	√		√		2
Osiloskop, GW Instek	2	√		√		2		

		Vernier Caliper, Mitotoyo	2	√		√		2
		Power Amplifier	1	√		√		4
		Inverter Frekuensi	1	√		√		2
		Dynamic Signal Analyzer (B&K)	1	√		√		2
		Multifunction Data Acquisition + Software (NI)	1	√		√		1
		Digital Function generator (B&K)	1	√		√		1
		Microphone (B&K)	1	√		√		2
		Microphone preamplifier (B&K)	1	√		√		2
		350 Watt D.C. Power Supply	1	√		√		4
		Accelerometer (B&K)	2	√		√		2
4	LABORATORIUM DINAMIKA FLUIDA	Wind Tunnel	1	√		√		1
		Dynamic Signal Analyzer	1	√		√		1
		Osiloskop	3	√		√		1
		Manometer	1	√		√		1
		Digital Signal Processing	1	√		√		1
		Porta Smoke	1	√		√		1
		Multyfunction Shyazer	1	√		√		1
		Graphtec	1	√		√		1
		GP-IB Interface	1	√		√		1
		DC Motor Speed Control	1	√		√		1
		5	LABORATORIUM INTI TEKNOLOGI PRODUKSI & CAD/CAM	Mesin Bubut	2	√ (1)	√ (1)	√
Mesin Freis	2			√ (1)	√ (1)	√		10
Mesin Skrap	2			√ (1)	√ (1)	√		10
Mesin Gurdi	1			√		√		15
CNC Machining Center MC 520	1			√			√	-
Lathe Center NC S20	1				√	√		2
CNC 3-Axis Training Machine	1			√		√		4
PC + Software CAD-CAM System	5			√		√		4
Mesin Rolling	1				√	√		1
Gergaji (Rack Saw)	1			√		√		10
Kompresor	1			√		√		4
Mesin Tekuk Bending	1			√		√		4
Mesin Gerinda Rata	1			√		√		2
Mesin Gerinda (pedestal grinder)	1			√		√		15
Mesin Cutting	1				√		√	-
6	LABORATORIUM MEKATRONIKA DAN OTOMASI PRODUKSI	Power Supply	1	√		√		6
		Festo Suystem Control Apparatus	1	√		√		1
		PLC (Omron)	2	√		√		6
		Osiloskop	2	√		√		6
		Multimeter	2	√		√		6

		Bor Tangan	1	√	√		6
		Sensor	5	√	√		6
		Mikrokontroler	5	√	√		6
		Kit Mikro	10	√	√		6
		Aktuator	5	√	√		6
		PLC-Trainer, MELSEC-Q, Mitsubishi	1	√	√		1
		Mikroprocessor- Trainer	1	√	√		1
		3D Printer (Rapid prototyping)	1	√	√		1
		High-Speed Function Generator					6
7	LABORATORIUM METALURGI	Universal Testing Machine	1	√	√		10
		Rockwell Hardness Tester	1	√	√		6
		Tungku	1	√	√		6
		Aparatus Jominy	1	√	√		2
		Mesin Uji Tarik Komposit 2.2 ton	2	√	√		5
		Mesin Gerinda	1	√	√		12
		Alat Uji Impak	1	√	√		2
		Erichsen Testing Machine	1	√		√	-
		Mesin Poles	1	√	√		6
		Mesin Amplas Sabuk	1	√	√		6
		Alat Uji Tarik Mini	1	√	√		2
		Mesin Las Titik	1	√	√		5
		Mesin Press Hidrolik Kap. 50 ton	2	√	√		6
		Mesin Gerinda Tangan	1	√	√		10
		Desicator	1	√	√		40
		Ultrasonic test	1	√	√		5
		Thread rolling machine	1	√		√	-
		Deep drawing apparatus	1	√		√	-
		Rolling machine	1	√		√	-
		Fatigue test machine	1	√		√	-
		Las MIG dan TIG	3	√	√		4
		Mesin Las SMAW	3	√	√		8
		Optical Microscope	4	√	√		8
		Inverted Polarization Microscope	1	√	√		2
		Polarization microscope	1	√	√		2
		Stereo Microscope	2	√	√		4
		SEM (Scanning Electron Microscope)	1	√	√		16
		Benchtop Optical Emission Spectrometer	1	√	√		2
		Gold Coater	1	√	√		1
		Ultrasonic cleaner	1	√	√		2
		EDX attachment on SEM	1	√	√		16
		Planetary ball mill	1	√	√		4

		Shieve Vibrator	1	√	√		8
		Mikroskop optic inverter	1	√	√		4
		Micro Vickers Hardness Tester	1	√	√		2
		Automated Tensile and Compression Test System + Software + Fixtures + Clamp	1	√	√		6
		Induction Heating Machine	1	√		√	-
		Balance (high precision)	1	√	√		2
		CeramFireS Vacuum Porcelain Furnace	1	√	√		4
		Digital Microscope	1	√	√		2
8	LABORATORIUM TERMODINAMIKA	Alat Uji Gasifikasi	1	√	√		2
		Alat Pengering Padi	1	√	√		10
		Alat Pengering Gambir	1	√	√		10
		Tungku Pemanas	1	√	√		15
		Kulkas Pengering	1	√	√		40
		Blower	2	√	√		10
		Dual-Element Heating Tapes - 120 VAC	1	√	√		2
		RH/temperature transmitter	1	√	√		2
		Portable Vacuum Meter	1	√	√		2
		Balance, Ohaus	1	√	√		4
		Regenerative blower, Cole Palmer	1	√	√		2
		Digital manometer	2	√	√		2
		Moisture analyzer	1	√	√		2
		Wheaton Dry-Seal Vacuum Desiccators	1	√	√		40
		Multifunction Data Acquisition & Software (National Instrumen)	1	√	√		2
		9	LABORATORIUM METROLOGI INDUSTRI	Vernier Caliper kec. 0,05 ; 0,02 mm	5	√	√
Mikrometer 0-25 mm	3			√	√		10
High caliper (manual), kec. 0,02 mm	1			√	√		2
Mikrometer Rahang, 6 range kap 25- 150 mm	1 (set)			√	√		6
High Pretester	1			√	√		1
Dial Indicator	5			√	√		10
Telescope gauge	1			√	√		6
Dial Bore Gauge	1			√	√		6
Surface Roghness Tester (SJ- 402)	1			√		√	-
Surface Roghness Tester (SJ- 301)	1			√	√		10
Pupitas (dial test indicator)	3			√	√		5
Precision Spirit Level, Sensivity 0,4; 0,1, 015 mm/m	5			√	√		8
Universal Bevel Protactor	2			√	√		1
Gauge blocks, Grade 0	1			√	√		1
Gauge blocks,112 set, Grade 01	1	√	√		4		

		Meja rata granit 600x800 mm	1	√	√		4
		Meja rata besi cor 1200x800 mm	1	√	√		4
		High caliper, digmatic system	1	√	√		1
		Tool Microscope	1	√	√		10
		Triobore, kec. 0,005 mm, 3 jenis ukuran	3	√	√		4
		Blok V 414 (2 set) dan 419 (2 set)	4	√	√		4
		Universal bench Compator	1	√	√		1
		Parallel Optic	1	√	√		1
10	LABORATORIUM KONSTRUKSI MESIN	Alat Praktikum Governor (buatan sendiri)	1	√	√		6
		Alat Praktikum Getaran (buatan sendiri)	1	√		√	6
		Alat Praktikum Putaran Kritis (buatan sendiri)	1	√	√		6
		Alat Praktikum Defleksi (buatan sendiri)	1	√		√	6
		Alat Praktikum Efek Girooskop	1	√	√		6
		Alat Praktikum Governor	1	√	√		6
		Alat Praktikum <i>Static & Dynamic Unbalance</i>	1	√	√		6
		Vibration Analysis	1	√	√		1
		Chasis Front-Wheel Drive Transversal Position	1	√	√		1
		Braking System (Disc Brake)	1	√	√		1
		Braking System (Drum Brake)	1	√	√		1
		Multi-Purpose Digital Indicator	1	√	√		2
		S-Type Load Cell	1	√	√		1
		11	LABORATORIUM ENERGI TERBARUKAN DAN SURYA	Solar Power Generation Experiment	1	√	√
Mesin Las 900 W	1			√	√		4
Solarimeter	1			√	√		2
Multimeter Digital	1			√	√		2
Thermometer	4			√	√		2
Higrometer	1			√	√		2
Luxmeter	1			√	√		2
Solar Charge Controller	1			√	√		2
Portable Electronic Scale	1			√	√		2
Inverter 500 W	1			√	√		2
Stabilizer	2			√	√		2
Komputer	4			√	√		2
Solar Cell panel	2			√	√		2
Solar Cell tracker Equipment (buatan sendiri)	1			√	√		2
Modul Surya Shinyoku 100WP	1			√	√		1
Solar Controller	1			√	√		1
12	RUANG INSTRUMENTASI			Contact/ Non Contact Digital Tachometer	3	√	√
		Clamp meter, AC/DC	1	√	√		2
		<i>Stroboscope</i>	2	√	√		2
		Digital Thermometer.	1	√	√		2

Infrared Thermometer PC Interface	1	√		√		
Manometer and Flow Meter	1	√		√		2
Humidity and Temperatur meter	1	√		√		2
Digital Haging Scale, 20kg/10 gram.	2	√		√ (1)	√ (1)	2
<i>Frequency Inverter, 2HP</i>	2	√		√		1
<i>Frequency Inverter, 1,5 HP</i>	2	√		√		-
Multi-Purpose Digital Indicator	1	√		√		4
Rotary Torque Sensor	1	√			√	-
Load Cell , donut type kap. 50 kN	1	√		√		1
LVDT, kap 5 mm	1	√		√		1
Reaction torque, cap 5 kNm	1	√		√		-
S-Type Load Cell	1	√		√		1
Coating Thicckness Gauge TT 220, Time	1	√		√		1
Analytical Balance	1	√		√		4
Vibration Meter	1	√		√		1
Ossiloskop	4	√		√		4
Power meter	1	√		√		2

Keterangan: SD = Milik PT/fakultas/jurusan sendiri; SW = Sewa/Kontrak/Kerjasama/Hak Pakai.

Catt:

Peralatan utama diadakan lewat pendanaan 1) Dana sendiri/ tugas akhir mahasiswa, 2) HEDS/ JICA Project (1992); 3) Dana DIPA/ OPF, 4) Proyek PHK A-2 Dikti (Hibah Kompetisi), 5) Proyek I-MHERE Batch IV IBRD/World Bank Dikti (Hibah Kompetisi), 6) Dana RM DIPA Unand 2012/2013 , 7) Penelitian dosen