

**Information Systems**

Track 1: Game Development  
 Track 2: Business Intelligence  
 Track 3: Data Science and Machine Learning  
 Language: Kazakh / Russian / English  
 Admission year: 2022  
 Graduation year: 2025

**3 years  
 after school**

**Degree:**

Bachelor in Information and Communication Technology in the program  
 "6B06101 - Information Systems"

Accredited by IAAR program accreditation  
 Registration No.: AB 3720 from 23 December 2021 to 22 December 2026



Year 1

1 semester	ECTS
IT Startup 1 (Ideation/Validation)	5
Principles of Programmng and Algotirhms	5
Applied Linear Algebra	3
Introduction to Web Development with HTML,CSS,Javascript	3
Kazakh(Russian) Language 1	5
Foreign Language 1	5
Human Rights and Civil Society/Sustainability: Principles and Practice/Data Analysis in Excel	5
Physical Training 1	4
<b>Total</b>	<b>35</b>

2 semester	ECTS
IT Startup 2 (Project Launch,MVP,Web Project)	5
Object -Oriented Programming and Data Structures	3
Discrete Mathematical Structures	3
Introduction to Back-End Development and Databases	5
Kazakh(Russian) Language 2	5
Foreign Language 2	5
Introduction to Entrepreneurship	3
Physical Training 2	4
<b>Total</b>	<b>33</b>

Summer semester	ECTS
Practice 1-Creation of internal corporate projects(Dual)	10
Phylosophy	5
Culturology/Psycology	4
<b>Total</b>	<b>19</b>

Year 2

3 semester	ECTS
IT Startup 3 (Business Models,CustDev,Iteratio n)	5
Python for Data Analysis and Visualization	5
Advanced Back-End Development 2 and DevOps	5
Game Programming Fundamentals/Data mining in SQL/Fundamentals of Machine Learning	5
Leadership/Critical Thinking	3
Foreign Language 3	5
Entrepreneurship in Action 1	3
Minor course 1	5
<b>Total</b>	<b>36</b>

4 semester	ECTS
IT Startup 4 (Mobile App Project)	5
Front-End and Mobile Development(JS)	5
Unity 3D/MS Power Bi/Data mining and Machine Learning	5
Blender 3D/Google Data Studio/Big Data Fundamentals	5
Service Learning	3
Information Communication Technologies	5
Entrepreneurship in Action 2	3
Minor course 2	5
<b>Total</b>	<b>36</b>

Summer semester	ECTS
Practice 2-Creation of internal corporate projects (dual)	10
Modern History of Kazakhstan	5
Sociology/Political Science	4
<b>Total</b>	<b>19</b>

Year 3

5 semester	ECTS
Advanced Unity 3D/Introduction to Azure/Natural Language Processing	5
GameDev Project/Google cloud/Computer Vision and Deep Learning	5
Design of Life	3
Research Design	3
Economics	3
Marketing	3
Management	3
Minor course 3	5
<b>Total</b>	<b>30</b>

6 semester	ECTS
<b>IT Startup Capstone Project (DS/ML Startup)</b>	<b>20</b>
<b>Writing and defence of diploma project / thesis</b>	<b>12</b>
<b>Total</b>	<b>32</b>

General module	26
AlmaU module	65
Minor	15
Profile module	102
Internship, Thesis-Project	32
<b>Total</b>	<b>240</b>

**Total credits for 3 years of study**

**240**

Track

Game Development	ECTS
Game Programming Fundamentals	5
Unity 3D	5
Blender 3D	5
Advanced Unity 3D	5
GameDev Project	5
<b>Total</b>	<b>25</b>

Business Intelligence	ECTS
Data mining in SQL	5
MS Power Bi	5
Google Data Studio	5
Introduction to Azure	5
Google Cloud	5
<b>Total</b>	<b>25</b>

Data Science and Machine Learning	ECTS
Fundamentals of Machine Learning	5
Data Mining and Machine Learning	5
Big Data Fundamentals	5
Natural Language Processing	5
Computer Vision and Deep Learning	5
<b>Total</b>	<b>25</b>