

Faculty of Digital Transformation
Department of Media Communications and History of Kazakhstan

APPROVING IT
Vice-Rector for Academic and Educational
Activities of ISC «International University of
Information Technologies»
Umarov T. F.
" 03 " 2021 y.



7M06 Information and Communication Technologies

7M06113 - «Digital Media Technologies and Data Visualization»

(Code of the Educational program)

CATALOG OF ELECTIVE SUBJECTS

2021-2023 year

The catalog of elective subjects for the OP 7M06113 - «Digital media technologies and data visualization" is developed on the basis of the working curriculum of the EP.

Catalog of elective subjects discussed at the meeting of the Department

Media communication and History of Kazakhstan

protocol no. 07 from "20" 09 2021 y.

Head of the Department _____  Niyazgulova A. A.

CED Compiler _____  Niyazgulova A. A.
_____  Beisenkulov A.A..

Catalog of elective subjects approved at the meeting of the Educational and Methodological Council of JSC "International University of Information Technologies" Protocol no. 04 of "30" 09 2021 year.

Department Director _____  Bektemysova G.Y.
postgraduate education
signature Full name, title, degree

1. TERMS AND ABBREVIATIONS

1. Educational program – a single set of basic characteristics of education, including the goals, results and content of training, organization of the educational process, methods and methods of their implementation, criteria for evaluating learning outcomes.

The content of the educational program of higher education consists of disciplines of three cycles – general education disciplines (hereinafter referred to as GES), basic disciplines (hereinafter referred to as BD) and profile disciplines (hereinafter referred to as PD).

The GES cycle includes the disciplines of the compulsory component (hereinafter referred to as the CC), the university component (hereinafter referred to as the UC), and(or) the elective component (hereinafter referred to as the EC). DB and PD include the disciplines of EC and UC.

2. Catalog of elective subjects (CED) – a systematized annotated list of all elective component disciplines for the entire period of study, containing their brief description with an indication of the purpose of study, brief content (main sections) and expected learning outcomes. The CED reflects the prerequisites and post-prerequisites of each academic discipline. CED should provide students with an alternative choice of elective academic subjects for the formation of an individual educational trajectory.

Based on the educational program and CED, students develop individual training plans with the help of advisors.

3. Individual curriculum (IP) – a curriculum formed for each academic year by students independently with the help of an adviser on the basis of the educational program and the catalog of elective subjects and (or) modules;

The IEP determines the individual educational trajectory of each student separately. The IEP includes disciplines and types of educational activities (practical training, research/experimental research work, forms of final certification) of the mandatory component (MC), the university component (UC) and the elective component (EC).

4. Advisor – a teacher who performs the functions of an academic mentor studying under the relevant educational program, who assists in choosing the learning path (forming an individual curriculum) and mastering the educational program during the training period.
5. University component – a list of mandatory academic subjects determined by the university independently for the development of the educational program.
6. Elective component – a list of academic subjects and corresponding minimum academic credits offered by the university, independently selected by students in any academic period, taking into account their prerequisites and post-prerequisites.
7. Elective subjects – academic subjects included in the university component and the elective component within the established academic credits and introduced by educational organizations, reflecting the individual training of the student, taking into account the specifics of socio-economic development and the needs of a particular region, established scientific schools.
8. Postrequisite – disciplines and / or modules and other types of academic work that require knowledge, skills, abilities and competencies acquired upon completion of the study of this discipline and / or modules;
9. Prerequisites - disciplines and / or modules and other types of academic work that contain knowledge, skills, abilities and competencies necessary for mastering the discipline being studied and / or modules;
10. Competencies – the ability to make practical use of the knowledge, skills and abilities acquired in the course of training in professional activities.

2. ELECTIVE SUBJECTS

№	Discipline cycle	Discipline code	Name of the discipline	Semester	Number of credits	Prerequisites
<i>Elective discipline 1</i>						
1	BD	JUR7422	International cross-cultural communications	1	5	Digital media technologies
2	BD	JUR7423	Modern scientific concepts of mass communication	1	5	Digital media
<i>Elective discipline 2</i>						
3	BD	JUR7410	Data analysis (Python and other programs)	2	5	Visual informatics: computer graphics and visualization
4	BD	JUR7418	Modern applications of data journalism	2	5	Big data and social analytics
<i>Elective discipline 3</i>						
5	BD	JUR7427	Forms and methods of the country's foreign policy image	2	5	Visual Informatics: Computer graphics and visualization
6	CD	JUR7428	Current problems of international journalism	2	5	Big data and social analytics
<i>Elective discipline 4</i>						
7	CD	JUR7430	Journalism and international law	2	5	Visual Informatics: Computer Graphics and visualization
8	CD	JUR7429	Semiotics of nonverbal communication	2	5	Visual Informatics: Computer Graphics and Visualization
<i>Elective discipline 5</i>						
9	CD	JUR7414	Artificial intelligence: applications for media strategy	3	5	Visual Informatics: Computer Graphics and visualization

10	CD	JUR7415	State policy of the Republic of Kazakhstan in the field of information and cybersecurity	3	5	Information security and data protection
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3. DESCRIPTION OF ELECTIVE SUBJECTS

Description of the discipline	
Discipline code	JUR7422
Name of the discipline	International cross-cultural communications
Number of credits	5
Course, semester	1,1
Name of the department	Media communications and history of Kazakhstan
Course author	Velitchenko S. N.
Prerequisites	for digital media technologies
Postrequisites	-
The purpose of studying the discipline	Purpose: to reveal the content of the main theoretical concepts and terms used in modern communication studies.
Brief description of the course (main sections)	The practical goal involves the formation of students' ability to apply the acquired knowledge in solving professional and social problems, which, in turn, involves solving the following tasks • * to assess intercultural communication in the organization of international relations; • to form intercultural communication skills in practice; • to apply the skills of effective interaction with representatives of Western and eastern cultures. The educational goal involves raising the level of general culture and acquiring knowledge about cross-cultural communication in international relations of scientific and social significance.

Expected results	<p>Willingness to act in non-standard situations, to bear social and ethical responsibility for the decisions made.</p> <p>Know: the principles and bases of actions in non-standard situations, have an understanding of the principles of security. individual activity.</p> <p>Be able to: use the principles and algorithms of actions in non-standard situations Possess: decision-making skills in non-standard situations.</p>
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Description of the discipline	
Discipline code	JUR7423
Name of the discipline	Modern scientific concepts of mass communication
Number of credits	5
Course, semester	1,1
Name of the department	Media communications and history of Kazakhstan
Course author	Velitchenko S. N.
Prerequisites	for digital media technologies
Postrequisites	-
The purpose of studying the discipline	is to focus undergraduates on understanding the theory of mass communication and modeling media development.
Brief description of the course (main sections)	Evolution of information exchange processes, theoretical aspect of mass communication; development of interfaces, telecommunication techniques and technologies; from communicators to wireless technologies; current trends in digital media development; from network technologies to virtual reality; new directions in media development; from mass information to mass communication.

Expected results	<p>As a result of mastering the discipline, the master's student must::</p> <ul style="list-style-type: none"> - be able to analyze modern trends in the development of scientific knowledge; to know about the current methodological and philosophical problems of natural, social, humanitarian and economic Sciences; to write and edit scientific articles on an interdisciplinary level in the areas of it and media communication; and to integrate knowledge with science, innovation and startup projects, to cope with difficulties and to make judgments based on incomplete or limited information, taking into account ethical and social responsibility to use these judgments and knowledge; <p>Competencies:</p> <ul style="list-style-type: none"> - be able to navigate the technologies and specifics of working with information.
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Description of the discipline	
Discipline code	JUR7410
Name of the discipline	Data analysis (Python and other programs)
Number of credits	5
Course, semester	1,2
Name of the department	Media communications and history of Kazakhstan
Course author	Beisenkulov A. A.
Prerequisites	Visual Informatics: Computer Graphics and Visualization
Postrequisites	-
The purpose of studying the discipline	is to focus undergraduates on understanding image processing and analysis in a digital environment.
Brief description of the course (main sections)	Systematic review of modern methods of image processing and analysis, evaluation of their informative value. The course allows you to study and master the principles of image processing algorithms, editing and visual analysis, building software complexes and systems for intelligent digital graphics processing.

Expected results	<p>As a result of mastering the discipline, the master's student must::</p> <ul style="list-style-type: none"> - ability to work with digital images; - ability to analyze current trends in the development of scientific knowledge; - integrate knowledge with science, innovation and start-up projects, cope with difficulties and make judgments based on incomplete or limited information; <p>Competencies:</p> <ul style="list-style-type: none"> - be able to navigate the technologies and specifics of working with information and processing photos.
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Description of the discipline	
Discipline code	JUR7418
Name of the discipline	Modern applications of data journalism
Number of credits	5
Course, semester	1,2
Name of the department	Media communications and history of Kazakhstan
Course author	Beisenkulov A. A.
Prerequisites	Big data and social analytics
Postrequisites	-
The purpose of studying the discipline	is to target undergraduates to understand the importance of working with big data in a digital environment.
Brief description of the course (main sections)	Mathematical foundations of big data; network operation algorithm, types of information storage, problems of forming large arrays and processing them; cloud storage technology; information security and access to network resources; problems of efficient use of big data: an applied aspect
Expected results	<p>As a result of mastering the discipline, the master's student must::</p> <ul style="list-style-type: none"> - ability to work with big data ; - ability to analyze current trends in the development of scientific knowledge; -integrate knowledge with science, innovation and start-up projects, cope with difficulties and make judgments based on incomplete or limited information; <p>Competencies:</p> <ul style="list-style-type: none"> - be able to navigate the technologies and specifics of working with information and big data.

Description of the discipline	
Discipline code	JUR7427
Name of the discipline	Forms and methods of the country's foreign policy image
Number of credits	5
Course, semester	1,2
Name of the department	Media communications and history of Kazakhstan
Course author	Velitchenko S. N.
Prerequisites	Visual Informatics: Computer Graphics and Visualization
Postrequisites	-
The purpose of studying the discipline	The purpose of the work predetermined the formulation of the following research tasks: To clarify the content of the concepts "foreign policy image of the state" and "foreign policy image of the leader of the state", to identify the role and place of the positive quality of these images in ensuring the foreign policy interests of the state in modern conditions.
Brief description of the course (main sections)	In modern conditions, the formation and use of attractive images of the country and its leader can rightly be attributed to the most important factors of their success in the international arena. Such images, supported by the real achievements of the state and its leaders in key areas of socio-political life, are a necessary condition for recognizing the authority of the country and the influence of its political leaders in the world. However, without the availability of appropriate information technologies and mechanisms created on the basis of conceptual developments and consulting services of specialists-field technologists dealing with the theory and practice of improving the domestic and foreign policy images (or images ¹) of the state and political leaders, this task seems difficult to solve.
Expected results	As a result of mastering the discipline, the master's student must: - to be able to analizirovat the current state of systems and digital models of the media; - to have the technology and methods of commercialization of scientific ideas; - demonstrate developing knowledge and understanding obtained at the level of higher education; andto integrirovat knowledge with science, innovation and startup projects, to cope with difficulties and to make judgments based on incomplete or limited information; Competencies: - be able to navigate the technologies and specifics of working with information.

Description of the discipline	
Discipline code	JUR7428
Name of the discipline	Current problems of international journalism
Number of credits	5
Course, semester	1,2
Name of the department	Media communications and history of Kazakhstan
Course author	D. P. Shorokhov.
Prerequisites	Big data and social analytics
Postrequisites	-
The purpose of studying the discipline	The aim is to study the current problems of international journalism in the context of media coverage of the most important issues of world politics and international security.
Brief description of the course (main sections)	A modern journalist absolutely needs both knowledge of the main problems of world politics, their origins, development trends, and the ability to analyze them. The aim of the course is to teach students the skills of in-depth analysis of modern problems of international relations and world security, using the most successful journalistic materials and the works of well-known experts.
Expected results	As a result of mastering the discipline, the master's student must:: - ability to work with big data; - ability to analyze current trends in the development of scientific knowledge; - integrate knowledge with science, innovation and start-up projects, cope with difficulties and make judgments based on incomplete or limited information; Competencies: - be able to navigate the technologies and specifics of working with information and big data.

Description of the discipline	
Discipline code	JUR7430
Name of the discipline	Journalism and international law
Number of credits	5
Course, semester	1,2

Name of the department	Media communications and history of Kazakhstan
Course author	Beisenkulov A. A.
Prerequisites	Visual Informatics: Computer Graphics and Visualization
Postrequisites	-
The purpose of studying the discipline	to focus undergraduates on understanding visual effects, video processing in a digital environment.
Brief description of the course (main sections)	The evolution of design, technique and technology of motion animation; animation graphics, aka motion graphics-visual design that animates a static image. Visualization of concrete data and abstract ideas. Use visual effects, audio, graphic design, and various animation techniques.
Expected results	As a result of mastering the discipline, the master's student must:: ability to analyze current trends in the development of scientific knowledge; Integrate knowledge with science, innovation and start-up projects, manage complexities and make judgments based on incomplete or limited information, taking into account the ethical and social responsibility for applying these judgments and knowledge; Competencies: - be able to navigate the technologies and specifics of working with information.

Description of the discipline	
Discipline code	JUR7429
Name of the discipline	Semiotics of nonverbal communication
Number of credits	5
Course, semester	1,2
Name of the department	Media communications and history of Kazakhstan
Course author	Beisenkulov A. A.
Prerequisites	Visual Informatics: Computer Graphics and Visualization
Postrequisites	-
The purpose of studying the discipline	is to focus undergraduates on understanding visual effects обработки and video processing in a digital environment.

Brief description of the course (main sections)	The science of sound codes of nonverbal communication; gestures and gesture movements, processes and systems; eye language and visual behavior during communication; auditory perception of sounds and auditory behavior of people in the process of communication; tactile communication; time of communication, its structural, cultural and semiotic functions.
Expected results	As a result of mastering the discipline, the master's student must: <ul style="list-style-type: none"> - - be able to analyze the current state of systems and digital models of mass media; - possess the technology and methods of commercialization of scientific ideas; - demonstrate the developing knowledge and understanding gained at the level of higher professional education; - integrate knowledge with science, innovation and startup projects, cope with complexities and make judgments based on incomplete or limited information; Competencies: <ul style="list-style-type: none"> - be able to navigate the technologies and specifics of working with information.

Description of the discipline	
Discipline code	JUR7414
Name of the discipline	Artificial Intelligence: Applications for media strategy
Number of credits	5
Course, semester	2,3
Name of the department	Media communications and history of Kazakhstan
Course author	Niyazgulova A. A.
Prerequisites	Visual Informatics: Computer Graphics and Visualization
Postrequisites	-
The purpose of studying the discipline	is to target undergraduates to understand the importance of artificial intelligence and its application for media strategy in the digital environment.
Brief description of the course (main sections)	Computing devices and software in the service of humans; gadgets and smart devices; the Internet of Things; development of interfaces for interaction with machine intelligence; bots and software tools; use of artificial intelligence to develop media strategies in improving the information environment.

Expected results	<p>As a result of mastering the discipline, the master's student must::</p> <ul style="list-style-type: none"> - possess artificial intelligence technology and methods of commercialization of scientific ideas; - demonstrate developing knowledge and understanding obtained at the level of higher professional education; -integrate knowledge with science, innovation and start-up projects; <p>Competencies:</p> <ul style="list-style-type: none"> - be able to navigate the technologies and specifics of working with information.
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Description of the discipline	
Discipline code	JUR7415
Name of the discipline	State policy of the Republic of Kazakhstan in the field of information and cybersecurity
Number of credits	5
Course, semester	2,3
Name of the department	Media communications and history of Kazakhstan
Course author	Seitzhanova RailwaystationД.
Prerequisites	Information security and data protection
Postrequisites	-
The purpose of studying the discipline	is to target undergraduates to understand the importance of the State Policy of the Republic of Kazakhstan in the field of information and cybersecurity
Brief description of the course (main sections)	The state policy of the Republic of Kazakhstan in the field of information and cybersecurity, regulations and normative documents of state secrets and access to information; the Law on mass media, the role of journalism in modern society; problems of information security, ethical issues, personal human life and protection of personal data; hacking and attack information resources, hacking, methods of protection from unauthorized access; securing networks and devices from threats.

Expected results	As a result of mastering the discipline, the master's student must:: - understand the importance of the State Policy of the Republic of Kazakhstan in the field of information and cybersecurity; - master the technology and methods of commercialization of scientific ideas; - integrate knowledge with science, innovation and start-up projects; Competencies: - be able to navigate the technologies and specifics of working with information.
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