

Faculty Information and Communication Sciences

Undergraduate FIRST CYCLE OF STUDIES

Study program: **DIGITAL BUSINESS ANALYTICS** (DBA) 4 years

Active from academic 2023/2024 year

Four-year (240 ECTS) studies

Degree: Bachelor of Science in Information Technology, Digital Business Analytics.

Acquired skills: business and management skills in the field of ICT, applied mathematics in the field of economics, human resource management, entrepreneurship, information technology, business intelligence systems, computer and mathematically assisted decision making.

DBA 4 years

Year I				
Semester I				
No.	Code	Course Name	No. of classes	ECTS
Core Courses				
1	ICS11M01	Economy	3+2	6
2	ICS11M02	Information and communication technologies	3+2	6
3	ICS11M03	Introduction to Programming	3+2+2	6
4	ICS11M04	Mathematics 1	3+2	6
5	ICS11M05	English for Technical Communication 1	3+2	6
Year I				
Semester II				
No.	Code	Course Name	No. of classes	ECTS
1	ICS12M01	Object Oriented Programming	3+2+2	6
2	ICS12M02	Society and technological transformation	3+2	6
3	ICS12M03	Economic mathematics	3+2	6
4	ICS12M04	English for Technical Communication 2	3+2	6
Elective				
5	ICS12EXX	Course from Faculty elective list	3+2	6

Year II				
Semester III				
No.	Code	Course Name	No. of classes	ECTS
Core Courses				
1	ICS13M01	The economics of electronic commerce	3+2	6
2	ICS13M02	Algorithms and data structures 1	3+2	6
3	ICS13M03	Databases 1	3+2	6
4	ICS13M04	Script programming	3+2	6
Elective				
5	XXX13UXX	Course from University elective list	3+2	6
Year II				
Semester IV				
No.	Code	Course Name	No. of classes	ECTS
1	ICS14M01	Web application development	3+2	6
2	ICS14M02	Business Law	3+2	6
3	ICS14M03	Software engineering	3+2	6
Elective				
4	ICS14EXX	Course from Faculty elective list	3+2	6
5	XXX14UXX	Course from University elective list	3+2	6
Year III				
Semester V				
No.	Code	Course Name	No. of classes	ECTS
Core Courses				
1	ICS15M01	Business Information Systems	3+2	6
2	ICS15M02	Probability and Statistics	3+2	6
3	ICS15M03	Economic analysis of business and financial operations	3+2	6
Elective				
4	ICS15EXX	Course from Faculty elective list	3+2	6
5	XXX15UXX	Course from University elective list	3+2	6

Year III				
Semester VI				
No.	Code	Course Name	No. of classes	ECTS
1	ICS16M01	Management of information systems	3+2	6
2	ICS16M02	Decision making methods	3+2	6
3	ICS16M03	Data visualization	3+2	6
Elective				
4	ICS16EXX	Course from Faculty elective list	3+2	6
5	XXX16UXX	Course from University elective list	3+2	6

Year IV				
Semester VII				
No.	Code	Course Name	No. of classes	ECTS
Core Courses				
1	ICS17M01	Economics of ERP systems	3+2	6
2	ICS17M02	Artificial intelligence	3+2	6
3	ICS17M03	Distributed systems	3+2	6
Elective				
4	ICS17EXX	Course from Faculty elective list	3+2	6
5	ICS17EXX	Course from Faculty elective list	3+2	6

Year IV				
Semester VIII				
No.	Code	Course Name	No. of classes	ECTS
1	ICS18M01	Business intelligence and analytics	3+2	6
2	ICS18M02	Entrepreneurship	3+2	6
3	ICS18M03	Graduation work and preparation	3+2	6
4	ICS18M04	Digital management	3+2	6
Elective				
5	ICS18EXX	Course from Faculty elective list	3+2	6
Total credits				240

The first cycle of university studies recognizes the modules:

- C - mandatory (core courses),
- MaE - elected from the scientific field of the faculty
- MiE – elected from the university list of courses.

List of Faculty Elective courses				
id	code	Course	Weekly fund of hours	ECTS
1	ICS12E01	Processing of multimedia data	3+2	6
2	ICS12E02	Logic circuits and digital electronics	3+2	6
3	ICS12E03	Signals and Systems	3+2	6
4	ICS12E04	Mathematics 2		
5	ICS14E01	Network technologies	3+2	6
6	ICS14E02	Graph theory	3+2	6
7	ICS14E03	Economics of business processes and transactions	3+2	6
8	ICS14E04	The economics of digital marketing	3+2	6
9	ICS14E05	Algorithms and data structures 2	3+2	6
10	ICS14E06	Theory of communications	3+2	6
11	ICS14E07	Social networks	3+2	6
12	ICS14E08	Political processes and governance in the 21st century	3+2	6
13	ICS14E09	Legal aspects of computer crime	3+2	6
14	ICS14E10	Introduction to Robotics	3+2	6
15	ICS15E01	Computer Organization and Architecture	3+2	6
16	ICS15E02	Computer graphics	3+2	6
17	ICS15E03	Linear algebra	3+2	6
18	ICS15E04	Computer simulations in Physics	3+2	6
19	ICS15E05	Human-Computer Interaction	3+2	6
20	ICS15E06	Modeling and simulations	3+2	6
21	ICS15E07	Digital signal processing	3+2	6
22	ICS15E08	Optical and wired networks	3+2	6
23	ICS15E09	Music programming	3+2	6
24	ICS15E10	Discrete mathematics	3+2	6
25	ICS15E11	Management theory	3+2	6
26	ICS15E12	Multimedia information systems	3+2	6
27	ICS16E01	Operative system	3+2	6
28	ICS16E02	Information theory	3+2	6

29	ICS16E03	User interface design	3+2	6
30	ICS16E04	Programmable logic controllers	3+2	6
31	ICS16E05	Numerical methods	3+2	6
32	ICS16E06	Economics of Electronic Banking	3+2	6
33	ICS16E07	Internet programming	3+2	6
34	ICS16E08	Microprocessors	3+2	6
35	ICS16E09	Wireless networks	3+2	6
36	ICS16E10	Stochastic processes	3+2	6
37	ICS16E11	Databases 2	3+2	6
38	ICS17E01	Digital music	3+2	6
39	ICS17E02	Cryptography	3+2	6
40	ICS17E03	Internet of Things	3+2	6
41	ICS17E04	Digital processing of signals and images	3+2	6
42	ICS17E05	Optimization methods	3+2	6
43	ICS17E06	Data Engineering	3+2	6
44	ICS17E07	Multiplatform programming	3+2	6
45	ICS17E08	Music and Mathematics	3+2	6
46	ICS17E09	Wireless mobile systems	3+2	6
47	ICS17E10	Platform engineering	3+2	6
48	ICS17E11	Cloud data processing	3+2	6
49	ICS17E12	Wireless mobile systems	3+2	6
50	ICS17E13	Machine learning	3+2	6
51	ICS17E14	Legal protection of data	3+2	6
52	ICS17E15	Wireless Sensor Networks	3+2	6
53	ICS18E01	Parallel programming	3+2	6
54	ICS18E02	Blockchain Development	3+2	6
55	ICS18E03	Data science	3+2	6
56	ICS18E04	Deep learning	3+2	6
57	ICS18E05	Offensive safety	3+2	6
58	ICS18E06	Virtual and augmented reality	3+2	6
59	ICS18E07	Natural language processing	3+2	6
60			3+2	6

List of University courses				
id	code	Course	Weekly fund of hours	ECTS
1	CNS13U01	Digital art	3+2	6
2	ICS13U01	Ethics of electronic literature	3+2	6
3	ICS13U02	Creative writing for media	3+2	6
4	MIR13U02	Democracy and Technology	3+2	6
5	MIR13U03	Open data	3+2	6
6	MIR13U01	Law in Information Technologies	3+2	6
7	ISVMA13U01	English for Academic Purposes	3+2	6
8	CNS14U02	The art of graphic design	3+2	6
9	CNS14U03	Visual arts and 3D modeling	3+2	6
10	ICS14U03	Theory of culture	3+2	6
11	ICS14U04	Literary theories in journalism	3+2	6
12	MIR14U04	Diplomacy in the Modern Age	3+2	6
13	CNS15U05	2D and 3D techniques for concept art	3+2	6
14	CNS15U04	Introduction to New Media Art	3+2	6
15	ICS15U05	Animated storytelling	3+2	6
16	ICS15U06	Intertextuality and hypertextuality in game theory	3+2	6
17	MIR15U06	Public speaking	3+2	6
18	MIR15U07	Elections, electoral systems and technology	3+2	6
19	MIR16U09	Negotiations and dispute resolution	3+2	6
20	CNS16U06	Visual arts and 3D character animation	3+2	6
21	ICS16U07	Art and creativity	3+2	6
22	ICS16U08	Creative writing	3+2	6
23	MIR16U08	Open government	3+2	6
24	CNS16U08	Video art and production	3+2	6
25	ISVMA16U07	English for Special Purposes	3+2	6