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## CONCEPT OF EDUCATIONAL AND PROFESSIONAL PROGRAM

### “EDUCATIONAL MEASUREMENT”

Nizhyn Mykola Gogol State University

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### DEVELOPERS OF THE CONCEPT

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The volume of MA program	90 ECTS credits (2700 hours)
Educational level	Master
Branch of knowledge	1801 Specific categories
Specialty	8.18010022 Educational Measurements
Qualification	2433.2 Professional in the field of information and information analyst
Apprenticeship	1 year 5 months
<b>1</b>	<b>Objectives of the program</b>
	To help students to acquire knowledge, skills and understanding of educational measurement, including analytics and gender research in education and behavioral sciences, to give them possibilities to carry out their work independently. To prepare them for successful mastering of complex applications of scientific research and development, to help them to become experts in communication, teachers, supervisors in educational and social institutions, including solving gender-related issues and challenges.

<b>2</b>	<b>Characteristics of the program</b>	
1	Subject area	Behavioral sciences: pedagogy, psychology, sociology, political science, and others.
2	The focus of the program	General. Emphasis is put on testing, evaluating, data analysis, usage quantitative methods in various fields, including gender studies. The program has 2 specializations: Information analytics; Gender studies.
3	Orientation of the program	Educational-professional
4	Features of the program	Interdisciplinary and multidisciplinary training of specialists in various fields of analytics
<b>3</b>	<b>Career of graduates, employment and further education</b>	
1	Career of graduates	Graduates of the program can work in higher education institutions, analytical centres, education management bodies of any level, education quality assessment centers, testing centers, scientific organizations involved in education quality assessment projects, organizations offer services in the development of educational quality assessment tool, in HR-organizations and human resources services, in certification services and licensing bodies, in the centers for certification of skills, in scientific organizations participating in projects on the assessment of professional competences and requirements for professional qualifications.
2	Further education	The ability to study in graduate school
<b>4</b>	<b>The style and methods of teaching</b>	
1	Approaches to Learning	Lectures, seminars, consultations, independent work and self-study in the library and web-based environment, master thesis. Style of the study - active, which allows the student to organize time. The combination of modern training methods and technology with new and traditional approaches allow improving training in terms of practical orientation to meet the requirements of the labour market and international settings, forming skills at each stage of learning, activating cognitive activities of students.
2	The assessment system	Written and oral exams, credits, presentation of training practices, defense of diploma (qualification work) is particularly focused on information analytics and/or gender studies, the final exam. Certification of graduates is carried out by means of objective evaluation of achievements.
<b>5</b>	<b>Program competences</b>	
1	General social, personal and	<b>1.</b> Oral and written communication in native and foreign languages. The ability to speak and write correctly in accordance with different communication styles, namely: informal, formal and scientific.

	scientific competences	<p><b>2.</b> Independent work. The ability to work independently and skills of time management. The ability to direct the effort, combining the results of different studies and analysis, to submit results and outcomes of work on time.</p> <p><b>3.</b> Ability for continuous and active learning, self-education, continuous professional development and application of acquired knowledge and skills in the profession.</p> <p><b>4.</b> Ability to conduct scientific and applied research by using information technology.</p> <p><b>5.</b> Critical thinking skills and critical self-reflection. The ability to formulate the problem, to solve it and achieve a reasonable conclusion using appropriate information and methodology.</p> <p><b>6.</b> Quality management and ethical commitments. Knowledge of standards necessary for scientific research and publication, including critical awareness and intellectual honesty.</p> <p><b>7.</b> The ability of interdisciplinary interaction and cooperation with representatives of other fields of knowledge in the process of solving research and applied problems.</p> <p><b>8.</b> Interpersonal skills and teamwork. Ability to work in a team, performing a leading role in an international and multicultural group.</p> <p><b>9.</b> Ability to appreciate diversity and differences.</p> <p><b>10.</b> Ability to carry out a gender analysis of information in politics, education and economy.</p>
2	General and specialized professional competences	<p><b>1.</b> Ability to open and analyze patterns of development of international and national educational practice, to identify its positive and negative aspects, directions of integration of international educational achievements in Ukrainian educational space.</p> <p><b>2.</b> Ability to participate in education management at various levels, to select and develop procedures for monitoring educational programs and processes, to identify major areas for improving educational management.</p> <p><b>3.</b> Knowledge of fundamental sections of mathematics and statistics, to the extent necessary for mastering the mathematical apparatus (analysis strategies, tools and techniques) of psychology, pedagogy, the ability to use mathematical methods in educational measurements.</p> <p><b>4.</b> Ability to organize, process and analyze statistical data, interpret them, identify causal relationships and use for scientific analysis and practical conclusions.</p> <p><b>5.</b> Ability to analyze and implement the latest achievements of educational science, apply innovative forms, methods and techniques of organization of educational and cognitive activity, plan the structure and content of the components of the educational process.</p> <p><b>6.</b> Knowledge in mathematical methods of construction and analysis of models of educational systems and processes, development of new</p>

		<p>mathematically grounded tools and methods of research in the field of education.</p> <p><b>7.</b> Knowledge of basic theoretical approaches, theories, fundamental and applied fields of psychology and pedagogy to solve applied and scientific problems in the field of education.</p> <p><b>8.</b> Ability to select, develop and apply assessment and measurement techniques relevant to educational and professional decision making.</p> <p><b>9.</b> Ability to scale and interpret the results of evaluation and measurement procedures, to communicate results and decisions based on them to stakeholders and the wider social community.</p> <p><b>10.</b> Knowledge of technical, legal and ethical requirements for methods of evaluating and measuring, the ability to determine compliance with these requirements means both the assessment and measurement procedures and their implementation and information on the results of their application.</p> <p><b>11.</b> Knowledge of the methods and means of computerizing the evaluation and measurement and analysis of their results, the ability to use them.</p> <p><b>12.</b> Ability to apply modern methods of data analysis in various fields of human activity, to acquire knowledge in databases, to implement machine-learning procedures.</p> <p><b>13.</b> Ability to understand the historical evolution and contemporary character of gender policy. Knowledge of the methodology and methods of gender analysis of legal or political relations.</p>
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<b>6 Learning Outcomes</b>		
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<b>6</b>	<b>Learning Outcomes</b>	
1	<p>Knowledge and understanding:</p> <ul style="list-style-type: none"> <li>- knowledge of Science Philosophy, intellectual property legislation, the methodology of research in the field of educational measurement</li> <li>- knowledge and understanding of current issues of higher school, education and pedagogy</li> <li>- knowledge of industrial methods in educational measurement for higher school</li> <li>- knowledge of job protection and civil defence</li> <li>- knowledge of fundamental mathematics and statistics necessary for mastering statistics of psychology, pedagogy, psychometry, ability to apply statistical methods in educational measurement</li> <li>- knowledge of research methods and analysis of educational systems and processes, understanding of educational systems, their diversity and interaction in solving the practical and scientific problems in the field of education</li> <li>- knowledge of methods and means of computer estimation and measurement, analysis of their results</li> <li>- knowledge of technical, legal and ethical requirements for estimation and measurement</li> </ul>	
2	<p>Application of knowledge and understanding (Applying knowledge and understanding):</p>	

	<ul style="list-style-type: none"> <li>- the ability for business communication in a foreign language</li> <li>- to apply knowledge in Theory of Education and Psychology of higher school in the career of university teacher</li> <li>- to apply the principles of scientific activity and knowledge in solving specific methodical, scientific, industrial, information retrieval and other tasks</li> <li>- to select and apply methods of estimation and measurement for decision-making in education and professional selection</li> <li>- to scale and deliver the results of educational measurement, interpretation and decisions for stakeholders and broad social strata</li> <li>- to select and develop procedures for monitoring educational programs and processes</li> <li>- the ability to carry out gender monitoring of education sector in order to produce recommendations for overcoming gender discrimination</li> </ul>
3	<p>Making judgments:</p> <ul style="list-style-type: none"> <li>- the ability to combine fundamental research and practical training in educational measurement to model the social phenomena and processes and to conduct the scientific research</li> <li>- the ability to develop the new mathematically-based models, tools and methods of research in education</li> <li>- the ability to analyze the validity and reliability of the results in educational measurement</li> <li>- the ability to design and select methods for studying the quality of educational programs</li> <li>- the ability to plan, organize and administer standardized assessment</li> <li>- the ability to appreciate and cultivate diversity; to be learned in the national and international legislation, in gender equality in particular; to carry out the gender approach in education management and research</li> </ul>

### Structure of the MA Programme

No	Course Title	ECTS	OB <sup>1</sup>	SEL <sup>2</sup>	LEC <sup>3</sup>	SEM\ PrTr <sup>4</sup>	LAB <sup>5</sup>	Individual work
<b>1<sup>st</sup> Semester</b>								
1	Philosophy of Science	3	+		20	10		60
2	Foreign Language	3	+		4	26		60
3	Mathematical and statistical methods in education	4	+		20	10	10	80
4	Methodology and organization of scientific research	3	+		20	10		60
5	Pedagogy of high school	3	+		18	12		60
6	Psychology of higher education	3	+		12	10	8	60
7	Basics of educational assessment and monitoring of education quality	3	+		16	14		60
8	Computer technologies in knowledge assessment	4	+		18		20	82

9	Cognitive Psychology and Psychometry	4	+		20	18		82
		<b>30</b>						
<b>2<sup>nd</sup> Semester</b>								
1	Foreign Language	4	+		8	32		80
2	Measurement in education	6	+		30	14	14	122
3	Designing tests	3	+		14	8	8	60
4	Models and methods of modern test theory	5	+		24	12	12	102
5	Psychology of business communication / Actual problems of methodology / Actual problems of higher education pedagogy / Management in education	3		+	10	20		60
6	Professional and corporate ethics / Intellectual Property / Factors for successful employment in specialty / European Studies (taught in English) / Civil Protection	3		+	10	20		60
7	Applied Statistics / Data Analysis Methods	3		+	16	14		60
8	Testing for licensing, certification and professional selection / Setting standards	3		+	16	14		60
		<b>30</b>						
<b>3d Semester</b>								
1	Methods of teaching educational measurements	3	+		14	6	8	62
2	Organization of distance learning / <b>Education and gender</b>	3		+	14	14		62
3	Data mining / <b>Gender Psychology</b>	4		+	18	20		82
4	Applied statistical packages / <b>Gender policy</b>	3,5		+	18	16		71
5	Scientific-pedagogical practice	6	+					180
6	Master thesis	10,5	+					315
		<b>30</b>						
		<b>90</b>			340	250	130	1980

Notification: <sup>1</sup>OB= Obligatory

<sup>2</sup>SEL= Selective

<sup>3</sup>LEC= Lecture

<sup>4</sup>SEM= Seminar

<sup>5</sup>LAB= Laboratory

<sup>6</sup>PrTr= Practical Training

## SHORT DESCRIPTIONS OF GENDER COURSES

	<b>Name of subject</b>	<b>Purpose of subject</b>	<b>Content of subject</b>
1	Gender policy	The course aims to familiarize students with the basic concepts, approaches and areas of gender theory, to reveal the relationship of political processes with gender factors, described models, strategies and forms of implementing the policy of gender equality, give practical skills of gender examination and analysis of various areas of policies.	Gender as a category of analysis of the socio-political processes. The emergence and development of women's and gender studies. Gender theory and areas of gender studies. The women's movement as a socio-cultural phenomenon. Feminism as a catalyst for the emergence and establishment of gender policy. Principles of gender policy. The strategy of Gender Policy. Types of gender policy. Gender analysis of political practices. Political relations: gender aspect. The economic sphere: gender aspect. Gender equality as a basic principle of gender policy. Social norms and gender differences in board education. The gender dimension of education accessibility. Gender policy in science and research. Gender approach in education. Indicators of gender equality in the sphere of health care. Gender policy of International Organization of Health Care. Main factors of gender differences of diseases. Gender equality in health care.
2	Education and gender	This theme explores the gender dimension of modern education and methods of teaching gender studies. The theoretical course is drawn from reserach studies on gender education and teaching aids for teachers Gender Studies. The focus of the course is training practical skills in gender studies.	Value of education, gender and politics. Equality for admission to educational institutions. Equal opportunities for training and education. Gender stereotypes and prejudices in education. Manifestations of gender discrimination and violence in education. Gender roles and stereotypes: the curriculum. Gender analysis of educational textbooks. Involving parents in gender education. Gender issues in the context of courses of secondary and higher education. Educational Technology theory of gender. How to recognize and carry out research on gender stereotypes and gender discrimination. Gender violence as an object of study. Designing strategies for the egalitarian environment.
3	Gender Psychology	Mastery of the basics of gender analysis of social and psychological processes and phenomena. Examine current research and theory regarding the validity and utility of commonly accepted gender differences in many realms.	The structure of gender knowledge. The essence of the gender category of gender, history of the concept. The methodology of gender studies in psychology. Qualitative approaches in the study of gender. The development of gender psychology. Gender theory. Queer -theory. The gender dimension of the relationship of biological and psychological characteristics. Gender identity. Sexual identity. The phenomenon of queer-identity. Gender socialization: cultural transmission and cultural constraints. Common problems of gender socialization. Gender stereotypes and gender roles. Gender stereotypes in the media, film, and advertising. Psychological aspects of sexism and gender asymmetry in the process of socialization. Applied aspects of gender psychology.