

2020

**MINISTRY OF SCIENCE AND EDUCATION OF THE AZERBAIJAN REPUBLIC**  
**"AZERBAIJAN STATE OIL AND INDUSTRY UNIVERSITY" PUBLIC LEGAL ENTITY**

“Approved”

acting rector

Assoc. prof. Vazeh Askarov

2023

Specialty : 050615 - Information security  
 Duration of study: 4 year (8 semesters)

**EDUCATION PLAN**

(for undergraduate level)

**I. EDUCATION PROCESS CHART**

Courses	September				October			November				December				January			February			March				April			May				June				July			August								
	1	8	15	22	5	12	19	26	3	10	17	24	1	8	15	22	5	12	19	26	2	9	16	23	2	9	16	23	6	13	20	27	4	11	18	25	1	8	15	22	6	13	20	27	2	9	16	23
I																																																
II	=	=																																														
III	=	=																																														
IV	=	=																																														

Conventional symbols

Theoretical training

Examination Session

Experience

Vacation



**II. EDUCATIONAL PROCESS PLAN**

Row No	Subject code	Subject Name	Credits number	Total hours	Out-of-class hours	Total hours for classroom	Auditorium hours			Course Work / Course Project	Prerequisite (the disciplines that are required to be taught)	Corequisite (the disciplines with parallel learning)	Semester where the subject is taught	Weekly Workload
							Including the type of training							
							Lecture	Seminar	Laboratory					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	<b>HS-BOO</b>	<b>Humanitarian subjects</b>	<b>30</b>	<b>900</b>	<b>480</b>	<b>420</b>	<b>105</b>	<b>315</b>						
1	HS-B01	History of Azerbaijan	5	150	90	60	30	30					3	4
2	HS-B02.1	Foreign Language: General English and Speech Practice	8	240	120	120		120					1	8
3	HS-B02.2	Foreign Language: Academic vocabulary and reading. Social communication skills	7	210	105	105		105					2	7
4	HS-B03	Business and academic communication in Azerbaijani	4	120	75	45	15	30					4	3
		<b>Elective subjects</b>	<b>6</b>	<b>180</b>	<b>90</b>	<b>90</b>	<b>60</b>	<b>30</b>						
5	HES-B04	Block I: 1) Philosophy 2) Sociology; 3) Consultation of the Republic of Azerbaijan and foundations of law; 4) Ethics and aesthetics; 5) Logics; 6) Introduction to multiculturalism	3	90	45	45	30	15					4	3
6	HES-B05	Block II: 1) Information technology (by specialty); 2) Information management; 3) Fundamentals of Entrepreneurship and Introduction to Business; 4) Political science	3	90	45	45	30	15					5	3
	<b>VSS-BOO</b>	<b>Vocational training subjects by speciality</b>	<b>180</b>	<b>5400</b>	<b>3540</b>	<b>1860</b>	<b>990</b>	<b>465</b>	<b>405</b>					
			<b>120</b>	<b>3600</b>	<b>2355</b>	<b>1245</b>	<b>660</b>	<b>330</b>	<b>255</b>					
7	VSS-B01	Linear algebra and analytical geometry	3	90	45	45	30	15					1	3
8	VSS-B02.1	Calculus - 1	3	90	45	45	30	15					1	3
9	VSS-B02.2	Calculus - 2	4	120	60	60	30	30			VSS-B02.1		2	4
10	VSS-B03	Discrete mathematics	3	90	45	45	30	15					3	3
11	VSS-B04	Differential equations	3	90	45	45	30	15					4	3
12	VSS-B05	Probability theory and mathematical statistics	3	90	45	45	30	15					5	3
13	VSS-B06	Physics	5	150	90	60	30	15	15				2	4
14	VSS-B07	Introduction to information security	7	210	150	60	30		30				1	4
15	VSS-B08	Fundamentals of programming	8	240	180	60	30		30				1	4
16	VSS-B09	Computer architecture	7	210	150	60	30	30					2	4
17	VSS-B10	Operating systems	7	210	150	60	30	30					4	4
18	VSS-B11	Data structure and algorithms	7	210	150	60	30		30				2	4
19	VSS-B12	Database systems	7	210	150	60	30		30				3	4
20	VSS-B13	Cryptography basics	8	240	180	60	30		30				3	4
21	VSS-B14	Steganography	6	180	120	60	30		30				5	4
22	VSS-B15	Computer graphic	6	180	120	60	30	30					4	4
23	VSS-B16	Methods and means of information retrieval	5	150	90	60	30	30					3	4
24	VSS-B17.1	Information security tools (organizational and legal)	5	150	90	60	30	30					5	4
25	VSS-B17.2	Information security tools (software and hardware)	6	180	120	60	30		30				6	4
26	VSS-B18	Risk and incident management	7	210	150	60	30	30					4	4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
27	VSS-B19	Intellectual data analysis*/is	7	210	135	75	30	15	30				6	5
28	VSS-B20	Civil defense	3	90	45	45	30	15					3	3
	<b>SPEE-BOO</b>	<b>Elective subjects (Vocational education)</b>	<b>60</b>	<b>1800</b>	<b>1185</b>	<b>615</b>	<b>330</b>	<b>135</b>	<b>150</b>					
29	SPEE-B01	Block I: 1) Cybersecurity; 2) Cyber-attacks, cyber-crime and digital forensics; 3) Computer vision; 4) Management of security incidents and events	6	180	120	60	30	30					7	4
30	SPEE-B02	Block II: 1) Web systems and technologies; 2) Web design; 3) PHP programming; 4) Management of information security incidents and events	6	210	150	60	30		30	C/W			6	4
31	SPEE-B03	Block III: 1) Object-oriented programming; 2) Modern programming languages; 3) Python programming; 4) Security of system operations	6	180	120	60	30		30				6	4
32	SPEE-B04	Block IV: 1) Artificial intelligence; 2) Basics of decision making; 3) Big data processing technologies	7	180	120	60	30		30	C/W			5	4
33	SPEE-B05	Block V: 1) Security of computer and network systems; 2) Information theory; 3) System analysis and modeling; 4) Vulnerability assessments and penetration testing	5	150	105	45	30	15					7	3
34	SPEE-B06	Block VI: 1) Internet of Things; 2) Sensors and actuators; 3) Cyber systems; 4) Cyber operating security	5	150	105	45	30	15					7	3
35	SPEE-B07	Block VII: 1) Cloud technologies; 2) Mobile technologies; 3) Internet technologies; 4) IT Audit	5	150	105	45	30	15					7	3
36	SPEE-B08	Block VIII: 1) Digital electronics and microprocessors; 2) Processing of digital signals; 3) Digital communication	6	180	120	60	30		30				5	4
37	SPEE-B09	Block IX: 1) Hacker tools and methods; 2) Security of mobile devices; 3) Wireless networks; 4) Investigation and hunting of cyber threats	6	180	105	75	30	15	30				7	5
38	SPEE-B10	Block X: 1) Technical foreign language; 2) Classical and fuzzy-logic; 3) Audit and Assurance	3	90	60	30		30					6	2
39	SPEE-B11	Block X: HOSEP (Health, occupational safety and environmental protection)	2	60	30	30	30						6	2
40	SPEE-B12	Block XII: Project Management	3	90	45	45	30	15					7	3
	<b>Total</b>		<b>210</b>	<b>6300</b>	<b>4020</b>	<b>2280</b>	<b>1095</b>	<b>780</b>	<b>405</b>					

### III. DURATION OF TRAINING (IN WEEKS)

Education year	Theoretical training	Examination session	Practice	Vacation	Total
I	30	10	-	12	52
II	30	10	-	12	52
III	30	10	-	12	52
IV	15	5	20	2	42
Total	105	35	20	38	198

### IV. INDICATORS OF EDUCATION PROCESS

Semester	1	2	3	4	5	6	7	8	Total
								Experience	
Credits number	29	30	31	30	30	30	30	30	240
Examinations number	5	5	6	6	6	6	6		40
Hours per week	22	23	22	21	22	21	21		

Presented by:

Vice Rector for Academic Affairs

Dean of the Information Technology and Control Faculty

Head of "Computer Engineering" department

*G.A. Mammadov*  
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