

## Advance Program - Automation and Control Engineering and Electrical Systems

No	Course Code	Course Name	Credit	Semester								
				1	2	3	4	5	6	7	8	
<b>Political theory + Introduction to laws</b>			<b>12</b>									
1	SSH1110	Basic principles of Marx-Leninism I	2(2-1-0-4)	2								
2	SSH1120	Basic principles of Marx-Leninism II	3(3-0-0-6)		3							
3	SSH1050	Ho Chi Minh's thought	2(2-0-0-4)			2						
4	SSH1130	Revolution Lines of Vietnam Communist Party	3(2-1-0-6)				3					
5	EM1170	Introduction to laws	2(2-0-0-4)	2								
<b>Physical Education (5 credits)</b>												
22	PE1010	Physical Education A	0(0-0-2-0)	x								
23	PE1020	Physical Education B	0(0-0-2-0)		x							
24	PE1030	Physical Education C	0(0-0-2-0)			X						
25	PE2010	Physical Education D	0(0-0-2-0)				X					
26	PE2020	Physical Education E	0(0-0-2-0)					x				
<b>Military Education (165 hours)</b>												
27	MIL1110	Military policy of the Party	0(3-0-0-6)	x								
28	MIL1120	Defense and security tasks	0(3-0-0-6)		x							
29	MIL1130	General military and tactical, AK submachine gun (CKC) technique	0(3-2-0-8)				x					
<b>English</b>			<b>???</b>									
6	FL1016	Speaking skill I	2(2-2-0-4)	2								
7	FL1017	Listening skill I	2(2-2-0-4)	2								
8	FL1018	Reading skill I	2(2-2-0-4)	2								
9	FL1019	Writing skill I	2(2-2-0-4)	2								
10	FL1022	General skill I	2(2-2-0-4)	2								
11	FL1026	Speaking skill II	2(2-2-0-4)		2							
12	FL1027	Listening skill II	2(2-2-0-4)		2							
13	FL1028	Reading skill II	2(2-2-0-4)		2							
14	FL1029	Writing skill II	2(2-2-0-4)		2							
15	FL1031	General skill II	2(2-2-0-4)		2							
<b>Basic knowledge of Math and Science</b>			<b>29</b>									
16	MI1016	Analytics I	4(3-2-0-8)		4							
17	MI1026	Analytics II	4(3-2-0-8)			4						
18	MI1036	Algebra	4(3-2-0-8)			4						
19	MI1046	Differential equations and series	3(2-2-0-6)				3					
20	PH1016	General Physics I	4(2-2-1-8)			4						
21	PH1026	General Physics II	4(2-2-1-8)				4					
35	MI2036	Probability and random signal analysis	3(3-1-0-6)					3				
31	IT1016	Fundamental Information technology	3(2-1-2-6)			3						
<b>Compulsory basic knowledge</b>			<b>45</b>									
30	EE1024E	Introduction to electrical engineering	2(1-1-1-4)				2					
32	EE3706	Circuit theory I	3(3-1-0-6)					3				
33	EE3729	Circuit theory II	3(3-1-0-6)							3		

34	EE3030E	Electromagnetic Field Theory	3(3-0-1-6)					3				
36	EE2001E	System and Signals	3(3-0-1-6)					3				
37	EE2110E	Electronic Design	3(3-0-1-6)					3				
38	EE2130E	Digital system design	3(3-0-1-6)						3			
39	EE3288E	Linear Control Theory	3(3-1-0-6)						3			
40	EE3110E	Measurement techniques	3(3-0-1-6)						3			
41	EE3490E	Programming	3(2-2-0-6)					3				
42	EE3410E	Power electronics	3(3-0-1-6)							3		
43	EE3140E	Electric machines	3(3-0-1-6)						3			
44	EE3423E	Introduction to Power System Engineering	3(3-1-0-6)							3		
45	EE3480E	Microprocessor and computer architecture	3(3-0-1-6)						3			
46	EE3810E	Project I	2(0-0-4-4)						2			
47	EE3821E	Project II	2(0-0-4-4)							2		
<b>Kiến thức bổ trợ</b>			<b>9</b>									
42	EE2023	Technical Writing and Presentation	3(2-2-0-6)							3		
43	EM1010	Introduction to Management	2(2-1-0-4)						2			
44	EM1180	Business culture and entrepreneurship	2(2-1-0-4)						2			
45	ED3280	Applied psychology	2(1-2-0-4)									
46	ED3220	Soft skills	2(1-2-0-4)									
47	ET3262	Technology thinking and technical design	2(1-2-0-4)									
48	TEX3123	Industrial art design	2(1-2-0-4)							2		
<b>Application-oriented optional module</b>												
<b>Module 1: Control and Automation</b>			<b>18</b>									
49	EE4401E	Embedded Control System Design	3(2-2-0-6)							3		
50	EE4221E	Logic and PLC control	3(3-0-1-6)							3		
51	EE3550E	Process control	3(3-1-0-6)							3		
52	EE4435E	Digital control system	3(3-1-0-6)							3		
53	EE3510E	Electrical drives	3(3-0-1-6)							3		
54	EE3600E	Industrial communication system	3(3-0-1-6)						3			
<b>Module 2: Power Systems</b>			<b>18</b>									
49	EE4010E	Power System Analysis	3(3-1-1-6)						3			
50	EE4020E	Power System Short Circuit Analysis	3(3-1-0-6)							3		
51	EE4040E	Power System Protection and Control	3(3-1-1-6)							3		
52	EE4116E	Power System Automation	3(3-1-0-6)							3		
53	EE3101E	Renewable Energy Sources	3(3-1-0-6)							3		
54	EE4116E	Power System Operation and Planning	3(3-1-0-6)							3		
<b>Graduation internship and project</b>			<b>8</b>									<b>8</b>
55	EE3910E	Technical internship	2(0-0-4-4)									2
56	EE4900E	Graduation project	6(0-0-12-12)									6
<b>TOTAL</b>			<b>141</b>	<b>14</b>	<b>17</b>	<b>17</b>	<b>12</b>	<b>18</b>	<b>27</b>	<b>28</b>	<b>8</b>	