

Matrix courses vs. learning outcomes

H: Highly Supportive S: Supportive N: Non Supportive

No	Group of courses		Course	# credit	Learning Outcomes															
					A		B				C						D			
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Introduction	IEET130145	Introduction to Electrical & Electronics Engineering Technology	3	N	N	N	S	S	S	H	S	S	H	H	S	N	N	N	N
2	Political Education	LLCT150105	Principles of Marxist-Leninism	5	S	N	N	N	N	N	N	N	N	N	S	N	N	N	N	N
3		LLCT120314	Ho Chi Minh's Ideology	2	S	N	N	N	N	N	N	N	N	N	S	N	N	N	N	N
4		LLCT230214	Revolutionary Lines of VCP	3	S	N	N	N	N	N	N	N	N	N	S	N	N	N	N	N
5		GELA220405	General Laws	2	S	N	N	N	N	N	N	S	N	S	S	S	N	N	N	N
6	IT	VBPR131085	Visual basic program	3	H	N	N	N	N	N	N	S	S	N	H	N	N	N	N	N
7	Foreign Languages	ENGL130137	English 1	3	S	N	N	N	N	N	S	S	H	N	N	H	N	N	N	N
8		ENGL230237	English2	3	S	N	N	N	N	N	S	S	H	N	N	H	N	N	N	N
9		ENGL330337	English 3	3	S	N	N	N	N	N	S	S	H	N	N	H	N	N	N	N
10	Mathematics and Natural Sciences	MATH130101	Advanced Mathematics1	3	H	S	N	N	N	N	N	N	N	S	N	H	N	N	N	N
11		MATH130201	Advanced Mathematics2	3	H	S	N	N	N	N	N	N	N	N	S	N	H	N	N	N
12		MATH130301	Advanced Mathematics3	3	H	S	N	N	N	N	N	N	N	N	S	N	H	N	N	N
13		MATH130401	Applied Probability	3	H	S	N	N	N	N	N	N	N	N	S	N	H	N	N	N
14		PHYS120102	General Physics A1	3	H	S	N	N	N	N	N	N	N	N	S	N	H	N	N	N
15		PHYS120202	General PhysicsA2	3	H	S	N	N	N	N	N	N	N	N	S	N	H	N	N	N
16		MATH12120	Complex Functions and Laplace Transforms	2	H	S	N	N	N	N	N	N	N	N	S	N	H	N	N	N
17		GCHE130103	General Chemistry A1	3	S	S	N	N	N	N	N	N	N	N	S	N	S	N	N	N
18	Physical Education	GEEC220105	1. Physical Education 1		N	N	N	N	N	N	S	N	N	N	N	S	N	N	N	N
19			2. Physical Education 2		N	N	N	N	N	N	S	N	N	N	N	S	N	N	N	N
20		PLSK320605	3. Physical Education 3 (compulsory)		N	N	N	N	N	N	S	N	N	N	N	S	N	N	N	N
21	Social Science (choose 03 among the 06 courses)	GEEC220105	General Economics	2	S	N	N	N	N	N	S	N	S	S	S	S	N	N	N	N
22			Creativity Methodologies	2	S	N	N	N	N	N	S	N	S	S	S	S	N	N	N	N
23		PLSK320605	Planning Skill	2	S	N	N	N	N	N	S	S	N	S	S	S	N	N	N	N
24		INMA220305	Introduction to Management	2	S	N	N	N	N	N	S	S	N	S	S	S	N	N	N	N
25		INSO321005	Introduction to Sociology	2	S	N	N	N	N	N	S	S	N	S	S	S	N	N	N	N
26		IQMA220205	Introduction to Quality Management	2	S	N	N	N	N	N	S	S	N	S	S	S	N	N	N	N
27	Social Science (choose 03 among the 06 courses)	INLO220405	Introduction to Logics	2	S	N	N	N	N	N	S	N	N	S	S	N	N	N	N	
28		PRSK320705	Presentation skills	2	S	N	N	N	N	N	S	H	N	N	S	S	N	N	N	
29		SYTH220505	Systems Thinking	2	S	N	N	N	N	N	S	S	N	S	S	S	N	N	N	
30		ULTE121105	University learning methods	2	S	N	N	N	N	N	S	S	N	N	S	S	N	N	N	
31		IVNC320905	Vietnamese culture	2	S	N	N	N	N	N	S	N	N	S	S	S	N	N	N	
32		TDT320805	Writing Scientific and Technical Documents	2	S	N	N	N	N	N	S	S	N	N	S	S	N	N	N	
33	Fundamental Courses	ELCI140144	Electrical Circuits	4	H	S	N	S	N	N	N	N	N	S	N	H	N	N	N	
34		BAEL340662	Basic Electronics	4	H	S	N	S	N	N	N	N	N	S	N	H	N	N	N	
35		DIGI330163	Digital System	3	N	S	N	S	N	N	N	N	N	S	N	H	N	N	N	
36		EMIN330244	Electrical Measurement and Instruments	3	S	H	N	S	H	N	N	N	N	S	N	S	N	N	N	
37		POEL330262	Power Electronics	3	S	H	N	S	N	N	N	N	N	S	N	H	N	N	N	
38		ACSY330346	Automatic Control Systems	3	H	S	N	S	N	N	N	N	N	S	N	H	N	N	N	
39		MICR330363	Microprocessor	3	S	H	N	S	N	N	N	N	N	S	N	H	N	N	N	
40		ELSA320245	Electrical Safety	2	H	S	N	S	N	N	N	N	N	S	N	H	N	N	N	
41		ELMA240344	Electric Machines	2	S	S	N	S	N	N	N	N	N	S	N	S	N	N	N	
42		ELIN320444	Electricity Instrument	4	H	S	N	S	N	N	N	N	N	S	N	H	N	N	N	
43		ELPS330345	Power Supply System	3	N	N	S	H	H	N	N	N	S	S	S	H	N	N	N	
44	ELDR320545	Automatic Electric Drive	3	S	H	N	H	S	N	N	N	S	S	N	H	N	N	N		
45	EMA220544	Electronic and Electrical Materials	2	S	S	S	S	S	N	N	N	S	S	S	H	N	N	N		
46	Specialized Courses	PLCS 330846	Programmable Logic Controller	3	N	H	S	H	S	N	N	N	S	N	S	N	N	N	N	
47		ECAD320645	CAD for Electrical Engineering	2	N	H	S	S	S	N	N	N	S	S	S	N	N	N	N	
48		POSY330445	Power System	3	S	H	N	S	S	N	N	N	S	S	N	H	H	S	S	
49		SCDA420946	Data Acquisition System and SCADA	3	S	H	N	S	S	N	N	N	S	S	N	H	H	S	S	
50		REPR320745	Relay Protection and Automation	2	S	H	N	H	S	N	N	N	S	S	N	H	H	S	S	
51		PSAS430845	Power System Analysis and Simulation	2	S	H	S	H	S	S	N	S	S	S	S	S	H	S	S	
52	Specialized Courses	PRTO412445	Professional Development Training	1	S	S	S	S	S	S	H	H	S	H	H	S	H	S	S	
53		PRED410945	Project on Electric Drive	1	S	S	H	H	H	S	H	H	S	H	H	S	H	H	S	
54		PRES411045	Project on Power Supply System	1	S	S	H	H	H	S	H	H	S	H	H	S	H	H	S	
55		PLCR 311146	Project on Programmable Logic Controller	1	S	S	H	H	H	S	H	H	S	H	H	S	H	H	S	
56		ELCD321545	Electrical Control Devices	2	N	S	H	H	S	S	S	S	S	H	S	S	S	H	H	
57		RENE321745	Renewable Energy	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
58		ENAE321845	Energy Audit and Efficiency	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
59		PQE320755	Power Quality in Power System	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
60		LTRI321345	Lighting Techniques in Residential and Industrial	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
61		SCDA 420946	Data Acquisition System and SCADA	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
62		SSSY321445	Building Access Control and Security System	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
63	Elective (06 credits)	PLSUE40445	Power Station and Power Plant	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
64		EMCE321744	Calculation of Electrical Machine	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
65		SPMA32CD44	Special Electrical Machine	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
66		ACAD321245	Advanced CAD for Electrical Engineering	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	H	
67		MSET321145	MATLAB/Simulink for Power System	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	H	
68		BMSY322045	Building Management System	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
69		SSAS322045	ATS and Power Backup System	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
70		PJMA 322345	Project Management	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
71		IDMA322245	Industrial Management	2	N	S	H	H	S	S	S	S	S	H	S	S	H	H	S	
72		ELPR320762	Electronics in Practice	2	S	H	H	S	H	H	S	S	S	H	S	S	H	S	S	
73	ELPR210644	Electricity in Practice	1	S	H	H	S	H	H	S	S	S	H	S	S	H	S	S		

74	Specialized knowledge (courses in workshop, industrial internship)	PMEM31084	Electrical Measurement in Practice	1	S	H	H	S	H	H	S	S	S	H	S	S	H	S	S	S	
75		PRDI320263	Digital System in Practice	2	S	H	H	S	H	H	S	S	S	H	S	S	H	S	S	S	S
76		PRMI 320463	Microprocessor in Practice	2	S	H	H	S	H	H	S	S	S	H	S	S	H	S	S	S	S
77		PREM221244	Electric Machine in Practice	2	S	H	H	S	H	H	S	S	S	H	S	S	H	S	S	S	S
78		POEP320262	Power Electronics in Practice	2	S	H	H	S	H	H	S	S	S	H	S	S	H	S	S	S	S
79		PPLC321346	Programmable Logic Controller in Practice	2	S	H	H	S	H	H	S	S	S	H	S	S	H	S	S	H	H
80		PRES322545	Power Supply System in Practice	2	S	H	H	S	H	H	S	S	S	H	S	S	H	S	S	H	H
81		ELEC322645	Electric Drive in Practice	2	S	H	H	S	H	H	S	S	S	H	S	S	H	S	S	H	H
82		ININ422745	Industrial Internship	2	S	H	H	H	H	H	H	S	S	H	H	S	H	S	H	S	H
83	Grad. Thesis	FIPR 402845	Graduation Thesis	10	H	H	H	H	H	H	H	S	H	S	H	S	H	H	H	H	