

## COURSE STRUCTURE

**Table 1. Course Structure for Freshman**

1 <sup>st</sup> Semester				2 <sup>nd</sup> Semester				
Code	Course Title	CU		Code	Course Title	CU		
1000002003	Core Personality Development Courses	Indonesian	2	1000002024	Core Personality Development Courses	Buddhist	2	
1000002018	Core Personality Development Courses	Pancasila Education	2			1000002025	Hindu Religious	
1000003042	Personality Development Courses	Basics of Education	3			1000002026	Islamic	
	Basic Skills Courses	Learning Theory	2			1000002027	Catholic Religious	
8320103059	Scientific and Skills Courses	Basic Engineering Mathematics	3			1000002028	Confucius Religious	
8320103037	Scientific and Skills Courses	Engineering Physics	2			1000002029	Protestant Religious	
	Scientific and Skills Courses	Practical Physics Engineering	1			1000002033	Core Personality Development Courses	Civic education
8320102087	Scientific and Skills Courses	Vocational Education	2	8320103013	Personality Development Courses	English	3	
8320102156	Scientific and Skills Courses	Basic Electric Circuit	2	1000002039	Personality Development Courses	Educational Psychology	2	
					Personality Development Courses	Digital Literacy	2	
				8320102067	Basic Skills Courses	Learning Media	2	
				8320103060	Scientific and Skills Courses	Advanced Engineering Mathematics	3	
				8320102159	Scientific and Skills Courses	Advanced Electrical Circuits	2	
				8320102061	Scientific and Skills Courses	Basic Electromagnetic Field	2	
				8320102030	Scientific and Skills Courses	Basic Digital Electronics	2	
<b>TOTAL</b>			<b>19</b>	<b>TOTAL</b>			<b>22</b>	

**Table 2. Course Structure for Strong Foundation**

3 <sup>rd</sup> Semester				4 <sup>th</sup> Semester			
Code	Course Title	CU		Code	Course Title	CU	
1000002011	Personality Development Courses	Basic socio-cultural / basic natural sciences	2	8320102178	Basic Skills Courses	Statistics	3
	Personality Development Courses	Physical Education and Fitness	2	8320103106	Basic Skills Courses	Innovative Learning Planning	2
8320103180	Scientific and Skills Courses	Learning strategies	2	8320102206	Basic Skills Courses	Educational Philosophy	2
8320102039	Scientific and Skills Courses	Computer programming	2	<b>Communication Electronics Expertise Program</b>			
8320102062	Scientific and Skills Courses	Advanced Electromagnetic Fields	2	8320102152	Scientific and Skills Courses	Basic Electronics Circuit	2
8320102031	Scientific and Skills Courses	Advanced Digital Electronics	2	8320103094	Scientific and Skills Courses	Digital Signal Processing	2
<b>Communication Electronics Expertise Program</b>				8320102010	Scientific and Skills Courses	Computer Applications in Electronic Studies	2
8320102123	Scientific and Skills Courses	Digital Electronics Practicum	1		Scientific and Skills Courses	Basic Telecommunications Systems	2
	Scientific and Skills Courses	Electronic image	2	8320103182	Scientific and Skills Courses	Audio Video Techniques	3
8320103025	Scientific and Skills Courses	Electronics	2	8320102049	Scientific and Skills Courses	Data communication	2
8320102164	Scientific and Skills Courses	Sensors and Actuators	2	<b>Electric Power Engineering Expertise Program</b>			
8320102184	Scientific and Skills Courses	Laser technique	2	8320103189	Scientific and Skills Courses	Refrigeration and Air Conditioning Engineering	2
8320102097	Scientific and Skills Courses	Electronic Measurement	2	8320102027	Scientific and Skills Courses	Power Electronics	2
<b>Electric Power Engineering Expertise Program</b>				8320102071	Scientific and Skills Courses	AC Electric Machine	2
8320102012	Scientific and Skills Courses	Electricity Materials	2	8320103172	Scientific and Skills Courses	Control and Control System	2
8320102039	Scientific and Skills Courses	Electrical Instrumentation and Measurement	2		Scientific and Skills Courses	Digital Electronics Practicum	2

8320102067	Scientific and Skills Courses	Engineering drawings	3	8320102017	Scientific and Skills Courses	Electric Repair Shop	2
8320102202	Scientific and Skills Courses	Transformer	2				
8320102120	Scientific and Skills Courses	Electromechanical Basic Practicum	2				

**Table 3. Course Structure for Advanced Concept**

5 <sup>th</sup> Semester				6 <sup>th</sup> Semester			
Code		Course Title	CU	Code		Course Title	CU
8320103032	Basic Skills Courses	Learning Evaluation and Learning	2	8320103075	Basic Skills Courses	Research methodology	4
8320103044	Basic Skills Courses	School Curriculum	2		Creative Work Course	Micro Teaching	2
	Scientific and Skills Courses	Education Management	2				
<b>Communication Electronics Expertise Program</b>				8320103052	Subjects for Social Life	Community Service Program	3
8320102153	Scientific and Skills Courses	Advanced Electronic Circuit	2	<b>Communication Electronics Expertise Program</b>			
8320102122	Scientific and Skills Courses	Electronics Practicum	1	8320103147	Scientific and Skills Courses	Electronics Design	3
8320103041	Scientific and Skills Courses	Telecommunications Network	2	8320102006	Scientific and Skills Courses	Antennas and Propagation of Waves	2
8320103175	Scientific and Skills Courses	Telecommunication System	2		Scientific and Skills Courses	Antenna Practices and Wave Propagation	1
8320102133	Scientific and Skills Courses	Telecommunications Practicum	1	8320103064	Scientific and Skills Courses (selective)	Mechatronics	2
8320102170	Scientific and Skills Courses	Fiber Optic Communication System	2	8320102193	Scientific and Skills Courses (selective)	Switching Techniques	2
8320103077	Scientific and Skills Courses	Microcontroller	3	<b>Electric Power Engineering Expertise Program</b>			

	Scientific and Skills Courses	Microcontroller Practicum	1	8320102095	Scientific and Skills Courses	Optimization and Operation of the Electric Power System	3
<b>Electric Power Engineering Expertise Program</b>				8320102004	Scientific and Skills Courses	Electric Power System Analysis	2
8320102130	Scientific and Skills Courses	Electrical Engineering Practicum	2	8320102084	Scientific and Skills Courses	Maintenance and Repair of Electrical Machines	2
8320103102	Scientific and Skills Courses	Electric Power Planning and Installation	3	8320102165	Scientific and Skills Courses	Electric Power System Simulation	2
8320103072	Scientific and Skills Courses	DC Electric Machine	2	8320103144	Scientific and Skills Courses	Electric Power System Protection	3
8320102126	Scientific and Skills Courses	Electrical Installation Practicum	2				
8320103139	Scientific and Skills Courses	Programmable Logic Controller (PLC)	2				
8320102128	Scientific and Skills Courses	Full Practice and Automation	2				

**Table 4. Course Structure for Thesis**

7 <sup>th</sup> Semester				8 <sup>th</sup> Semester			
Code	Course Title	CU		Code	Course Title	CU	
8320102115	Scientific and Skills Courses	Internship	2	8320102207	Personality Development Courses	Entrepreneurship	2
	Creative Work Course	Introduction to School Field I	1	8320106177	Creative Work Course	Bachelor Thesis	6
	Creative Work Course	Introduction to School Field II	3	<b>Communication Electronics Expertise Program</b>			
<b>Communication Electronics Expertise Program</b>					Scientific and Skills Courses (selective)	IoT	2
8320102162	Scientific and Skills Courses	Industrial Robot	2	<b>Electric Power Engineering Expertise Program</b>			
8320102146	Scientific and Skills Courses (selective)	Radar and Navigation	2	8320102194	Scientific and Skills Courses (selective)	High Voltage Engineering	2

	Scientific and Skills Courses (selective)	Embedded System	2	8320102019	Scientific and Skills Courses (selective)	Scada Basics	2
	Scientific and Skills Courses (selective)	Industrial Automation	2				
<b>Electric Power Engineering Expertise Program</b>							
8320103176	Scientific and Skills Courses	Electric Power Transmission System	3				
8320102168	Scientific and Skills Courses	Electric Power Distribution System	2				
	Scientific and Skills Courses	Electric Energy Generation	2				
8320102085	Scientific and Skills Courses (selective)	Selection and Use of Electric Motors	2				
8320102104	Scientific and Skills Courses (selective)	Electric Power Network Planning	2				
8320102105	Scientific and Skills Courses (selective)	Electrical Engine Planning	2				