

MINISTRY OF HEALTH OF UKRAINE  
KHARKIV NATIONAL MEDICAL UNIVERSITY

Department of Obstetrics, Gynecology and Pediatric Gynecology

**SYLLABUS**  
of academic discipline

“Ultrasound Examination in Obstetrics and Gynecology”

**Academic year 2020-2021**

field of knowledge

22 Healthcare

(code and name of the direction of training)

specialty

222 Medicine

(code and name of the specialty)

name of the level of higher education Second (educational and scientific level)

name of the degree assigned master's level of higher education

The syllabus of the discipline was approved at the meeting of the department of Obstetrics, Gynecology and Pediatric Gynecology


Approved by the methodical commission of KhNMU on the problems of professional training of surgical profile

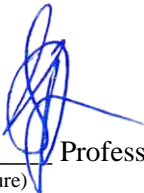
Protocol of  
“28” August 2020 No. 1

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“28” August 2020 No. 1

Head of the department

Head

  
\_\_\_\_\_  
(signature) Professor I.O. Tuchkina  
(initials and surname)

  
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(signature) Professor V.O. Syplyvyi  
(initials and surname)

“28” August 2020

“28” August 2020

### 1. Data on the teacher who teaches the discipline

First name, patronymic and surname of the teacher	Lyudmyla Anatoliyivna Vygivska
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Schedule of classes	
Consultations	

## INTRODUCTION

The syllabus of the discipline “Current Scientific Research in Obstetrics and Gynecology” is compiled in accordance with the educational and professional program Medicine, field of knowledge 22 – “Health”, specialty – 222 “Medicine”.

**Discipline description (abstract)** Ukraine has actively embarked on the path of Western European development, this applies in particular to medical science and education. Modern scientific trends require educators to take new approaches to research, write scientific articles and dissertations, develop new methods and more creative approaches to training graduate students, young scientists, using their creative potential, acquired knowledge and experience. Training of doctors is the basis for further professional activity and is important for self-realization and further career growth, which will generally improve the diagnosis, treatment and prevention of diseases of the female reproductive system, improve the level of medical care for mothers and mothers and influence the demographic situation in Ukraine. Thus, it is important to study the discipline “Current scientific research in obstetrics and gynecology” in the system of training doctors for the specialty 222 Medicine.

**The subject** of the course is medical and diagnostic methods and techniques in obstetrics and gynecology, the use and principles of working with the latest equipment.

**Interdisciplinary relations.** The discipline “Current Scientific Research in Obstetrics and Gynecology” relates with such disciplines as: “Obstetrics and Gynecology”, “Modern Medical and Biomedical Technologies”, “Methodology of Scientific Research in Medicine”.

The discipline is elective.

*Prerequisites.* The study of the discipline involves the prior mastering of credits in obstetrics and gynecology.

*Postrequisites.* The main provisions of the discipline should be applied in the study of professional disciplines.

## 1. The purpose and objectives of the discipline

**1.1. The purpose of teaching the discipline** is to acquire the necessary knowledge on modern research in obstetrics and gynecology, which involves the acquisition and deepening of knowledge, skills, abilities and other competencies sufficient to produce new ideas, solving complex problems in this discipline, mastering the methodology scientific and pedagogical activities, as well as conducting their own research, which solves the current scientific problem in obstetrics and gynecology, the results of which have scientific novelty, theoretical and practical significance.

**1.2. The main objectives of the discipline are:** the acquisition of skills in the use of modern research in obstetrics and gynecology, mastering the terminology of the research area; study of the latest techniques in obstetrics and gynecology; acquisition of skills in the analysis of resource and information bases for solving professional problems in obstetrics and gynecology, systematization of methodological experience (domestic and foreign) in obstetrics and gynecology.

**1.3 Competences and learning outcomes**, the formation of which is facilitated by the discipline (relationship with the normative content of training of higher education, formulated in terms of learning outcomes).

According to the requirements of the standard, the discipline provides acquisition by students of

***competencies:***

- *integral:*

Ability to solve complex specialized problems and practical problems associated with physical therapy and occupational therapy, characterized by complexity and uncertainty of conditions, using the provisions, theories and methods of medical-biological, social, psychological and pedagogical sciences.

- *general:*

GC 01. Knowledge and understanding of the subject area and understanding of professional activity.

GC 02. Ability to act on the basis of ethical considerations (motives).

GC 03. Interpersonal skills.

GC 04. Ability to work in a team.

GC 05. Ability to motivate people and move towards a common goal.

GC 06. Ability to communicate in the state language both orally and in writing.

GC 07. Ability to communicate in a foreign language.

GC 08. Ability to plan and manage time.

GC 09. Information and communication technology skills.

GC 10. Ability to search, process and analyze information from various sources.

GC 11. Ability to learn and master modern knowledge.

GC 12. Ability to apply knowledge in practical situations.

GC 13. Ability to act socially responsibly and consciously.

GC 14. Ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.

GC 15. Ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, use different types and forms physical activity for active recreation and a healthy lifestyle.

- *special (professional, subject-specific):*

SC 01. Ability to explain to patients, clients, families, members of the interdisciplinary team, other health care professionals the need for physical therapy, occupational therapy, principles of their use and connection with health care.

SC 02. Ability to analyze the structure, normal and individual development of the human body and its motor functions.

SC 03. Ability to interpret pathological processes and disorders and use suitable means of physical therapy, occupational therapy for their correction.

SC 04. Ability to take into account medical, psychological and pedagogical, social aspects in the practice of physical therapy, occupational therapy.

SC 05. Ability to conduct safe practice for the patient / client and practitioner in physical therapy, occupational therapy in obstetrics and gynecology.

SC 06. Ability to perform basic components of examination in physical therapy and / or occupational therapy: observation, survey, measurement and testing, document their results.

SC 07. Ability to help the patient / client understand their own needs, discuss and explain the content and need for a physical therapy and occupational therapy program

SC 08. Ability to effectively implement a program of physical therapy and / or occupational therapy.

SC 09. Ability to ensure that physical therapy and / or occupational therapy measures are appropriate to the patient's / client's functionalities and needs.

SC 10. Ability to carry out operational, current and staged monitoring of the patient's / client's condition by appropriate means and methods and to document the obtained results.

SC 11. Ability to adapt their current practice to changing conditions.

SC 12. Ability to provide pre-medical care in emergencies.

SC 13. Ability to teach the patient / caregivers self-care / care, prevention of diseases, injuries, complications and disabilities, a healthy lifestyle.

SC 14. Ability to find ways to continuously improve the quality of physical therapy and occupational therapy services.

Detailing of competencies according to NQF descriptors in the form of “Competence Matrix”.

## Matrix of compliance defined by the Standard of competencies with the descriptors of the National Qualifications Framework

Competence code	Competence name	Knowledge	Skills	Communication	Autonomy and responsibility
<b>Integral competence</b>					
IC	Ability to solve complex specialized problems and practical problems associated with physical therapy and occupational therapy, characterized by complexity and uncertainty of conditions, using the provisions, theories and methods of medical-biological, social, psychological and pedagogical sciences.				
<b>General competencies</b>					
GC01	Knowledge and understanding of the subject area and understanding of professional activity	To know the legislative and system-forming documents governing professional activities.	To adhere to the law, be able to take into account the factors that affect the professional activities of physical therapists and occupational therapists.	Ability to exchange information about legislative factors influencing the professional activity of a physical therapist and occupational therapist.	To be responsible for their own professional decisions, adherence to the framework of professional activity.
GC02	Ability to act on the basis of ethical considerations (motives)	To know the legal documents related to health care, social protection, education, physical education.	To adhere to the law, moral norms, professional ethics; be able to obtain the consent of the patient / client, or guardians to conduct physical therapy, occupational therapy.	To show respect for the patient / client; show empathy; adhere to effective communication; perceive and respect the patient's / client's need for communication.	To be responsible for their own professional decisions, compliance with ethical and legal requirements.
GC03	Interpersonal skills	To know the methods of verbal and non-verbal communication with patients / clients in different conditions, guardians, family members, relatives and all participants in the	To be able to take into account factors that may affect the effectiveness of communication; use open and closed questions; identify and interpret nonverbal communication	To demonstrate the skills of an attentive listener and the ability to ask questions correctly; express written information in plain language.	To be responsible for complying with ethical and legal requirements, critically analyze their communication skills and improve communication skills.

		rehabilitation process.	signals; communicate professionally and clearly with patients / clients, guardians, family members, relatives and all participants in the rehabilitation process; check that the patient / client understands the information provided.		
GC04	Ability to work in a team	To know the methods of effective communication, teamwork management.	To be able to work in a team, adhere to the limits of professional competence, ethical and moral principles; demonstrate behavior that contributes to the formation of a favorable working atmosphere.	Ability to exchange information with team members, communicate with them verbally and nonverbally; adhere to the appropriate style of clothing, communication and behavior.	To be responsible for complying with ethical, legal and professional requirements
GC05	Ability to motivate people and move towards a common goal	To know the methods of effective communication, basics of management and governance	To be able to apply knowledge of effective communication, management and governance, demonstrate behavior that promotes motivation.	Ability to exchange information, communicate verbally and nonverbally; adhere to the appropriate style of clothing, communication and behavior.	To be responsible in the formation of a common goal and its implementation.
GC06	Ability to communicate in the state language both orally and in writing	To have a perfect knowledge of the state language.	To be able to apply knowledge of the state language, both orally and in writing.	To use the state language in professional and business communication and in the preparation of documents.	To be responsible for proficiency in the state language at the appropriate level.

GC07	Ability to communicate in a foreign language	To have sufficient knowledge of a foreign language.	To be able to apply knowledge of a foreign language, be able to communicate in a foreign language.	To use a foreign language in professional and business communication and in the preparation of documents, use a foreign language in professional activities	To be responsible for foreign language proficiency at the appropriate level.
GC08	Ability to plan and manage time	To know the basics of management	To be able to apply the principles of organizational management	To use the means of communication	To apply responsibly the principles of organizational management
GC09	Skills in the use of information and communication technologies	To have knowledge in the field of information technology used in professional activities	To be able to use information and communication technologies in professional activities	Ability to use information and communication technologies in professional activities	To be responsible for the development of professional knowledge and competencies
GC10	Ability to search, process and analyze information from various sources	To know the principles of scientific evidence practices; modern methods of information retrieval; work with library and information resources.	To be able to use traditional and latest information communication technologies; select available resources, such as electronic databases; demonstrate the use of a critical approach during the process of interpreting information;	To establish appropriate connections to achieve goals; use library and information and communication technologies	Ability to work autonomously, to carry responsibility for the accuracy of the information collected.
GC11	Ability to learn and master modern knowledge	To know the methods of searching for educational resources and databases, the principles of forms and methods of	To be able to evaluate yourself critically; choose educational resources; critically analyze the	Ability to convey your public and social position	To choose independently the optimal educational resources and implement modern scientific data in



		teaching; have specialized conceptual knowledge acquired in the learning process.	existing rehabilitation practice, based on modern scientific data; apply knowledge in practice, solve complex problems and problems that arise in professional activities.		practice; to be responsible for professional development, to study professionally with a high level of autonomy.
GC 12	Ability to apply knowledge in practical situations	To know their social and public rights and responsibilities	To form civic consciousness, to be able to act in accordance with it	Ability to convey their public and social position	To be responsible for their civic position and activities
GC 13	The ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.	To know their professional rights and responsibilities; principles of scientific evidence-based practice.	To be able to form their professional responsibility, act in accordance with it; make decisions using the principles of scientific evidence-based practice; act within the scope of their job responsibilities and professional competence.	Ability to convey their position to professionals and non-specialists; effectively form a communication strategy in professional activities	To be responsible for their professional position and activities; to be responsible for making decisions in difficult conditions.
GC1 4	Ability to act socially responsibly and consciously	To know the social norms of nature and society	To be able to use different types and forms of physical activity for active recreation and a healthy lifestyle	To communicate clearly personal position	To have their own personal position and activities; to be responsible for making decisions in difficult conditions.
GC1 5	Ability to preserve and multiply the moral, cultural, scientific values and	To know the history of the subject area, its place in the general system of knowledge	To be able to use different types and forms of physical activity for active recreation	To develop measures to preserve moral, cultural, scientific values and	To be responsible for preservation and increase moral,

	achievements of society through an understanding of history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, equipment and technology, to use different types and forms of physical activity for active recreation and healthy living	about nature and society	and healthy living	achievements of society; interact with relevant structures in solving social problems	cultural, scientific values and achievements of society
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**Special (professional) competencies**

SC 01	Ability to explain the need for physical therapy, occupational therapy, principles of their use and connection with health care.	To know the principles of medical, social and biopsychosocial models of life restriction; features of application of preventive and therapeutic measures of physical therapy, occupational therapy and their influence on the state of health of the patient / client;	To be able to explain the concept of “health” and ways to strengthen it in the context of the needs of a particular patient / client; explain the effectiveness of exercise and environmental change to restore and maintain health; explain the need for preventive and therapeutic measures of physical therapy, occupational therapy.	Ability to convey their position to professionals and non-specialists; cooperation with a wide range of people (colleagues, managers, clients) to conduct professional activities	Ability to work autonomously, to be responsible for the accuracy of voiced information.
SC 02	Ability to analyze the structure,	To know the anatomy, biomechanics,	To be able to explain the anatomical	Ability to effectively form a	To be responsible for the timely

	normal and individual development of the human body and its motor functions.	physiology and biochemistry of motor activity, physical and mental development; processes that take place in the body during training and control of motor functions.	structure and functions of the human body; describe the structure and functions of organs and systems of the body; explain the relationship between the structure and function of the basic systems of the human body; analyze the basic motor functions of man; describe the features of physical and mental development of the human body.	communication strategy in professional activities.	acquisition of modern scientific and practical knowledge.
SC03	Ability to interpret pathological processes and disorders and use for their correction suitable means of physical therapy, occupational therapy	Fundamentals of pathology, pathophysiology, functional anatomy; principles of application and influence of means and methods of physical therapy, occupational therapy.	To be able to explain the body's reactions to damage; general principles and mechanisms of the processes of deterioration of health, recovery and recovery in the context of practical activities in physical therapy, occupational therapy; pathological processes that are exposed correction by physical therapy, occupational therapy	Ability to effectively form a communication strategy in professional activities.	To be responsible for the timely acquisition of modern scientific and practical knowledge
SC04	Ability to take into account medical, psychological and pedagogical, social aspects in the practice	To know the basics of pathology, pathophysiology, sociology, psychology of pedagogy, physical	Ability to integrate knowledge about pathological processes and the disorders caused by them, related to the condition of	To establish interdisciplinary links to achieve goals; communicate verbally and nonverbally.	Responsible attitude to the dissemination and interpretation of information from

	of physical therapy, occupational therapy	therapy, occupational therapy; interconnection and interaction of physical, cognitive, emotional, social and cultural spheres.	a particular patient / client.		medical, social, pedagogical, psychological specialists.
SC05	Ability to conduct safe for the patient / client and practitioner practical activities in physical therapy, occupational therapy in traumatology and orthopedics, neurology and neurosurgery, cardiology and pulmonology, as well as other fields of medicine	To know the Laws of Ukraine on health care, code of ethics, regulations governing professional activities; the principle of obtaining the consent of the patient / client to conduct physical therapy, occupational therapy; features of the impact of the patient's / client's condition and the external environment on the safety of activities; features of positioning and movement.	To be able to identify the actual and potential risk, danger to the patient / client and the practitioner, to respond accordingly; summarize all the results of the survey and draw up an appropriate plan of professional action, taking into account all safety measures and contraindications for each action; prevent dangers / risks, minimize them during physical therapy, occupational therapy; safe use of equipment; provide primary care in emergencies.	In case of uncertainty, to seek help or refer the patient / client to another healthcare professional; to respond tactfully and clearly to the dangerous actions of colleagues.	To be responsible for compliance with safety requirements.
SC06	Ability to perform basic components of examination in physical therapy and / or occupational therapy: observation, survey, measurement and testing, document their	To know the methods of sociological, pedagogical, clinical and paraclinical research; basic contraindications and warnings for physical therapy, occupational therapy; features of examination	To be able to organize the collection of information about the current state of health of the patient / client; take a history; demonstrate a clear rationale for the chosen sequence of questions and surveys; use	To establish interdisciplinary links to achieve goals; communicate verbally and nonverbally; to consult with colleagues, patient / client, guardians, family members and other	Under supervision to conduct examinations, testing, examination in physical therapy, occupational therapy and document the results; be responsible for

	results (Appendix 1)	in physical therapy, occupational therapy, special tests and scales; ethical and legal requirements for record keeping	appropriate survey and testing review methods; accurately document survey data using a logical format that meets the professional instructions of the specialist and the requirements of the institution.	participants in the rehabilitation process.	complying with ethical and legal requirements
SC07	Ability to help the patient / client to understand their own needs, discuss and explain the content and need to implement a program of physical therapy and occupational therapy. Independently seeks to help the patient / client understand and realize his own needs.	To know the basics of psychology, sociology; basics of scientific evidence-based practice and methods of forecasting and planning in physical therapy, occupational therapy; goal setting models; main contraindications and warnings for physical therapy, occupational therapy.	To be able to assess the needs and rehabilitation potential of the patient / client; interpret the program and explain it to the patient / client.	To provide a clear rationale for the goals and program of physical therapy, occupational therapy in communication with members of the multidisciplinary team, patient or caregivers; to discuss appropriate methods of intervention / care.	To demonstrate independently the ability to justify the goals and programs of physical therapy, occupational therapy
SC08	Ability to effectively implement a program of physical therapy and / or occupational therapy.	Means methods and forms of physical therapy, occupational therapy	To be able to safely and effectively perform the program of physical therapy, occupational therapy; act persistently and purposefully; modify the amount of workload, content and direction of classes depending on the functional, psychological and cognitive state of	In case of uncertainty, to seek help or refer the patient / client to other specialists; provide the patient / client with verbal and non-verbal prompts, correcting the performance of exercises / actions, and, if necessary, paraphrase the	To be responsible for the effective implementation of the program of physical therapy, occupational therapy.

			<p>the patient; choose the necessary level of assistance; determine the frequency of classes and the duration of the course of physical therapy, occupational therapy; coordinate the implementation of an individual rehabilitation program with all participants in the rehabilitation process; adjust goals if necessary; discuss the rehabilitation process with the patient / client and / or relatives, guardians, relatives, other professionals; provide patients / clients with a self-study program.</p>	<p>instructions; interact with members of a multidisciplinary team, patient or caregivers.</p>	
SC09	<p>Ability to effectively implement a program of physical therapy and / or occupational therapy</p>	<p>To know the basics of didactics, theory and methods of physical culture, psychology; criteria for compliance of physical therapy, occupational therapy measures with the current state of health, functionality and needs of the patient / client.</p>	<p>To be able to assess the functionality and needs of the patient / client; choose methods of influence / care, taking into account pathology, functional disorders, activity and participation of the person, contextual and personal factors; organize individual and group classes, choose the necessary equipment;</p>	<p>To establish an exchange of experience; use verbal and non-verbal communication with the patient / client; to provide information in an optimal way.</p>	<p>To be responsible for deciding on the compliance of physical therapy, occupational therapy measures with functional capabilities and needs</p>

			monitor the patient's condition; anticipate and determine the patient's / client's response to rehabilitation measures		
SC10	Ability to conduct operational, current and phased monitoring of the patient / client by appropriate means and methods (Appendix 1) and document the results	To know the forms and methods of conducting and recording the results of operational, current and phased monitoring of the patient / client; criteria for achieving goals; features of adjustment of the purposes and tasks depending on results of control; criteria for evaluating the effectiveness of independent activities of patients / clients.	To be able to conduct operational, current and phased monitoring of the patient's / client's condition and document their results; to evaluate the effectiveness of physical therapy, occupational therapy; determine the attitude of the patient / client to the results obtained; to teach the patient / client to apply methods of self-control; adhere to standardized protocols when measuring results; interpret the obtained data; manage the process of physical therapy, occupational therapy.	To communicate clearly control results when communicating with multidisciplinary team members, the patient, or caregivers.	To conduct independently operational and ongoing monitoring of the patient's / client's condition; to be responsible for timely and reliable monitoring of the patient's / client's condition by appropriate means and methods, for proper documentation of the obtained results.
SC11	Ability to adapt their current practical activities to changing conditions	To know the types and methods of adaptation, principles of action in a new situation.	To be able to apply means of self-regulation, to be able to adapt to new situations (circumstances) of life and activity; select and change the means, methods	To establish appropriate relationships with members of the multidisciplinary team, patient or caregivers to achieve results.	To be responsible for the timely use of self-regulatory methods.

			and forms of physical therapy, occupational therapy in accordance with changing conditions.		
SC1 2	Ability to provide pre-medical care during emergencies	To have specialized knowledge about the structure of the human body, its organs and systems; algorithms for providing emergency pre-medical care in emergencies	To be able to provide emergency pre-medical care in an emergency	To explain the need and procedure for emergency pre-medical care. To be able to explain the inexpediency of any measures to non-specialists.	To be responsible for the timeliness and quality of emergency medical care.
SC1 3	Ability to teach the patient / caregivers self-care / care, prevention of diseases, injuries, complications and disabilities, a healthy lifestyle	To know the basics of psychology and didactics; principles of a healthy lifestyle; features of prevention of diseases and their complications, injuries, disabilities; receptions self-care and care.	To be able to lead a healthy lifestyle and teach it to the patient / client and / or relatives, guardians, relatives; to teach the patient / client the techniques of self-care, the basics of prevention of diseases and their complications, injuries, disabilities; teach caregivers and / or relatives how to care for patient / client, involve them in the rehabilitation process	Clear and unambiguous communication of own conclusions, knowledge and explanations that substantiate them to specialists and non-specialists.	To be responsible for maintaining a healthy lifestyle; be responsible for the prevention of diseases, injuries and disabilities; seek to help patient / client or caregivers to understand and implement care and self-care techniques
SC1 4	Ability to find ways to continuously improve the quality of physical therapy and occupational therapy services	To know the basics of management, the principles of evidence-based practice.	To be able to improve professional activities in accordance with modern scientific evidence.	To establish connections to achieve goals; communicate verbally and nonverbally.	To be responsible for adhering to the principle of continuous improvement of the quality of rehabilitation services



### **Learning outcomes:**

LO 01. To demonstrate readiness to strengthen and maintain personal and public health through the use of human physical activity and outreach to patients / clients, their family members, health professionals, and the improvement of the community environment.

LO 02. To communicate orally and in writing in Ukrainian and foreign languages in a professional environment, have professional terminology and professional discourse, adhere to the ethics of business communication; to compile documents, including in a foreign language (languages).

LO 03. To use modern computer equipment; find information from various sources; analyze domestic and foreign sources of information needed to perform professional tasks and make professional decisions.

LO 04. To apply in professional activities knowledge of biological, medical, pedagogical and psychosocial aspects of physical therapy and occupational therapy.

LO 05. To provide pre-medical care in emergencies and pathological processes in the body; choose the best methods and means of saving lives.

LO 06. To apply methods and tools for determining and measuring structural changes and impaired body functions, activity and participation, interpret the information obtained.

LO 07. To interpret the information on the patient's / client's violations according to the International Classification of Functioning, Restriction of Life and Health (ICF) and the International Classification of Functioning, Restriction of Life and Health of Children and Adolescents (ICF CA).

LO 08. To act in accordance with legal requirements and norms of professional ethics.

LO 09. To implement individual programs of physical therapy, occupational therapy.

LO 10. To carry out physical therapy measures to eliminate or compensate for movement disorders and activity.

LO 11. To implement occupational therapy measures to eliminate or compensate for functional and associated limitations of activity and participation.

LO 12. To apply modern scientific evidence in professional activities.

LO 13. To choose the optimal forms, methods and techniques that would ensure respect for the patient / client, his safety / protection, comfort and privacy.

LO 14. Safe and effective use of equipment for rehabilitation activities, monitoring of the patient's vital signs, rehabilitation aids for movement and self-care.

LO 15. To communicate verbally and non-verbally with individuals and groups of interlocutors, different in age, level of education, social and professional affiliation, psychological and cognitive qualities, etc., in a multidisciplinary team.

LO 16. To conduct instruction and training for clients, their family members, colleagues and small groups.

LO 17. To evaluate the results of the implementation of physical therapy and occupational therapy programs, using appropriate tools, and, if necessary, modify current activities.

LO 18. To assess themselves critically, learn new professional information, deepen knowledge through self-education, evaluate and present own experience, analyze and apply the experience of colleagues.

## **2. Information volume of the discipline**

The discipline is taught for 90 hours, 3 ECTS credits.

### **Discipline section 1. Ultrasound examinations in obstetrics**

#### **Topic 1. Ultrasound examination in early pregnancy.**

**Anatomical-physiological, endocrine and embryonic aspects of the reproductive process at an early stage**

Menstrual cycle. Tubal cycle of embryo development. Uterine period of early pregnancy.

**Ultrasound examinations in normal (uterine) early pregnancy (2-3 - 5-6 weeks of pregnancy)**

Early pregnancy (EP) and corpus luteum cyst.

**Unusual (atypical) variants of early pregnancy**

Twins. EP in the bicornuate uterus. EP in the presence of intrauterine contraception. EP on the background of organic pathology of the uterus and ovaries.

**Pathology of early pregnancy**

Threatened miscarriage. Miscarriage. Missed miscarriage.

**Functional disorders of the menstrual cycle**

Anovulation. Persistence of the corpus luteum.

**Topic 2. Fundamentals of ultrasound screening at 11-14 weeks of pregnancy.**

**Methodical approaches to ultrasound screening at 11-14 weeks of pregnancy**

**Evaluation of ultrasound anatomy of the fetus and prenatal diagnosis of congenital malformations at 11-14 weeks of pregnancy**

Skull vault bones. Brain. Spine. Facial structures. Heart. Stomach. Anterior abdominal wall. Bladder. Kidneys. Bones of the extremities.

**Prenatal ultrasound markers of chromosomal abnormalities at 11-14 weeks of pregnancy**

The thickness of the collar space. Nasal bones. Front angle. Venous duct. Tricuspid regurgitation.

**Combined screening of chromosomal abnormalities and preeclampsia at 11-14 weeks of pregnancy.**

**Topic 3. Fundamentals of ultrasound screening at 18-21 weeks of pregnancy.**

**Methodical approaches to conducting ultrasound screening at 18-21 weeks of pregnancy**

Fetometry. Ultrasound placentography. Umbilical cord. Amniotic fluid. Cervix and uterine wall.

**Evaluation of ultrasound anatomy of the fetus, markers of chromosomal abnormalities and prenatal diagnosis of congenital malformations at 18-21 weeks of pregnancy.**

Brain. Face. Neck and spine. Lungs. Heart and main vessels. Abdominal organs. Kidneys and bladder. Limbs.

**Topic 4. Fundamentals of ultrasound after 32 weeks of pregnancy**

**Features of ultrasound examination after 32 weeks of pregnancy.**

**Discipline section 2. Ultrasound examinations in gynecology**

**Topic 5. Ultrasound anatomy of the pelvic organs in healthy women**

**Topic 6. Inflammatory diseases of the pelvic organs**

Endometritis. Metroendometritis. Hydrosalpinx. Pelvic infiltrate. Adhesion disease.

**Topic 7. Cysts and tumors of the ovaries**

Follicular cysts. Serous cysts. Endometrioid cysts. Teratodermoid cysts. Rare ovarian neoplasms. Malignant tumors of the ovaries.

**Topic 8. Uterine fibroids**

Diffuse form of uterine fibroids. Nodular forms of uterine fibroids. Cervical fibroids. Multinodular form of fibroids. Uterine sarcomas.

**Topic 9. Endometriosis**

Endometriosis of the uterine body. Endometriosis of the cervix. Ovarian endometriosis. Cervical endometriosis. Combined forms of ingenious endometriosis.

**Topic 10. Ultrasound assessment of the uterine cavity**

Intrauterine contraceptives. Hematometer. Hyperplastic processes of the endometrium. Endometrial cancer.

**Description of the discipline**

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the discipline
		<b>Intramural training</b>
Number of credits – 3	Training direction 22 Healthcare (code and name)	Normative
Total number of hours – 90	Specialty: 222 Medicine	<b>Year of training:</b>
		5 <sup>th</sup>
		<b>Term</b>
		IX
Hours for full-time study: classroom - 20, independent student work - 70	Education level: Second Master's degree	<b>Lectures</b>
		-
		<b>Practical classes, seminars</b>
		20 hours
		<b>Laboratory</b>
		-
		<b>Independent work</b>
70 hours		
<b>Tasks for independent work: hours</b>		
Type of control: credit		

### 3. The structure of the discipline

Names of sections of the discipline and topics	Total number of hours	Type of classes (hours)		
		lectures	practical classes	seminars
<b>Discipline section 1. Ultrasound examinations in obstetrics</b>				
<b>Topic 1.</b> Ultrasound examination in early pregnancy.	2		1	1
<b>Topic 2</b> Fundamentals of ultrasound screening at 11-14 weeks of pregnancy.	2		1	1
<b>Topic 3</b> Fundamentals of ultrasound screening at 18-21 weeks of pregnancy.	2		1	1
<b>Topic 4</b> Fundamentals of ultrasound after 32 weeks of pregnancy	2		1	1
<b>Total in section 1</b>	<b>8</b>		<b>4</b>	<b>4</b>
<b>Discipline section 2. Ultrasound in gynecology</b>				
<b>Topic 5</b> Ultrasound anatomy of the pelvic organs in healthy women	2			2
<b>Topic 6</b> Inflammatory diseases of the pelvic organs	2		2	
<b>Topic 7</b> Cysts and tumors of the ovaries	2		1	1
<b>Topic 8</b> Uterine fibroids	2		1	1
<b>Topic 9</b> Endometriosis	2		1	1
<b>Topic 10</b> Ultrasound assessment of the uterine cavity	2		1	1
<b>Total in section 2</b>	<b>12</b>		<b>6</b>	<b>6</b>
<b>TOTAL</b>	<b>20</b>		<b>10</b>	<b>10</b>

#### 4. Lecture topics

Not provided by the curriculum.

#### 5 Topics of seminars

No	Topic name	Hours
1	<b>Topic 1.</b> Ultrasound examination in early pregnancy	1
2	<b>Topic 2</b> Fundamentals of ultrasound screening at 11-14 weeks of pregnancy.	1
3	<b>Topic 3</b> Fundamentals of ultrasound screening at 18-21 weeks of pregnancy	1
4	<b>Topic 4</b> Fundamentals of ultrasound after 32 weeks of pregnancy	1
5	<b>Topic 5</b> Ultrasound anatomy of the pelvic organs in healthy women	2
6	<b>Topic 6</b> Inflammatory diseases of the pelvic organs	-
7	<b>Topic 7</b> Cysts and tumors of the ovaries	1
8	<b>Topic 8</b> Uterine fibroids	1
9	<b>Topic 9</b> Endometriosis	1
10	<b>Topic 10</b> Ultrasound assessment of the uterine cavity	1
	<b>TOTAL</b>	<b>10</b>

#### 6. Topics of practical classes

No	Topic name	Hours
1	<b>Topic 1.</b> Ultrasound examination in early pregnancy	1
2	<b>Topic 2</b> Fundamentals of ultrasound screening at 11-14 weeks of pregnancy.	1
3	<b>Topic 3</b> Fundamentals of ultrasound screening at 18-21 weeks of pregnancy	1

4	<b>Topic 4</b> Fundamentals of ultrasound after 32 weeks of pregnancy	1
5	<b>Topic 5</b> Ultrasound anatomy of the pelvic organs in healthy women	-
6	<b>Topic 6</b> Inflammatory diseases of the pelvic organs	2
7	<b>Topic 7</b> Cysts and tumors of the ovaries	1
8	<b>Topic 8</b> Uterine fibroids	1
9	<b>Topic 9</b> Endometriosis	1
10	<b>Topic 10</b> Ultrasound assessment of the uterine cavity	1
	<b>TOTAL</b>	<b>10</b>

**7. Topics of laboratory classes**  
Not provided by the curriculum.

### 8. Topics of independent work

No	Topic name	Hours
1	<b>Topic 1.</b> Ultrasound examination in early pregnancy	7
2	<b>Topic 2</b> Fundamentals of ultrasound screening at 11-14 weeks of pregnancy.	7
3	<b>Topic 3</b> Fundamentals of ultrasound screening at 18-21 weeks of pregnancy	7
4	<b>Topic 4</b> Fundamentals of ultrasound after 32 weeks of pregnancy	7
5	<b>Topic 5</b> Ultrasound anatomy of the pelvic organs in healthy women	6
6	<b>Topic 6</b> Inflammatory diseases of the pelvic organs	7
7	<b>Topic 7</b> Cysts and tumors of the ovaries	7
8	<b>Topic 8</b> Uterine fibroids	7
9	<b>Topic 9</b> Endometriosis	7
10	<b>Topic 10</b> Ultrasound assessment of the uterine cavity	8
	<b>TOTAL</b>	<b>70</b>

### 9. Tasks for independent work

Not provided by the curriculum

### 10. Teacher's (department's) policy Academic expectations from students

#### Course requirements

Students are expected to attend all lectures and workshops. Missed classes should be redone (according to the schedule on the information stand of the department)

Written tasks and homework must be done completely and on time, if students have questions, they can contact the teacher in person or by e-mail, which the teacher will provide in the first practical class.

During the **seminars**, students are recommended to keep a synopsis of the class and keep a sufficient level of silence. Asking questions to the teacher is perfectly normal.

#### **Practical training**

Actively participating in the discussion in the classroom, students should be ready to understand the material in detail, ask questions, express their views, engage in discussion. During the discussion it is important to:

- show respect for colleagues,
- have tolerance for others and their experience,
- be receptive and impartial,

- be able to disagree with the opinion, but to respect the personality of the opponent,
- provide careful argumentation of one's opinion and the courage to change one's position under the influence of evidence,
- mandatorily get acquainted with primary sources.

A creative approach in its various manifestations is welcome. Students are expected to be interested in participating in city, national and international conferences, competitions and other events in the subject profile.

### **Occupational health**

During the first class of the course it is necessary to explain the basic principles of labor protection by conducting appropriate training. It is expected that everyone should know where the nearest evacuation exit to the audience, where the fire extinguisher is, how to use it, and so on.

### **Behavior in the classroom Basic “dos” and “don'ts”**

It is important to follow the rules of good behavior at the university. These rules are common to all, they also apply to all faculty and staff, and do not differ in principle from generally accepted norms.

During classes it is allowed to:

- leave the classroom for a short time if necessary and with the permission of the teacher;
- drink soft drinks;
- take photos of presentation slides;
- take an active part in the class.

It is prohibited to:

- eat (except for persons whose special medical condition requires it - in this case, medical confirmation is required);
- smoke, drink alcohol and even low-alcohol beverages or drugs;
- use obscene language or use words that offend the honor and dignity of colleagues and faculty;
- gamble;
- damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);
- shout, yell or listen to loud music in classrooms and even in corridors during classes.

### **Плагіат та академічна доброчесність**

**Кафедра акушерства, гінекології та дитячої гінекології підтримує нульову толерантність до плагіату.** Від студентів очікується бажання постійно підвищувати власну обізнаність в академічному письмі. На перших заняттях проводитимуться інформаційні заходи щодо того, що саме вважати плагіатом та як коректно здійснювати дослідницько-науковий пошук.

## 11. Teaching methods

Seminar  
practice class

## 12. Methods of control

When studying the discipline, the current and final semester control is used.

**Current control** (mastering of certain topics) is carried out in the form of oral interviews, testing, conversations of students on predetermined issues, in the form of speeches of applicants with reports when discussing educational issues in practical classes and seminars.

The **final semester control** in the discipline is a mandatory form of control of students' academic achievements. It is performed orally. The terms of the final semester control are set by the schedule of the educational process, and the amount of educational material, which is submitted for the final semester control, is determined by the work program of the discipline.

The total number of rating points for the study of the discipline for the semester is calculated as the sum of points obtained from the results of current control and points obtained from the results of the final semester control. The maximum amount of points for the semester is 200 points.

## 13. Form of assessment of students' knowledge

The form of final control of academic performance in the discipline is a credit.

### 13.1 Recalculation of the average score for current academic activities on a multi-point scale

Assessment of students is carried out in accordance with the "Instructions for assessing the educational activities of students in the European credit transfer system for the organization of the educational process at KhNMU".

### 13.2 Credit

The form of final control of academic performance in the discipline is a credit.

**Credit** is conducted by the teacher of the academic group in the last class of the discipline. Admission to the test is determined in the points of CAA, namely: min - 70, max - 120 points. The credit for the discipline or its part is a process during which the following aspects received for the course (semester) are checked:

- level of theoretical knowledge;
- development of creative thinking;
- skills of independent work;

- competencies - the ability to synthesize the acquired knowledge and apply it in solving practical problems.

### **Recalculation of the average score for current academic activities on a multi-point scale**

Conducted in accordance with the “Instructions for assessing the educational activities of students...”

Table 1

### **Recalculation of the average score for current academic activities on a multi-point scale (for disciplines ending with a credit)**

4-point scale	200-point scale	4- point scale	200-point scale	4- point scale	200-point scale
5	200	4.22-4.23	169	3.45-3.46	138
4.97-4.99	199	4.19-4.21	168	3.42-3.44	137
4.95-4.96	198	4.17-4.18	167	3.4-3.41	136
4.92-4.94	197	4.14-4.16	166	3.37-3.39	135
4.9-4.91	196	4.12-4.13	165	3.35-3.36	134
4.87-4.89	195	4.09-4.11	164	3.32-3.34	133
4.85-4.86	194	4.07-4.08	163	3.3-3.31	132
4.82-4.84	193	4.04-4.06	162	3.27-3.29	131
4.8-4.81	192	4.02-4.03	161	3.25-3.26	130
4.77-4.79	191	3.99-4.01	160	3.22-3.24	129
4.75-4.76	190	3.97-3.98	159	3.2-3.21	128
4.72-4.74	189	3.94-3.96	158	3.17-3.19	127
4.7-4.71	188	3.92-3.93	157	3.15-3.16	126
4.67-4.69	187	3.89-3.91	156	3.12-3.14	125
4.65-4.66	186	3.87-3.88	155	3.1-3.11	124
4.62-4.64	185	3.84-3.86	154	3.07-3.09	123
4.6-4.61	184	3.82-3.83	153	3.05-3.06	122
4.57-4.59	183	3.79-3.81	152	3.02-3.04	121
4.54-4.56	182	3.77-3.78	151	3-3.01	120
4.52-4.53	181	3.74-3.76	150	<b>Less than 3</b>	<b>Unsatisfactory</b>
4.5-4.51	180	3.72-3.73	149		
4.47-4.49	179	3.7-3.71	148		
4.45-4.46	178	3.67-3.69	147		
4.42-4.44	177	3.65-3.66	146		
4.4-4.41	176	3.62-3.64	145		
4.37-4.39	175	3.6-3.61	144		
4.35-4.36	174	3.57-3.59	143		
4.32-4.34	173	3.55-3.56	142		
4.3-4.31	172	3.52-3.54	141		
4.27-4.29	171	3.5-3.51	140		
4.24-4.26	170	3.47-3.49	139		



**Table 2.**

**Correspondence of estimates on a 200-point scale,  
four-point (national) scale and ECTS scale**

Rating on a 200-point scale	Score on the ECTS scale	Score on four-point (national) scale
180–200	A	Excellent
160–179	B	Good
150–159	C	Good
130–149	D	Satisfactory
120–129	E	Satisfactory
Less than 120	F, Fx	Unsatisfactory

The credit for the disciplines, the study of which has been completed, is conducted by the teacher of the academic group at the last class in the discipline and provides for the consideration of CAA and verification of mastering all topics in the discipline. The grade is determined in points from 120 to 200 and marked – “passed”, “failed”.

#### 14. Methodical support

1. Syllabus of academic discipline;
2. Plans of practical, seminar classes and independent work of students;
3. Methodical guidelines for the teacher;
4. Methodical instructions for practical classes for students;
5. Methodical materials that provide independent work of students;
6. Test and control tasks for practical classes;
7. Questions and tasks to control the assimilation of the section;
8. List of questions before the test, tasks to test practical skills during the test.
9. Multimedia presentations.

#### 15. Recommended references

1. Митькова В.В. Клиническое руководство по ультразвуковой диагностике: в 4т. / В.В. Митькова, М.В. Медведев. – М.: Видар.,1996. 92. Медведев М. В. 2. Медведев М.В. Задержка внутриутробного развития плода / М.В. Медведев, Е.В Юдина. – М.: РАВУЗДПП, 1998. – 237 с.
3. Филиппов О.С. Плацентарная недостаточность. М.: МЕД пресс-информ.-2009.-159с.
4. Хачкарузов С.Г. Узи в гинекологии. С.-Петербург.:1998-99. – 661с.
5. Хачкарузов С.Г. Ультразвуковое исследование при беременности раннего срока. М.: МЕД пресс-информ.-2013.-246с.
6. Медведев М.В. Основы ультразвукового скрининга в 18-21 неделю беременности. Реал Тайм.: 2015. – 126с.
7. Медведев М.В., Алтынник Н.А. Основы ультразвукового скрининга в 11-14 неделю беременности. Реал Тайм.: 2014. – 123с.
8. Яковенко Е. А. Изучение региональных номограмм плода для диагностики внутриутробной задержки роста / Е. А. Яковенко // Ультразвуковая перинатальная диагностика. – 1994. – Вып. 4-5. – С. 29–37.

## 16. List of questions for the test

1. Anatomical and physiological features of the menstrual cycle.
2. Tubal cycle of embryo development.
3. Uterine period of early pregnancy.
4. Early pregnancy (EP) and corpus luteum cyst.
5. Features of visualization of twins.
6. EP in the bicornuate uterus.
7. EP in the presence of intrauterine contraceptives.
8. EP on the background of organic pathology of the uterus and ovaries.
9. Ultrasound characteristics of threatened miscarriage.
10. Ultrasound characteristics of miscarriage.
11. Ultrasound characteristics of a stillborn pregnancy.
12. Ultrasound characteristics of the anovulatory menstrual cycle.
13. Ultrasound characteristics of the persistence of the corpus luteum.
14. Features of ultrasound examination at 11-14 weeks of pregnancy.
15. Prenatal diagnosis of congenital malformations at 11-14 weeks of pregnancy.
16. Prenatal ultrasound markers of chromosomal abnormalities at 11-14 weeks of pregnancy
17. Combined screening of chromosomal abnormalities and preeclampsia at 11-14 weeks of pregnancy.
18. Features of ultrasound screening at 18-21 weeks of pregnancy
19. Ultrasonic fetometry.
20. Ultrasound placentography.
21. Ultrasound evaluation of the umbilical cord.
22. Ultrasound evaluation of amniotic fluid.
23. Ultrasound assessment of the cervix and uterine wall.
24. Evaluation of ultrasound anatomy of the fetus at 18-21 weeks of pregnancy.
25. Markers of chromosomal abnormalities in 18-21 weeks of pregnancy.
26. Prenatal diagnosis of congenital malformations at 18-21 weeks of pregnancy.
27. Features of ultrasound after 32 weeks of pregnancy.
28. Determination of presentation, type and position of the fetus according to ultrasound.
29. Biophysical profile of the fetus.
30. Determining the degree of maturity of the lungs of the fetus.
31. Ultrasound assessment of the scar on the uterus after cesarean section.
32. Assessment of the degree of maturity of the placenta.
33. Ultrasound anatomy of the pelvic organs in healthy women
34. Ultrasound characteristics of endometritis.
35. Ultrasound characteristics of metroendometritis.
36. Ultrasound characteristics of hydrosalpinx.
37. Ultrasound characteristics of the pelvic infiltrate.
38. Ultrasound characteristics of adhesive disease.
39. Ultrasound characteristics of the follicular cyst.
40. Ultrasound characteristics of serous cysts.
41. Ultrasound characteristics of endometrioid cysts.
42. Ultrasound characteristics of teratodermoid cysts.

43. Ultrasound characteristics of rare ovarian tumors.
44. Ultrasound characteristics of malignant ovarian tumors.
45. Ultrasound characteristics of the diffuse form of uterine fibroids.
46. Ultrasound characteristics of the nodular form of uterine fibroids.
47. Ultrasound characteristics of cervical fibroids.
48. Ultrasound characteristics of the multinodular form of fibroids.
49. Ultrasound characteristics of uterine sarcoma.
50. Ultrasound characteristics of endometriosis of the uterine body.
51. Ultrasound characteristics of cervical endometriosis.
52. Ultrasound characteristics of ovarian endometriosis.
53. Ultrasound characteristics of retrocervical endometriosis.
54. Ultrasound characteristics of combined forms of ingenious endometriosis.
55. Ultrasound characteristics of intrauterine contraceptives.
56. Ultrasound characteristics of hematometers.
57. Ultrasound characteristics of hyperplastic processes of the endometrium.
58. Ultrasound characteristics of endometrial cancer.

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