

No	Subject code	Subjects	Credits	Credit hours			Pre-requisite (s) subject code
				Theory	Practice	Self-study	
I	General knowledge module <i>(Subject 8-9 are not included)</i>		21				
1	PHI1006	<i>Marxist-Leninist Philosophy</i>	3	30	15		
2	PEC1008	<i>Marxist-Leninist Political Economy</i>	2	20	10		PHI1006
3	PHI1002	<i>Scientific Socialism</i>	2	30	0		
4	HIS1001	<i>Revolutionary Guidelines of Vietnam Communist Party</i>	2	20	10		
5	POL1001	<i>Ho Chi Minh's Ideology</i>	2	20	10		
6	FLF1107	<i>English B1</i>	5				
7	FLF1108	<i>English B2</i>	5				
8		<i>Physical Education</i>	4				
9		<i>National Defense Education</i>	8				
II	Field-Based Knowledge		31				
10	MAT1092	<i>Advanced Mathematics</i>	4	45	15		
11	INS1058	<i>Applied Informatics</i>	3	17	28		
12	INS1044	<i>Physics</i>	3	27	18		
13	INS1059	<i>Introduction to Applied Information Technology</i>	2	15	15		
14	THL1057	<i>Introduction to Law</i>	2	20	10		
15	INS1061	<i>Introduction to Economics</i>	3	36	9		
16	INS1062	<i>Personal Development and Career Management</i>	3	27	18		
17	INS3009	<i>Entrepreneurship</i>	3	36	9		
18	INS2059	<i>Leadership and Team Building</i>	2	36	9		
19	INS2086	<i>Project I</i>	3	10	35		INS1059
20	INS4031	<i>Internship</i>	3	0	45		INS1059, INS2086, INS1058

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III	Area-Based Knowledge		15				
21	INS3107	<i>Programming Techniques</i>	3	15	30		
22	INS2080	<i>Databases</i>	3	27	18		INS1058
23	INS2092	<i>Electronic and Electrical Engineering</i>	3	18	27		
24	MAT1004	<i>Theory of Probability and Mathematical Statistics</i>	3	30	15		
25	INS2093	<i>Web Design and Development</i>	3	18	27		INS1058
IV	Discipline-Based Knowledge		27				
IV.1	Compulsory subjects		21				
26	INS2094	<i>Signals and Systems</i>	2	15	15		
27	INS3170	<i>Operating System</i>	3	30	15		INS1058
28	INS3062	<i>Principles of Information Security</i>	3	27	18		INS1058
29	INS3168	<i>Computer Architecture and Assembly Languages</i>	3	20	25		INS1058
30	INS1004	<i>Introduction to Computer Networks</i>	4	36	24		INS1058
31	INS3169	<i>Linux and Open Source Softwares</i>	3	18	27		IN3144S2076
32	INS3144	<i>Digital Signal Processing</i>	3	30	15		MAT1004
IV.2	Elective subjects		6/15				
33	INS2074	<i>Discrete Mathematics</i>	3	30	15		
34	INS3056	<i>Information Systems Modeling and Design</i>	3	27	18		INS1058
35	INS1189	<i>Computational methods</i>	3	27	18		
36	INS3050	<i>Data Structures and Algorithms</i>	3	27	18		INS3107

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37	INS2073	Lập trình 2 <i>Programming 2</i>	3	30	15		INS3107
V	Specialized Knowledge		51				
V.1	Specialized Knowledge		21				
V.1.1	Compulsory subjects		15				
38	INS3080	<i>Artificial Intelligence</i>	3	30	15		INS1058
39	INS3171	<i>Embedding Programming</i>	3	30	15		INS3107
40	INS3172	<i>Information Security and Safety</i>	3	27	18		INS3062
41	INS3148	<i>Microprocessor Systems and Microcontrollers</i>	3	20	25		INS3168, INS3171
42	INS3100	<i>Project II</i>	3	10	35		
V.1.2	Elective subjects		6/12				
43	INS3136	<i>Embedding Operating System</i>	3	18	27		INS3171
44	INS3044	<i>IT Project Management</i>	3	27	18		
45	INS3137	<i>Network Management</i>	3	18	27		INS3170, INS1004
46	INS3138	<i>System Programming</i>	3	18	27		INS3107
V.2.	Elective courses/ Specialized and supplementary courses		2/6				
47	INS3139	<i>Digital Skills and Innovation</i>	2	18	12		
48	INS1005	<i>IT Research Methodology</i>	2	18	12		
49	INS3173	<i>Marketing and Communications</i>	2	18	12		
V.3	Selected in-depth knowledge electives		18				
V.3.1	Digital Space Safety Orientation		18				
50	INS3045	<i>Network Security</i>	3	30	15		INS1004, INS3062
51	INS3199	<i>Management System and Database Security</i>	3	18	27		INS2080, INS3172

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				Theory	Practice	Self-study	
52	INS3200	<i>Biometric Authentication System</i>	3	18	27		INS3062
53	INS3201	<i>Digital Forensics</i>	3	18	27		INS3062
54	INS3202	<i>Malware Analysis</i>	3	18	27		INS3062
55	INS3203	<i>Project III</i>	3	0	45		INS3045, INS3199, INS3200, INS3202, INS3201
V.3.2	<i>IoT Orientation and Embedded Systems</i>		18				
56	INS3204	<i>Embedding System and Micro-processing</i>	3	18	27		INS3136, INS3171
57	INS3205	<i>IoT programming</i>	3	18	27		INS3171
58	INS3152	<i>Robotics</i>	3	18	27		INS3136, INS3171
59	INS3206	<i>IoT Technology and Machine Learning</i>	3	18	27		INS3080, INS1004
60	INS3207	<i>IoT Technology and Cloud Computing</i>	3	18	27		INS1004, INS2080,
61	INS3203	<i>Project III</i>	3	0	45		INS3207, INS3206, INS3152, INS3205, INS3204
V.4	<i>Internship and Graduation/ Alternative subjects for Dissertation</i>		10				
V.4.1	<i>Internship</i>		5				
62	INS4001	<i>Internship</i>	5		75		
V.4.2	<i>Graduation/ Alternative subjects for Dissertation</i>		5				
63	INS4011	<i>Graduation Thesis</i>	5		75		
	Total		145	<i>Awarded a Bachelor's Degree</i>			

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				Theory	Practice	Self-study	
I	General knowledge module		3				
1	PHI5001	<i>Philosophy</i>	3	30	15		
II	Basic and specialized knowledge		23				
II.1	Compulsory subjects		14				
2	INS6025	<i>Advanced Database Systems</i>	3	18	27		INS2080
3	INS6029	<i>Advanced Computer Networks</i>	3	18	27		INS1004
4	INS6035	<i>Internet of Things Security</i>	3	18	27		INS3062, INS1004
5	INS6027	<i>Modern Machine Learning and Applications</i>	3	18	27		INS3080
6	INS6030	<i>Advanced Topics in ICT</i>	2	30	0		
II.2	Elective subjects		9/24				
7	INS6028	<i>Advanced Digital Signal Processing</i>	3	18	27		INS3144
8	INS6020	<i>Develop Applications from Computer</i>	3	18	27		
9	INS6023	<i>Data Mining</i>	3	18	27		INS3080
10	INS6034	<i>Next Generation Networks</i>	3	18	27		INS2080, INS3062
11	INS6036	<i>Penetration Testing</i>	3	18	27		INS3062, INS2076
12	INS6037	<i>Cryptography and Computational Complexity</i>	3	18	27		INS3062
13	INS6019	<i>Control Peripheral Devices from Computers</i>	3	18	27		INS3148
14	INS6039	<i>IoT application development</i>	3	18	27		INS3148

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				Theory	Practice	Self-study	
III.	Graduation Thesis		9				
15	INS7205	<i>Graduation Thesis</i>	9				
	Total		35	Awarded a Master's Degree			