

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

SUMY STATE UNIVERSITY

Academic and Research Medical Institute

Кафедра акушерства, гінекології та планування сім'ї

OBSTETRICS AND GYNECOLOGY

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| Higher education level | The Second |
| Major: study programme | 222 Medicine: Medicine |

Approved by Quality Council

Protocol dated _____ № _____

Chairman of the Quality Council

Petrashenko Viktoriia
Oleksandrivna

DATA ON REVIEWS AND APPROVAL

Author

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Nikitina Iryna Mykolaivna

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| Review of the course descriptor | <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> |
| Considered and approved at the meeting of the work group of Study programme Медицина | <p>Protocol dated _____ № _____</p> <p>Head of the work group (Head of the Study programme)</p> <p style="text-align: right;">_____ Prystupa Liudmyla Nykodymivna</p> |
| Considered and approved at the meeting of the Кафедра акушерства, гінекології та планування сім'ї | <p>Protocol dated _____ № _____</p> <p>Head of the Department</p> <p style="text-align: right;">_____ Boiko Volodymyr Ivanovych</p> |

ДАНІ АКТУАЛІЗАЦІЇ РОБОЧОЇ ПРОГРАМИ НАВЧАЛЬНОЇ ДИСЦИПЛІНИ

«Obstetrics and Gynecology»

Робоча програма навчальної дисципліни переглянута, обговорена та схвалена до використання в 2023/2024 навчальному році на засіданні кафедри акушерства, гінекології та планування сім'ї

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SYLLABUS

1. General information on the course

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| Full course name | Obstetrics and Gynecology |
| Full official name of a higher education institution | Sumy State University |
| Full name of a structural unit | Academic and Research Medical Institute. Кафедра акушерства, гінекології та планування сім'ї |
| Author(s) | Nikitina Iryna Mykolaivna, Herasymenko Svitlana Fedorivna |
| Cycle/higher education level | The Second Level Of Higher Education, National Qualifications Framework Of Ukraine – The 7th Level, QF-LLL – The 7th Level, FQ-EHEA – The Second Cycle |
| Semester | 18 weeks across 11 semester, 17 weeks across 12 semester |
| Workload | 10 ECTS, 300 hours. For full-time course 120 hours are working hours with the lecturer (120 hours of seminars), 180 hours of the individual study. |
| Language(s) | English |

2. Place in the study programme

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| Relation to curriculum | Compulsory course available for study programme "Medicine" |
| Prerequisites | "KROK-1", Necessary knowledge of: Latin and medical terminology, medical biology, medical chemistry, medical informatics, of biological and bioorganic chemistry, anatomy human, physiology, histology, cytology and embryology, microbiology, virology and immunology, pathomorphology, pathophysiology, pharmacology, hygiene and ecology, obstetrics and gynecology, nursing practice |
| Additional requirements | There are no specific requirements |
| Restrictions | There are no specific restrictions |

3. Aims of the course

The goal of the educational discipline is for students to achieve modern knowledge and professional skills in physiological and pathological obstetrics, conservative and operative gynecology, to master the general principles of managing pregnancy, childbirth and the postpartum period, the ability to analyze the obstetric situation and surgical risks of a gynecological patient using modern research

methods and compliance with the principles medical ethics and deontology.

4. Contents

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| Module 3. Obstetrics and gynecology. |
| <p>Topic 1 Disorders of menstrual function in the reproductive age, neuroendocrine syndromes. Physiological and pathological conditions in the perimenopausal period.</p> <p>Disorders of menstrual function in the reproductive age. Neuroendocrine syndromes in gynecology: premenstrual, menopausal, polycystic ovary syndrome, Sheehan syndrome, hyperandrogenism, hyperprolactinemia. Clinic, modern methods of diagnosis and principles of treatment. The concept of the perimenopausal period. Physiological changes in female genital organs during perimenopause. Pathological conditions in the perimenopausal period. Prolapse and prolapse of the walls of the vagina and uterus: diagnosis, treatment, prevention.</p> |
| <p>Topic 2 Pathological conditions of the reproductive system in childhood and adolescence. Methods of contraception for teenagers.</p> <p>Modern methods of examination of girls and adolescents with gynecological diseases. Disorders of menstrual function in adolescence, classification, diagnosis and treatment from the standpoint of evidence-based medicine. Amenorrhea. Juvenile uterine bleeding. Therapy, rehabilitation and prevention of menstrual disorders in girls. Anomalies of genital development. Disorders of sexual development in adolescents. Inflammatory diseases of genital organs in girls and teenagers. Clinic, diagnosis and treatment from the standpoint of evidence-based medicine. Methods of contraception in teenagers. Peculiarities of selection and use of barrier and hormonal methods of contraception.</p> |
| <p>Topic 3 Female urogenital inflammatory diseases.</p> <p>Modern approaches to the diagnosis and treatment of female urogenital inflammation diseases from the position of evidence-based medicine. Diagnosis, treatment from the standpoint of evidence-based medicine and prevention of sexually transmitted diseases.</p> |
| <p>Topic 4 Benign neoplasms of female genital organs. Dyshormonal diseases of the mammary gland. Genital endometriosis.</p> <p>Доброякісні новоутворювання статевих органів жінки. Діагностика, лікування з позиції доказової медицини та профілактика. Дисгормональні захворювання молочної залози. Сучасні методи діагностики, лікування з позиції доказової медицини та профілактики. Ендоетріоз. Сучасні аспекти етіопатогенезу, діагностики, лікування з позиції доказової медицини, та профілактики ендометріозу.</p> |
| <p>Topic 5 Background and precancerous diseases of female genital organs. Malignant neoplasms of the female genital organs.</p> <p>Background and precancerous diseases of female genital organs. Modern methods of diagnosis, principles of treatment from the standpoint of evidence-based medicine and prevention. Malignant neoplasms of female genital organs. Modern methods of diagnosis, principles of treatment from the standpoint of evidence-based medicine and prevention.</p> |

Topic 6 Urgent conditions in gynecology.

Modern approaches to diagnosis and emergency care for acute abdomen. Modern approaches to diagnosis and emergency care for uterine bleeding. Basic principles and methods of surgical interventions in emergency conditions in gynecology. Traumatic damage to the genitals. Clinic diagnostics and treatment from the position of evidence-based medicine. Differential diagnosis with acute surgical pathology (appendicitis, intestinal obstruction, cholecystitis, renal colic, perforated gastric ulcer). Prevention of emergency conditions in gynecology.

Topic 7 Operative interventions in gynecology. Preparation and postoperative management gynecological patients during urgent and planned surgical interventions. Prevention of HIV infection.

Indications, contraindications, conditions and types of operations on the cervix; the uterus (conservative myomectomy, defunding of the uterus, supravaginal amputation of the uterus, extirpation of the uterus), appendages of the uterus, with prolapse and prolapse of the female genital organs. Artificial insemination of pregnancy in early and late periods, indications, methods, complications. Therapeutic and diagnostic endoscopic methods in gynecology. Peculiarities of preparation and postoperative management of gynecological patients during urgent and planned surgical interventions. Postoperative complications and their prevention. Rehabilitation after gynecological interventions. Prevention of HIV infection in medical institutions. Prevention of the risk of contracting blood-borne infections and ways to reduce it. Post-contact prevention.

Topic 8 Infertility

Medical and social significance of the problem of infertility in marriage. Etiopathogenetic factors of the development of infertility. Examination of a married couple with infertility marriage Modern principles and methods of treatment of female infertility from the standpoint of evidence-based medicine. Indications for the use of assisted reproductive technologies.

Topic 9 Modern aspects of family planning. Methods of contraception. Medical criteria acceptability of using WHO contraceptive methods.

Counseling regarding the choice and use of a contraceptive method: stages of counseling. Methods of contraception according to periods of life. Modern methods of contraception: classification, mechanism of action, advantages, disadvantages, necessary examination before starting use, mode of use, side effects, instructions for the patient. Postpartum and postabortion contraception. WHO medical acceptance criteria: classification of categories, use of summary tables. Methods of contraception in women with HIV.

Topic 10 Physiological pregnancy, childbirth and the postpartum period. Perinatal care fetus Pharmacotherapy in obstetrics.

Management of physiological pregnancy, childbirth and the postpartum period. Modern methods of diagnosing the state of the fetus. Peculiarities of pharmacotherapy at different stages of pregnancy and in the postpartum period. Issues of medical ethics and deontology. Methods of contraception in the postpartum period.

Topic 11 Early gestosis. Hypertensive disorders during pregnancy. Preeclampsia. Eclampsia.

Etiology and pathogenesis of preeclampsia. Early gestation (vomiting, hypersalivation). Clinic, diagnosis and treatment of early gestosis from the standpoint of evidence-based medicine. Hypertension during pregnancy. Edema during pregnancy. Proteinuria during pregnancy. Preeclampsia. Eclampsia. Clinic, diagnosis, differential diagnosis, methods of treatment from the standpoint of evidence-based medicine, influence on the state of the fetus. Rare forms of preeclampsia. Tactics of managing pregnancy, childbirth and the postpartum period in late gestosis. Emergency aid. Prevention of late gestosis and rehabilitation.

Topic 12 Early termination of pregnancy. Postponement of pregnancy. Multi-fruited pregnancy.

Etiology and pathogenesis of premature termination of pregnancy at different times. Classification, clinic, diagnosis, treatment from the standpoint of evidence-based medicine and prevention of spontaneous abortion. Premature birth. Peculiarities of management of premature birth. Prevention of miscarriage. Etiology and pathogenesis of late pregnancy. Methods of diagnosing late pregnancy. The course of pregnancy and childbirth, the effect on the fetus. Tactics of managing a delayed pregnancy from the standpoint of evidence-based medicine. Prevention and therapy of complications associated with transfer from the standpoint of evidence-based medicine. Multiple pregnancy: classification and diagnosis. Tactics of managing pregnancy and childbirth in case of multiple fertility. Feto-fetal transfusion syndrome, intrauterine death of one fetus.

Topic 13 Anomalies of the bony pelvis. The problem of macrosomia in modern obstetrics. Inconsistency between the head of the fetus and the pelvis of the mother. Incorrect positions and pelvic presentation of the fetus.

Anomalies of the bony pelvis. Childbirth with a narrow pelvis. Features of childbirth with a large fetus. Delivery tactics with a large fetus and a clinically narrow pelvis. Pregnancy and childbirth with pelvic presentation. Incorrect positions of the fetus. Methods of diagnosis and correction of the incorrect position of the fetus. Peculiarities of obstetric tactics during pregnancy and childbirth depending on the variety of presentation and the position of the fetus.

Topic 14 Bleeding during pregnancy, childbirth and the postpartum period. Hemorrhagic shock. DIC-syndrome. Intensive therapy and resuscitation for bleeding during pregnancy.

Bleeding during pregnancy, childbirth and the postpartum period. Etiology, pathogenesis, clinic, diagnosis. Algorithm of the doctor's actions and methods of combating bleeding from the standpoint of evidence-based medicine. Hemorrhagic shock. DIC-syndrome. Modern approaches to infusion-transfusion and intensive therapy and resuscitation for bleeding in obstetrics from the standpoint of evidence-based medicine.

Topic 15 Abnormalities of the contractile activity of the uterus. Childbirth traumatism of mother and fetus. Modern approaches to diagnosis and treatment of maternal and fetal birth.

Classification, etiology, pathogenesis of various types of birth defects. Modern methods of diagnosis and treatment of birth defects from the standpoint of evidence-based medicine. Prevention of birth defects. Childbirth traumatism of mother and fetus, classification. Modern approaches to diagnosis and treatment of maternal and fetal birth injuries from the standpoint of evidence-based medicine. Peculiarities of managing pregnancy and childbirth in women with a scar on the uterus. Prevention of obstetric injuries.

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| <p>Topic 16 Pregnancy and childbirth with extragenital diseases. Perinatal infections. Prevention of vertical transmission of HIV.</p> <p>Pregnancy and childbirth with diseases of the cardiovascular system (heart defects, hypertension, arterial hypotension); diseases of the urinary system; liver and gall bladder; diseases of hematopoietic organs; respiratory organs; organs of the digestive system; endocrine system; nervous system; organs of vision; acute and chronic infectious diseases, tuberculosis. The course of pregnancy and childbirth with gynecological diseases. Peculiarities of the course and tactics of management in acute surgical pathology. Perinatal infections in pregnant women: clinical course, diagnosis, management tactics, treatment from the standpoint of evidence-based medicine, prevention. Principles of pregnancy and childbirth in women with HIV. Prevention of vertical transmission of HIV.</p> |
| <p>Topic 17 Operative interventions in obstetrics.</p> <p>Indications, contraindications, conditions and preparation for operative interventions at vaginal and abdominal childbirth in obstetrics. The main stages of obstetric operations. Analgesia of operations. Toolkit. Asepsis and antiseptics. Management of the postoperative period.</p> |
| <p>Topic 18 Postpartum septic diseases.</p> <p>Postpartum septic diseases. Classification, etiology, pathogenesis, diagnosis, principles of treatment from the standpoint of evidence-based medicine, prevention. Emergency care for septic conditions in obstetrics. Indications for operative treatment from the standpoint of evidence-based medicine.</p> |
| <p>Topic 19 Placental dysfunction, delayed fetal development, fetal distress. Immunological incompatibility of maternal and fetal blood. Anomalies of the fertilized egg.</p> <p>Etiology, pathogenesis of placental dysfunction, fetal distress, retardation of fetal development. Modern perinatal diagnostic technologies. Modern approaches to the tactics of managing adverse fetal conditions during pregnancy and childbirth from the standpoint of evidence-based medicine. Immunological incompatibility of the blood of the mother and the fetus (Rhesus conflict, incompatibility according to the ABO system, isoleukocyte, etc.). Pathogenesis, diagnosis, management of pregnancy, selection of the optimal delivery date. Management of childbirth and the postpartum period. Immunological conflict. Prevention. Anomalies of the development of the fertile egg. Anomalies of extra-embryonic elements of the fetal egg (placenta, amniotic membranes and umbilical cord). Trophoblastic diseases (bubble drift). Polyhydramnios and oligohydramnios: causes, clinic, pregnancy management tactics topologists, consequences for the fetus and newborn.</p> |
| <p>Topic 20 Performance of practical skills and manipulations.</p> <p>Carrying out a list of practical skills and manipulations.</p> |
| <p>Topic 21 Final lesson: graded test.</p> <p>Graded test will include: answers to theoretical questions, questions for computer test control, solving clinical cases, providing emergency care.</p> |

5. Intended learning outcomes of the course

After successful study of the course, the student will be able to:

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| LO1 | Collect medical information about an obstetric patient and be able to analyze clinical data (acquiring skills in interviewing, external and internal obstetric and clinical laboratory examination of pregnant women, postpartum women and during labor). To substantiate and apply clinical methods for understanding the manifestations of obstetric and gynecological pathology. |
| LO2 | Carry out differential diagnosis of obstetric pathology, formulate a clinical diagnosis on the basis of evaluating the results of laboratory and instrumental research methods. |
| LO3 | Be able to determine the tactics of managing patients with various pathological conditions.PO3 |
| LO4 | Identify the main clinical syndrome, be able to determine the obstetric situation, establish a preliminary and clinical diagnosis, plan for childbirth. |
| LO5 | To justify the use of basic invasive and non-invasive diagnostic methods, to be able to perform medical manipulations |
| LO6 | Apply in practice the algorithms of examination and management of patients with emergency conditions, master the methods of treatment of emergency conditions in obstetric practice. |
| LO7 | Argue information for decision-making regarding the management of pregnancy and childbirth and the postpartum period. Be able to provide counseling on family planning and medical and genetic counseling. |
| LO8 | To be able to determine the necessary regime of work and rest of pregnant women. |
| LO9 | Be able to assess the general condition of a newborn child and provide emergency care to a newborn in the delivery room according to existing algorithms and standard schemes, observing the relevant ethical and legal norms. |
| LO10 | Perform manipulations of providing emergency medical care in limited time, using standard schemes, under any circumstances based on the diagnosis of an emergency in a pregnant, laboring or parturient woman. |
| LO11 | To learn the main classes of pharmacological drugs used in midwifery practice, to apply the relevant clinical and pharmacological principles for the management of pregnant women, women in labor and women in labor, to calculate doses of drugs. |
| LO12 | Be able to find the necessary information in professional literature and databases of other sources, analyze, evaluate and apply this information. Apply modern digital technologies, specialized software, and statistical data analysis methods to solve complex healthcare problems.PO18 |
| LO13 | Be able to assess the impact of the environment on the state of reproductive health of the population, the intrauterine state of the fetus and prevent the negative impact of environmental factors. |
| LO14 | Demonstrate mastery of the moral and deontological principles of a medical specialist and the principles of professional subordination.PO8 |
| LO15 | Be able to conduct epidemiological and medical-statistical studies of the health of the population; processing of state, social, economic and medical information. |
| LO16 | To be able to perform medical manipulations in midwifery practice. |

6. Role of the course in the achievement of programme learning outcomes

Programme learning outcomes achieved by the course.

For 222 Medicine:

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| PO1 | To highlight and identify leading clinical symptoms and syndromes (for list 1); according to standard methods, using previous data patient history, patient examination data, knowledge about a person, his organs and system, establish the most likely nosological or syndromic previous clinical diagnosis of the disease. |
| PO2 | Collect information about the general condition of the patient, evaluate psychomotor and the physical development of the patient, the state of the body's organs and systems, based on evaluate the results of laboratory and instrumental research information about the diagnosis. |
| PO3 | Assign and analyze additional (mandatory and optional) methods examination (laboratory, X-ray, functional and/or instrumental) according to list 4, patients with diseases of organs and systems body for differential diagnosis of diseases (for list 2). |
| PO4 | Establish a final clinical diagnosis by acceptance reasoned decision and logical analysis of the received subjective and objective data of clinical, additional examination, conduct differential diagnosis), observing the relevant ethical and legal norms, under the control of the head physician in the conditions of treatment institutions (according to list 2). |
| PO5 | Determine the main clinical syndrome or what causes the severity of the condition patient (according to list 3) by making a reasoned decision and assessment human condition under any circumstances (at home, on the street, in a security institution health, its subdivisions) including in emergency and combat conditions actions, in field conditions, in conditions of lack of information and limited time. |
| PO6 | Determine the nature and principles of treatment of patients (conservative, operative) with diseases (according to list 2) in the conditions of a security institution health, at the patient's home and at the stages of medical evacuation, including in the field conditions, on the basis of a previous clinical diagnosis, observing relevant ethical and legal norms, by adopting a well-founded solutions based on existing algorithms and standard schemes on the basis of evidence-based medicine, in case of the need to expand standard medicine schemes to be able to substantiate personalized recommendations under control the head doctor in the conditions of a medical institution. |
| PO7 | Determine the necessary mode of work and rest in the treatment of patients with diseases (according to list 2) in the conditions of a health care institution, at home in the patient and at the stages of medical evacuation, including in field conditions, on on the basis of a previous clinical diagnosis, following the appropriate ethical and legal norms, by making a reasoned decision for existing algorithms and standard schemes. |
| PO8 | Determine the necessary diet in the treatment of patients with diseases (for list 2) in the conditions of a health care facility, at the patient's home, and in stages medical evacuation, including in field conditions on the basis of the previous one clinical diagnosis, observing relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes. |

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| PO9 | Determine the approach, plan and tactics of managing a physiological pregnancy, physiological childbirth and the postpartum period by adoption reasoned decision based on existing and standard algorithms schemes. |
| PO10 | Determine the tactics of providing emergency medical care, under any circumstances, observing relevant ethical and legal norms, by making a reasoned decision, based on the main clinical syndrome (severity of the condition) of the diagnosis of an emergency (according to list 3) in conditions of limited time using standard schemes based on principles of evidence-based medicine. |
| PO11 | Provide emergency medical care, under any circumstances, observing relevant ethical and legal norms, by adopting a well-founded decision based on the main clinical syndrome (severity of the condition) diagnosis of an emergency (according to list 3) in conditions of limited time according to the defined tactics, using standard schemes that are based on the principles of evidence-based medicine. |
| PO12 | Assess the general condition of the newborn child by making an informed decision based on existing algorithms and standard schemes, observing the relevant ethical and legal norms. |
| PO13 | Perform emergency medical aid manipulations in the conditions for a limited time, using standard schemes, under any circumstances on the basis of a diagnosis of an emergency (according to list 3). |
| PO14 | Plan and implement a system of sanitary, hygienic and preventive measures for the occurrence and spread of diseases among the population. |
| PO15 | Search for the necessary information in professional literature and databases data from other sources, analyze, evaluate and apply this information Apply modern digital technologies, specialized software, statistical methods of data analysis to solve complex tasks of health care. |
| PO16 | Assess the impact of the environment on the health of the population. |

7. Soft Skills

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| SS1 | Ability to abstract thinking, analysis and synthesis. |
| SS2 | Ability to learn and master modern knowledge. |
| SS3 | Knowledge and understanding of the subject area and understanding of professional activity. |
| SS4 | Ability to adapt and act in a new situation. |
| SS5 | Ability to make informed decisions. |
| SS6 | Ability to work effectively in diverse teams, appreciate and respect different points of view and constructively contribute to the achievement of common ones goals through cooperation, compromise and conflict resolution (team work). |
| SS7 | Ability to generate new ideas (creativity). |

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| SS8 | The ability to learn throughout life (the pursuit of permanent personal and professional development, active search for new knowledge, acquisition of new ones skills and adaptation to new trends and technologies). |
| SS9 | Ability to search, process and analyze information from various sources. |
| SS10 | Ability to analyze, evaluate and objectively interpret information, make informed judgments and solve complex problems through logical reasoning and evidence-based decision-making (critical thinking). |
| SS11 | Ability to apply knowledge in practical situations. |
| SS12 | Ability to conduct research at an appropriate level. |
| SS13 | Ability to communicate in a foreign language. |

8. Teaching and learning activities

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| <p>Topic 1. Disorders of menstrual function in the reproductive age, neuroendocrine syndromes. Physiological and pathological conditions in the perimenopausal period.</p> |
| <p>pr.tr.1 "Disorders of menstrual function in the reproductive age. Physiological and pathological conditions in the perimenopausal period (daily)." (full-time course)</p> <p>Classification of disorders of the function of the reproductive system. Amenorrhea: classification, diagnosis. Abnormal uterine bleeding. Clinic, modern methods of diagnosis and principles of treatment from the standpoint of evidence-based medicine. The problem of menstrual dysfunction in different age periods. Modern methods of diagnosis and treatment. The study of this topic involves theoretical work in the classroom, in the simulation center (working with phantoms, educational tables, gynecological instruments), the use of virtual simulation (watching films about the neuroendocrine regulation of the menstrual cycle) with further discussion. Provided there are no quarantine restrictions, work in women's consultation (according to the cooperation agreement between the medical institution and the university).</p> |
| <p>pr.tr.2 "Neuroendocrine syndromes in gynecology (daytime)" (full-time course)</p> <p>Issues of gynecological endocrinology. Neuroendocrine syndromes in gynecology: premenstrual, menopausal, polycystic ovary syndrome, Sheehan syndrome, hyperandrogenism, hyperprolactinemia. Clinic, modern diagnostic methods and principles treatment from the position of evidence-based medicine. The study of this topic involves a theoretical one work in a training room, simulation center (work with phantoms, training tables, gynecological instruments), use of virtual simulation (viewing films with further discussion). Provided there are no quarantines limitations of work in a women's consultation with mastering the skills of a consultative reception gynecological patients, carrying out functional diagnostic tests (according to the agreement on cooperation between a medical institution and a university).</p> |
| <p>Topic 2. Pathological conditions of the reproductive system in childhood and adolescence. Methods of contraception for teenagers.</p> |

pr.tr.3 "Pathological conditions of the reproductive system in childhood and adolescence. Methods of contraception for adolescents. (daytime)." (full-time course)

Anatomical and physiological features of a girl's genitals during the formation of the reproductive system. Peculiarities of examination of girls. From inflammatory diseases of the genital organs in childhood and adolescence. Violation of menstrual function. Tumors and injuries of genital organs. The study of this topic involves theoretical work in a classroom, a simulation center (working with a phantom, gynecological instruments), the use of virtual simulation (viewing thematic films with further discussion). In the absence of quarantine restrictions, work in a women's consultation with mastering the skills of consulting gynecological patients, collecting gynecological and reproductive history, mirror examination, bimanual palpation (according to the agreement on cooperation between the medical institution and the university). Familiarization with the peculiarities of vaginal surgery for genital prolapse (presence in the operating room together with the teacher).

Topic 3. Female urogenital inflammatory diseases.

pr.tr.4 "Жіночі урогенітальні запальні захворювання (денна)" (full-time course)

Master the methods of modern diagnosis and treatment of acute and chronic inflammatory diseases processes of female genital organs, management of patients with purulent tuboovarian tumor. Indications for surgical treatment from the standpoint of evidence-based medicine. To study the possibilities of the course of inflammatory diseases of the female genital organs in different age periods, to master the tactics of management and further rehabilitation of women who have undergone inflammatory processes. The study of this topic involves working in a classroom, a simulation center (working with gynecological instruments), using virtual simulation (viewing thematic films with further discussion). Work in a women's consultation with mastering the skills of consulting gynecological patients, collecting gynecological and reproductive anamnesis, working in an ultrasound office diagnostics, gynecological department, work in a small operating room with mastering the skills of puncture through the posterior vault, laparoscopic operating room for tuboovarian abscess removal (provided there are no quarantine restrictions, according to the agreement on cooperation between the medical institution and the university).

Topic 4. Benign neoplasms of female genital organs. Dyshormonal diseases of the mammary gland. Genital endometriosis.

pr.tr.5 "Benign tumors of the female genital organs (daytime)" (full-time course)

Benign tumors and tumor-like diseases of the female genital organs. Concept ovarian cysts and tumors. Benign ovarian tumors: epithelial, stromal tumors sexual desire, lipid-cell tumors, germinogenic tumors. Tumor-like formation of ovaries. Benign uterine tumors. Clinic, modern diagnostic methods, treatment from the position of evidence-based medicine. The study of this topic involves a theoretical one work in a training room, simulation center (work with gynecological toolkit), application of virtual simulation (watching movies with further discussion). Work in a women's consultation with the development of counseling skills reception of gynecological patients, work in the office of ultrasound diagnostics, to be able to distinguish tumor-like diseases of the ovaries according to the O-RADS classification, the work of a small operating room with mastering the skills of diagnostic curettage of the uterine cavity, endometrial biopsy, hysteroscopy, presence in the operating room during surgery treatment of topical patients using laparoscopic techniques (according to the agreement on cooperation between the medical institution and the university, in case of absence quarantine restrictions).

pr.tr.6 "Genital endometriosis (daily)" (full-time course)

The problem of endometriosis. Etiopathogenetic aspects of endometriosis. Classification. Clinic. The study of this topic involves theoretical work in a classroom, a simulation center (working with gynecological instruments), the use of virtual simulation (watching films with further discussion). Work in a women's consultation with mastering the skills of consulting gynecological patients, work in the office ultrasound diagnostics, be able to distinguish tumor-like diseases of the ovaries according to the O-RADS classification, work in a small operating room with mastering the skills of diagnostic curettage of the uterine cavity, endometrial biopsy, hysteroscopy, presence in the operating room during the operative treatment of thematic patients with endometriosis using laparoscopic techniques (according to the agreement on cooperation between a medical institution and a university, provided there are no quarantine restrictions). To master methods of diagnosis, treatment and prevention of endometriosis. Get acquainted with methods of medical rehabilitation of women with endometriosis.

pr.tr.7 "Dyshormonal diseases of the mammary gland (daytime)" (full-time course)

Basic gynecological aspects of breast diseases. Modern diagnostic methods, management tactics, treatment from the standpoint of evidence-based medicine and prevention. The study of this topic involves theoretical work in a classroom, a simulation center (work with a mammary gland phantom), the use of virtual simulation (viewing thematic films with further discussion). In addition, when studying this topic, role-playing games are expected, in the absence of quarantine restrictions, work at the bedside of a patient in specialized departments of a medical institution (according to the agreement on cooperation between the medical institution and the university): mastering the skills of palpation of the mammary gland, identifying pathological symptoms: nipple retraction, compaction fabrics mammary gland, detection of the lemon peel symptom, discharge from the nipple, enlargement of axillary lymph nodes, work in the ultrasound diagnostic office, distinguishing breast tumors according to the Bi-RADS classification. Work in the mammography office: to be able to interpret mammographic images, distinguish pathological formations in the mammary gland.

Topic 5. Background and precancerous diseases of female genital organs. Malignant neoplasms of the female genital organs.

pr.tr.8 "Background and precancerous diseases of female genital organs (daytime)" (full-time course)

Background and precancerous diseases of external genital organs. Background and precancerous diseases of the cervix: classification. Hyperplastic processes of the endometrium: etiology, pathogenesis, classification, modern diagnostic methods, management tactics and principles of treatment from the standpoint of evidence-based medicine. Prevention of background and precancerous diseases of the female genital organs. The study of this topic involves theoretical work in a classroom, a simulation center (work with gynecological instruments), the use of virtual simulation (viewing thematic films with further discussion). Work in a women's consultation with the development of skills consultation of gynecological patients, working with a colposcope, mastering the skills of cytological examination of the cervix, sampling material for biopsy (according to the cooperation agreement between the university and the clinical institution, provided there are no quarantine restrictions).

pr.tr.9 "Malignant neoplasms of the female genital organs (daytime)" (full-time course)

Malignant neoplasms of external female genital organs (vulvar cancer). Cervical cancer. Cancer of the body of the uterus. Uterine sarcoma. Ovarian cancer. Fallopian tube cancer. Classification, clinic, diagnosis, management tactics and principles of treatment from the standpoint of evidence-based medicine. Trophoblastic diseases. The study of this topic involves theoretical work in a classroom, a simulation center (work with gynecological instruments), the use of virtual simulation (viewing thematic films with further discussion). Work in a women's consultation with mastering the skills of consulting gynecological patients, working with a colposcope, mastering the skills of cytological examination of the cervix, sampling material for biopsy (according to the cooperation agreement between the university and the clinical institution, provided there are no quarantine restrictions).

Topic 6. Urgent conditions in gynecology.

pr.tr.10 ""Emergencies in gynecology." (daytime)" (full-time course)

The problem of "Acute abdomen" in gynecology. Modern approaches to diagnostics, differential diagnosis, treatment from the standpoint of evidence-based medicine and prevention of urgent gynecological conditions. Ectopic pregnancy, ovarian apoplexy, ovarian tumor capsule rupture, ovarian tumor pedicle torsion, purulent tuboovarian tumor rupture. Emergency conditions in case of uterine myoma, violation of nutrition of the myomatous node. The problem of emergency gynecological care, basic principles and methods of surgical interventions in emergency conditions in gynecology. The study of this topic involves theoretical work in a classroom, a simulation center (working with gynecological instruments), the use of virtual simulation (watching films with further discussion). In addition, when studying this topic, role-playing games are expected, in the absence of quarantine restrictions, work at the patient's bedside in specialized departments of a medical institution (according to the cooperation agreement between the medical institution and the university). Drawing up a treatment plan for the patient.

pr.tr.11 "Traumatic damage to the female genital organs (daytime)" (full-time course)

Traumatic damage to female genital organs. The problem is urgent gynecological care, basic principles and methods of surgical interventions at emergency conditions in gynecology. The study of this topic involves theoretical work in a classroom, a simulation center (working with gynecological instruments), the use of virtual simulation (watching films with further discussion). In addition, when studying this topic, role-playing games are expected, in the absence of quarantine restrictions, work at the patient's bedside in specialized departments of a medical institution (according to the cooperation agreement between the medical institution and the university).

Topic 7. Operative interventions in gynecology. Preparation and postoperative management gynecological patients during urgent and planned surgical interventions. Prevention of HIV infection.

pr.tr.12 "Operative interventions in gynecology. Preparation and postoperative management gynecological patients during urgent and planned surgical interventions. Prevention of HIV infection (daily)" (full-time course)

Preoperative preparation of gynecological patients. Management of the postoperative period. Operations on the vaginal part of the cervix. Operations for prolapse and prolapse of the genitals. Gynecological operations on the appendages and uterus. Minor gynecological operations. Endoscopic surgery (laparoscopy, hysteroscopy). Acquaintance with the peculiarities of preoperative preparation and postoperative management of gynecological patients. Anesthesia during gynecological operations. Rehabilitation after gynecological interventions. this topic involves theoretical work in a classroom, a simulation center (work with gynecological instruments), the use of virtual simulation (viewing films with recordings of operative interventions with further discussion). In the absence of quarantine restrictions, work in the gynecology department, a small operating room with mastering the skills of puncture through the posterior vault, endoscopic operating room, presence at operations (according to the cooperation agreement between the medical institution and the university).

Topic 8. Infertility

pr.tr.13 "Infertility (daytime)" (full-time course)

Medical and social support for the problem of infertility in marriage. Study of modern principles and methods of treatment of female infertility (hormonal, surgical, latest reproductive technologies). Peculiarities of the use of modern auxiliary reproductive technologies. Etiological factors of the development of infertility. The study of this topic involves theoretical work in a classroom, a simulation center (working with gynecological instruments), the use of virtual simulation (viewing thematic films with the algorithm for examining a married couple in case of infertility, the use of auxiliary reproductive technologies with further discussion). In the absence of quarantine restrictions, work in a women's consultation with mastering the skills of consulting gynecological patients, collecting gynecological and reproductive history, mirror examination, bimanual palpation (according to the agreement on cooperation between the medical institution and the university).

Topic 9. Modern aspects of family planning. Methods of contraception. Medical criteria acceptability of using WHO contraceptive methods.

pr.tr.14 "Modern aspects of family planning. Methods of contraception. Medical criteria acceptability of using WHO contraceptive methods (daily)" (full-time course)

Organization, structure and tasks of the family planning service. Counseling on family planning: directions, advantages, counseling process. Family planning for people living with HIV infection. Classification, mechanism of action and effectiveness of modern contraceptives from the standpoint of evidence-based medicine. The study of this topic involves theoretical work in a classroom, a simulation center (working with gynecological instruments), the use of virtual simulation (viewing films on contraceptives with further discussion). Provided there are no quarantine restrictions, work in specialized departments of the medical institution (according to the cooperation agreement between a medical institution and a university). Acquaintance with modern methods of contraception: COC, vaginal ring, contraceptive patch, PTP, injectable, IUD, barrier methods and spermicides. Familiarization with fertility recognition methods, voluntary surgical sterilization, emergency contraception. Examinations are necessary, which are carried out in a planned manner before making a decision on the use of a particular method of contraception.

Topic 10. Physiological pregnancy, childbirth and the postpartum period. Perinatal care fetus Pharmacotherapy in obstetrics.

pr.tr.15 "Physiological pregnancy, childbirth and the postpartum period. Perinatal protection of the fetus. Pharmacotherapy in obstetrics (daytime)" (full-time course)

Management of physiological pregnancy. Peculiarities of managing pregnant women in women's conditions consultations Basic principles of normal childbirth. Clinic and management postpartum period. The study of this topic involves theoretical work in training room, simulation center, acquisition of practical skills with using an obstetric phantom: conduct an external obstetric examination (Leopold techniques, auscultation of the fetal heartbeat, pelviometry); perform an internal obstetric examination, measure the diagonal conjugate. Provided there are no quarantine restrictions, it is envisaged to work in the conditions of a women's consultation or an obstetrical hospital at the patient's bedside (according to the agreement on cooperation between a medical institution and a university): to be able to collect and evaluate anamnesis, determine the term of pregnancy, the expected date of delivery and the weight of the fetus. Work in the delivery room. Partogram maintenance. Acquaintance with the order of recording a partogram, evaluation of the results of the examination of the condition of the fetus (working with the equipment of the medical institution - fetal cardiomonitor, CTG, ultrasound, BPP, blood flow dopplerometry). Interpretation of the results and determination of the tactics of managing a pregnant woman depending on the results obtained. Using virtual simulation (viewing films on conducting physiological childbirth).

Topic 11. Early gestosis. Hypertensive disorders during pregnancy. Preeclampsia. Eclampsia.

pr.tr.16 "Early preeclampsia. Hypertensive disorders during pregnancy. Preeclampsia. Eclampsia (daytime)" (full-time course)

Early gestosis: classification, clinic, diagnosis, treatment from the standpoint of evidence-based medicine. Hypertensive disorders during pregnancy. Preeclampsia: pathogenesis, classification, diagnosis, clinic, treatment from the standpoint of evidence-based medicine, tactics, prevention. Eclampsia: clinic, diagnosis, complications, emergency care, management tactics from the standpoint of evidence-based medicine. The study of this topic involves theoretical work in the classroom, in the simulation center (practicing skills on phantoms), the use of virtual simulation (viewing films on providing emergency care during an eclampsia attack with further discussion, video discussion of approaches to treatment and prevention of preeclampsia from the standpoint of modern European midwifery schools). In addition, the study of this topic includes role-playing games, evaluation of laboratory examination results. If possible, work at the patient's bedside. in specialized departments of the medical institution (according to the agreement on cooperation between the medical institution and the university): work in the department of extragenital pathology and obstetric resuscitation (determining the tactics of managing pregnancy and childbirth in late gestosis, mastering the algorithm for providing emergency care in case of eclampsia).

Topic 12. Early termination of pregnancy. Postponement of pregnancy. Multi-fruited pregnancy.

pr.tr.17 "Premature termination of pregnancy (daytime)" (full-time course)

The threat of premature birth: diagnosis, treatment, obstetric tactics. Prevention of miscarriage. Tactics of managing premature births. The study of this topic involves theoretical work in the classroom, in the simulation center. In the absence of quarantine restrictions, work in an obstetric hospital (according to the cooperation agreement): continuing to practice the skills of examining the cervix in mirrors, conducting pH-metry of vaginal contents to determine the inflow of amniotic fluid, assessing the degree of maturity of the cervix according to Bishop). Application of virtual simulation (viewing films with demonstration of clinical manifestations of the threat of premature birth). When studying this pathology, role-playing games are expected: practicing the skills of making a preliminary diagnosis of premature birth and planning management tactics. Plan preventive measures in the event of a threat of premature birth.

pr.tr.18 "Post-term pregnancy. Multiple pregnancy (daytime)" (full-time course)

Etiology and pathogenesis of post-term pregnancy. Peculiarities of managing pregnancy and childbirth. Indications and conditions for labor induction. Methods of labor induction. Classification of multiple pregnancy. Tactics of managing multiple pregnancies depending on the type of placentation. Tactics of childbirth in case of multiple fertility, indications for operative delivery. The study of this topic involves theoretical work in the classroom, in the simulation center. In the absence of quarantine restrictions, work in an obstetric hospital (according to the cooperation agreement): continuing to practice the skills of examining the cervix in mirrors, carrying out pH-metry of vaginal contents in order to determination of inflow of amniotic fluid, evaluation of the degree of maturity of the cervix according to Bishop). When studying this pathology role-playing games are planned: practicing the skills of making a preliminary diagnosis and planning the tactics of childbirth in the event of a delayed pregnancy. Tactics of managing pregnancy and childbirth in case of multiple fertility. It is expected to master the methods of pre-induction and induction of labor (mechanical methods of preparation for childbirth: finger peeling of the amniotic membranes, introduction of a balloon Foley catheter into the cervix, use of kelp, and medicinal agents). Determination of signs that confirm post-term pregnancy.

Topic 13. Anomalies of the bony pelvis. The problem of macrosomia in modern obstetrics. Inconsistency between the head of the fetus and the pelvis of the mother. Incorrect positions and pelvic presentation of the fetus.

pr.tr.19 "Anomalies of the bony pelvis. The problem of macrosomia in modern obstetrics. Inconsistency of the fetal head and the mother's pelvis (day)" (full-time course)

Anomalies of the bony pelvis. Classification, diagnosis. Diagnosis of synclitic and asynclitic insertion of the head. The problem of macrosomia in obstetrics. Clinically narrow pelvis. Peculiarities of childbirth. The study of this topic involves theoretical work in a training room, a simulation center (practicing the skills of external and internal obstetric examination, applying Leopold's techniques using an obstetric phantom). Establish a diagnosis of a clinically narrow pelvis (Vasten's sign, Tsangenmeister's sign). Application of virtual simulation (watching films on the subject of the lesson with further discussion). In addition, the study of this topic involves role-playing, mastering inspection skills, palpation "one on one", conducting pelviometry. In the absence of quarantine restrictions, work in departmentsmedical institution (according to the cooperation agreement between the medical institution and the university).

pr.tr.20 "Incorrect positions and pelvic presentation of the fetus (daytime)" (full-time course)

Incorrect position of the fetus: classification, diagnosis, pregnancy management tactics. Extensor presentations of the fetal head: classification, diagnosis. Correction of incorrect positions during pregnancy. Childbirth with the wrong position of the fetus, management tactics. Pelvic presentation of the fetus. Classification, diagnosis. Tactics of managing pregnancy and childbirth in case of breech presentation of the fetus. The study of this topic involves theoretical work in a training room, a simulation center (practicing the skills of external and internal obstetric examination, the use of Leopold techniques, mastering the technique of combined external and internal rotation of the fetus, extraction of the fetus by the leg, by the inguinal fold, studying and practicing the biomechanism of childbirth with pelvic presentation of the fetus. Providing assistance according to the Tsovyanov I and II methods during pelvic presentation. Practicing on a phantom the skills of providing classical manual assistance during pelvic presentation of the fetus. Application of virtual simulation (watching films on the topic of the lesson with further discussion), role-playing games, mastering skills examination, palpation "one on one", carrying out pelviometry. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between medical institution and university).

Topic 14. Bleeding during pregnancy, childbirth and the postpartum period. Hemorrhagic shock. DIC-syndrome. Intensive therapy and resuscitation for bleeding during pregnancy.

pr.tr.21 "Bleeding during pregnancy, childbirth and the postpartum period (daytime)" (full-time course)

Etiology and clinic of the development of obstetric bleeding during pregnancy, childbirth and the postpartum period. Bleeding in the first half of pregnancy (spontaneous abortion, ectopic pregnancy, premature detachment and placenta previa). Etiology, pathogenesis, clinic, diagnosis. Presentation and premature detachment of a normally located placenta: etiology, pathogenesis, classification, clinic, diagnosis, features of the course, management of pregnancy and childbirth. Cuveler's mother. Rupture of the uterus: etiology, clinic, diagnosis, features of pregnancy and childbirth. Bleeding during childbirth, postpartum and early postpartum period. Methods of stopping bleeding. The study of this topic involves work in a simulation center (use of an obstetric phantom for childbirth, educational tables, medical tools - obstetric curette, Foley catheter), use of virtual simulation (viewing thematic films with methods of stopping bleeding) with further discussion. In the absence of quarantine restrictions, work in the relevant departments of the clinical institution (according to the cooperation agreement between the medical institution and the university). Master the practical skills of assessing the volume of blood loss, inspection of the birth canal, manual and instrumental revision of the uterine cavity, manual separation and removal of litter, bimanual compression of the uterus, compression of the abdominal aorta).

pr.tr.22 "Hemorrhagic shock. DIC-syndrome. Intensive therapy and resuscitation in case of vulnertis (daytime)" (full-time course)

Intensive therapy and resuscitation for bleeding in obstetrics. Hemorrhagic shock. DIC-syndrome. Thromboembolism of the pulmonary artery. Embolism with amniotic fluid. The study of this topic involves theoretical work in a training room, a simulation center, the use of virtual simulation (watching films with algorithms for providing intensive care and resuscitation for bleeding in obstetrics) with further discussion. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university): work in the delivery room, intensive care unit. Master the practical skills of assessing the volume of blood loss. Be able to develop an algorithm for providing emergency care for obstetric bleeding. To develop an algorithm for providing emergency care hemorrhagic shock, DIC-syndrome. Determination of the stage of DSC-syndrome, evaluation laboratory indicators. Study of modern approaches to infusion-transfusion and intensive therapy and resuscitation in pulmonary embolism, amniotic fluid embolism.

Topic 15. Abnormalities of the contractile activity of the uterus. Childbirth traumatism of mother and fetus.Modern approaches to diagnosis and treatment of maternal and fetal birth.

pr.tr.23 "Abnormalities of the contractile activity of the uterus. Childbirth traumatism of the mother and fetus. Modern approaches to the diagnosis and treatment of maternal and fetal birth injuries (daily)" (full-time course)

Classification, risk factors, pathogenesis of various types of birth defects. Prevention of birth defects. The study of this topic involves theoretical work in a classroom, a simulation center (training of skills using an obstetric phantom). In the absence of quarantine restrictions, work in the departments of the medical institution (according to the cooperation agreement between the medical institution and the university). Practicing practical skills: determining the readiness of the mother's body for childbirth; assessment of cervical maturity (cervical maturity scale according to E.H. Bishop). Mastering the methods of diagnosis and treatment of obstetric disorders activity Diagnosis of periods and phases of childbirth. Monitoring of the condition of the fetus during childbirth. Work with the equipment of a clinical facility with mastering the methods of recording uterine contractions and fetal heartbeat (using a fetal heart monitor). Application of virtual simulation (watching films on the subject of the lesson: anomalies of labor activity) with further discussion).

Topic 16. Pregnancy and childbirth with extragenital diseases. Perinatal infections. Prevention of vertical transmission of HIV.

pr.tr.24 "Pregnancy and childbirth with extragenital diseases. Perinatal infections. Prevention of vertical transmission of HIV (daytime)" (full-time course)

Pregnancy and childbirth with diseases of the cardiovascular system (heart defects, hypertension, arterial hypotension, diseases of hematopoietic organs, diseases of the urinary system; liver and gall bladder; respiratory organs; organs of the system; endocrine system; nervous system; organs of vision; acute and chronic infectious diseases, tuberculosis, gynecological diseases. Peculiarities of the course and tactics of management in acute surgical pathology. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (viewing films with algorithms for managing pregnant women with extragenital pathology) with further discussion. In the absence of quarantine restrictions, working at the patient's bedside in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university).

Topic 17. Operative interventions in obstetrics.

pr.tr.25 "Operative interventions in obstetrics (daytime)" (full-time course)

General concepts of operative interventions in obstetrics. obstetric forceps, vacuum extraction of the fetus, caesarean section: indications. Operative interventions in the postpartum and postpartum period. Indications for supravaginal amputation, extirpation of the uterus, ligation of the internal iliac arteries. The study of this topic involves theoretical work in a training room, a simulation center (practicing the skills of minor obstetric operations on a phantom: operations for the preparation of the birth canal (perineo- and episiotomy, amniotomy); obstetric forceps, vacuum extraction of the fetus, manual separation of the placenta, separation of the litter: technique; manual and instrumental examination of the uterus after childbirth). In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between medical institution and university): work in the obstetric department, obstetric operating room. Determination of absolute and relative indications for caesarean section. Mastering the methods of preoperative preparation and postoperative management of patients. Study of the technique of caesarean section in the lower segment of the uterus, the technique of applying obstetric forceps and vacuum extractor using virtual simulation (watching videos with further discussion).

Topic 18. Postpartum septic diseases.

pr.tr.26 "Postpartum septic diseases (daytime)" (full-time course)

Postpartum septic diseases: postpartum septic wound, postpartum metroendometritis, metrophlebitis, mastitis, postpartum peritonitis, postpartum peritonitis. Obstetric sepsis: classification, etiology, pathogenesis, diagnosis, modern principles of treatment from the standpoint of evidence-based medicine, prevention. Septic shock, emergency care. Methods of suppression of lactation. The study of this topic involves theoretical work in a training room, a simulation center (work with an obstetric phantom), the use of virtual simulation (viewing films with the main clinical manifestations of postpartum septic infection) with further discussion. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the cooperation agreement between the medical institution and the university). Role playing game. Be able to develop an algorithm for providing emergency care in case of septic shock.

Topic 19. Placental dysfunction, delayed fetal development, fetal distress. Immunological incompatibility of maternal and fetal blood. Anomalies of the fertilized egg.

pr.tr.27 "Placental dysfunction, retardation of fetal development. Fetal distress during pregnancy and childbirth (daily)" (full-time course)

Placental dysfunction, fetal growth retardation: risk factors, classification, diagnosis, pregnancy management tactics, prevention. Fetal distress during pregnancy and childbirth: risk factors, classification, diagnosis, management tactics, prevention. Methods of diagnosing the state of the fetus: non-invasive - ultrasound, CTG, biophysical profile of the fetus, dopplerometry, MRI; invasive - amniocentesis, cordocentesis, chorion biopsy. The study of this topic involves theoretical work in a classroom, a simulation center (acquiring practical skills on an obstetric phantom). Work with the use of virtual simulation (watching films with methods of diagnosing the state of the fetus) with further discussion. Provided there are no quarantine restrictions, work in specialized departments of a medical institution with medical equipment: fetal heart monitor, ultrasound diagnostic apparatus, etc. (according to the cooperation agreement between the medical institution and the university).

pr.tr.28 "Immunological incompatibility of maternal and fetal blood. Anomalies of the fetal egg (daytime)" (full-time course)

Isoantigenic incompatibility of the blood of the mother and fetus (Rhesus conflict, incompatibility according to the ABO system, isoleukocyte, etc.). Hemolytic disease of the fetus and newborn. Indications for premature delivery in case of Rhesus conflict. Anomalies of elements of the fetal egg/placenta, fetal membranes and umbilical cord. Polyhydramnios and oligohydramnios: causes, diagnosis, pregnancy management tactics, consequences for the fetus and newborn. Hereditary and congenital diseases of the fetus. Diagnostics. Indications for medical genetic counseling. Multiple pregnancy: classification, diagnosis, features of the course and management of multiple pregnancy. Childbirth in multiple pregnancy. The study of this topic involves theoretical work in a classroom, in a simulation center (learning practical skills on an obstetric phantom), work with the use of virtual simulation (watching films on pregnancy management in the case of isoantigenic incompatibility of maternal and fetal blood) with further discussion. Provided there are no quarantine restrictions, work in specialized departments of a medical institution with medical equipment: fetal heart monitor, ultrasound diagnostic apparatus.

Topic 20. Performance of practical skills and manipulations.

pr.tr.29 "Performance of practical skills and manipulations (daily)" (full-time course)
Performance of practical skills and manipulations.

Topic 21. Final lesson: graded test.

pr.tr.30 "Differentiated test." (full-time course)
Differentiated test will include: questions for computer test control, performance of a practical task, provision of emergency assistance.

9. Teaching methods

9.1 Teaching methods

Course involves learning through:

| | |
|-----|-------------------------|
| TM1 | Problem-based learning |
| TM2 | Research Based Learning |
| TM3 | Case-based learning |

| | |
|-----|---------------------|
| TM4 | Practical training |
| TM5 | Electronic learning |
| TM6 | Lecture teaching |
| TM7 | Self-study |

The discipline is taught using modern teaching methods (PBL, RBL, CBL), which contribute not only to the development of professional abilities, but also stimulate creative and scientific activity and are aimed at training practice-oriented specialists.

Acquisition of soft skills by students is carried out during the entire period of studying the discipline. Ability to analytical and critical thinking, teamwork, perseverance is formed during team-, practice- and case-oriented training, knowledge and understanding of the subject area is acquired during lectures and self-study. Electronic training stimulates the ability to use information technologies. Training on the basis of research encourages the development of certainty and persistence in relation to the set tasks and assumed responsibilities.

9.2 Learning activities

| | |
|------|--|
| LA1 | Analysis and discussion of cases (educational/practical/research) |
| LA2 | Electronic learning in systems (the list is specified by the teacher, for example, Google Classroom, Zoom and in the YouTube channel format) |
| LA3 | Performing situational exercises |
| LA4 | Assessment and interpretation of research data |
| LA5 | Practical work with the patient in specialized departments of the hospital |
| LA6 | Interactive lectures |
| LA7 | Individual research project (student research paper, article, theses, etc.) |
| LA8 | Preparation for practical classes |
| LA9 | Performing a group practical task |
| LA10 | Assessment and interpretation of research data |
| LA11 | Practicing practical skills in the simulation center |
| LA12 | Work with textbooks and relevant information sources |

10. Methods and criteria for assessment

10.1. Assessment criteria

| Definition | National scale | Rating scale |
|---|------------------|------------------------|
| Outstanding performance without errors | 5 (Excellent) | $170 \leq RD \leq 200$ |
| Above the average standard but with minor errors | 4 (Good) | $140 \leq RD < 169$ |
| Fair but with significant shortcomings | 3 (Satisfactory) | $120 \leq RD < 139$ |
| Fail – some more work required before the credit can be awarded | 2 (Fail) | $0 \leq RD < 119$ |

10.2 Formative assessment

| | Description | Deadline, weeks | Feedback |
|---|--|--|---|
| FA1 Mutual evaluation (peer assessment) | Partnership interaction aimed at improving the results of educational activities by comparing one's own current level of success with previous indicators. Provides the opportunity to analyze one's own educational activities throughout the entire period of studying the discipline Adjustment together with the students of approaches to learning taking into account the results of the assessment. | Throughout period study disciplines | Correction together with acquirers approaches to learning from taking into account results assessment |
| FA2 Instructions of the teacher in the process of performing practical tasks | The guidelines reveal the methods of pedagogical control over the professional activities of applicants. Efficiency is determined by compliance with all stages of practical tasks. The effectiveness of the formation of the necessary practical skills and abilities depends on the level of formation of practical competence. | During the entire period of studying the discipline | Counseling of students in working with a standardized patient, direct and indirect observation of the work of applicants "at the bedside" of the patient with subsequent determination of the level of practical training |
| FA2 Conclusive testing | Method of effective verification level of assimilation of knowledge, skills and educational skills disciplines. Testing allows you to check the results graduate studies. disciplines | In the penultimate discipline lesson. | The maximum number of points for the test is 10 points, provided that 100% of the answers are correct. The minimum score for successfully passing the tests is 6 points (60% of correct answers). |

| | | | |
|---|---|---|--|
| FA4 Consulting the teacher during the preparation of an individual research project (speech at a conference, competition of scientific papers) | It is an important factor in the formation of professional qualities of future specialists research work of students. Involvement of the latter in research activities contributes to the formation of their scientific outlook, diligence, work capacity, initiative, etc. | During the entire period of studying the discipline | Verbal comments of the teacher. The student is given additional incentive points (from 5 to 10), depending on the type of research project. |
| FA5 Survey and teacher's oral comments based on his results | Provides an opportunity to identify the state of the students' educational experience in accordance with the set goals, to find out the prerequisites for the state of formation of the obtained results, the causes of difficulties, to adjust the learning process, to track the dynamics of the formation of learning results and to forecast their development. | During the entire period of studying the discipline | According to the received data on the results of training, based on their analysis, it is proposed to determine the evaluation as an indicator of the achievements of the educational activities of the applicants |
| FA6 Solving clinical cases | The case method allows you to reveal and form the qualities and abilities of medical students necessary for further work, forms clinical thinking, analytical abilities, independence in decision-making, communication skills, skills for working with a sufficiently large amount of information. | During the entire period of studying the discipline | Assessment of the student's ability to think clinically, justify their decisions, clearly express their opinions, determine the level of theoretical training, which is reflected in the corresponding assessment. |

| | | | |
|---|---|---|--|
| FA7 Tests (automated tests) to control the educational achievements of applicants | A method of effective verification of the level of assimilation of knowledge, abilities and skills from each subject of an educational discipline. Testing allows you to check the assimilation of educational material from each subject. | During the entire period of studying the discipline | The student must provide 60% of the correct answers, which is an admission to the practical part of the lesson |
| FA8 Tests (automated tests) to control the educational achievements of applicants | Assessment of acquired theoretical knowledge on the subject of the discipline. It is conducted at each practical lesson in accordance with the specific goals of each topic based on a comprehensive assessment of the student's activity, which includes monitoring the level of theoretical training, performing independent work according to the thematic plan. | During the entire period of studying the discipline | Feedback is aimed at supporting students' independent work, identifying shortcomings and assessing the level of acquired theoretical knowledge |
| FA9 The task of assessing the level of theoretical training | Assessment of acquired theoretical knowledge on the subject of the discipline. It is conducted at each practical lesson in accordance with the specific goals of each topic based on a comprehensive assessment of the student's activity, which includes monitoring the level of theoretical training, performing independent work according to the thematic plan. | During the entire period of studying the discipline | Feedback is aimed at supporting students' independent work, identifying shortcomings and assessing the level of acquired theoretical knowledge |
| FA10 Practical skills test | Practicing practical skills on various mannequins and simulators. | During the entire period of study. At the last lesson, the student must successfully perform practice | Successful completion of practical skills in the discipline is a prerequisite for taking the exam. The maximum number of points is 20, the minimum is 12 |

| | | | |
|---|---|---|---|
| FA11 Discussions in focus groups | he method makes it possible to involve all participants in the process of discussion and justification of one's own opinion through multilateral communication, to develop the ability to conduct a professional discussion, to cultivate respect for colleagues and the ability to generate alternative ideas and proposals. | During the entire period of studying the discipline | Assessment of the student's ability to work in a team, the ability to justify their decisions, determination of the level of theoretical training, which is reflected in the corresponding assessment |
| FA12 Tests (automated tests) to control the educational achievements of applicants | A method of effective verification of the level of assimilation of knowledge, abilities and skills from each subject of an educational discipline. Testing allows you to check the assimilation of educational material from each subject. | During the entire period of studying the discipline | The student must provide 60% of the correct answers, which is an admission to the practical part of the lesson. |

10.3 Summative assessment

| | Description | Deadline, weeks | Feedback |
|--|---|---|--|
| SA1 Final control: diff. test | Compilation of a practically-oriented differential score. Applicants who have successfully mastered the material from the discipline, passed practical skills and final computer testing are allowed to take the differential test. | According to the schedule | The winner can get 80 points for differential credit. The minimum number of points a student must receive is 30 points |
| SA2 Assessment of written works, surveys, solving a clinical case | Includes oral interview, interpretation of laboratory and instrumental methods of examination, objective structured clinical examination of the patient, solution of clinical individual and group cases, ongoing testing. Students who are involved in research activities have the opportunity to present the results of their own research at conferences, student research competitions, etc. (incentive activities, additional points) | During the entire period of studying the discipline | The performance result of each lesson affects the comprehensive assessment for the practical lesson |

| | | | |
|--|--|--|--|
| SA3 Final testing | A method of effective verification of the level of assimilation of knowledge, abilities and skills from an educational discipline. Testing allows you to check the results of training during the cycle and determine the level of knowledge at the end of the discipline. | Final computer test at the end of the course (10 points) | It is an admittance to the preparation of a differential score |
| SA4 Current evaluation of the level of theoretical and practical training | includes oral interview, interpretation of laboratory and instrumental methods of examination, objective structured clinical examination of the patient, solution of clinical individual and group cases, ongoing testing. Students who are involved in research activities have the opportunity to present the results of their own research at conferences, student research competitions, etc. (incentive activities, additional points). | During the entire period of studying the discipline | At each lesson, the result of the ND performance affects the comprehensive assessment for the practical lesson |
| SA5 Assessment of performance of practical skills and manipulations | Comprehensive practice of the practical component of academic programs in a safe simulation environment for students. Provides an opportunity to learn skills from a variety of emergency situations. | At the last lesson in the discipline, the student must successfully complete a list of practical ski | It is mandatory for admission to the exam. The maximum number of points is 80, the minimum is 48 |

Form of assessment:

| | Points | Minimum points | Можливість перескладання з метою підвищення оцінки |
|--|-------------------|----------------|--|
| 12 semester | 200 scores | | |
| SA1. Final control: diff. test | 80 | | |
| answer to theoretical questions (3x15) (3x15) | 45 | 9 | No |
| answer to the question of practical training | 15 | 9 | No |
| answer to the question of providing emergency care | 20 | 12 | No |
| SA2. Assessment of written works, surveys, solving a clinical case | 10 | | |
| | 10 | 10 | No |
| SA3. Final testing | 10 | | |
| | 10 | 6 | No |
| SA4. Current evaluation of the level of theoretical and practical training | 20 | | |

| | | | | |
|--|--|-----------|----|----|
| | | 20 | 12 | No |
| SA5. Assessment of performance of practical skills and manipulations | | 80 | | |
| | | 80 | 48 | No |

When learning the materials of the module, the student is awarded a maximum of 5 points for each practical session (the grade is given in the traditional 4-point grading system). At the end of the academic year, the student's arithmetic average is calculated. The maximum number of points that a student can receive in practical classes during the academic year is 80. The number of points of a student is calculated using the formula of multiplying by the arithmetic average and dividing by 5. For diagnostic testing, the student receives a maximum of 10 points. The minimum number of points that a student must receive is 6 points. A mandatory condition for admission to the exam is the successful completion of the list of practical skills in the last lesson of the discipline. The maximum number of points that a student can receive is 20 points, the minimum is 12 points. The maximum number of points for the current educational activity of the student is 120. The student is admitted to the exam provided that the requirements of the educational program are met and if he has scored at least 72 points for the current educational activity: 48 points during practical classes, 6 points for medical history, 6 points for testing and 12 points for performing practical skills and manipulations. The practice-oriented exam is held according to the schedule during the session. Exam tickets contain 3 theoretical questions on various topics and cover all sections of the academic discipline (15 points each), 1 practical task (15 points) and questions on providing emergency care (20 points). The exam is credited to the student if he scored at least 48 points out of 80. Encouraging points are added to the grade in the discipline for the implementation of an individual research project (defense of the student thesis 10 points, presentation at the conference, poster presentation at the conference, theses of the reports - 5 points). The total score for the discipline cannot exceed 200 points. The possibility of re-crediting the points obtained under the system of non-formal education is provided in accordance with the Regulations.

11. Learning resources

11.1 Material and technical support


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| MTS1 | Information and communication systems |
| MTS2 | Library funds, archive of radiographs, cardiocograms, computer tomograms, results of laboratory examination methods |
| MTS3 | Computers, computer systems and networks |
| MTS4 | Simulation center (obstetric phantom, newborn baby phantom for primary resuscitation with a set of equipment) |
| MTS5 | KNP SOR "Regional Clinical Perinatal Center", KNP "Clinical Maternity Hospital of the Blessed Virgin Mary", Medical Center "MedSoyuz", KNP TsMKL |
| MTS6 | Multimedia, video and sound reproduction, projection equipment (video cameras, projectors, screens, laptops) |
| MTS7 | Software (to support distance learning, Internet surveys, virtual laboratories, virtual patients, to create computer graphics, modeling, etc.) |

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|------|---|
| MTS8 | Medical equipment (fetal heart monitor, ultrasound machine, digital mammogram, laryngoscope, pinlon, height meter, scales, centimeter tape, tachometer, tonometer, obstetrical stethoscope, colposcope, IUD insertion simulator, set for gynecological examination, cervical brushes, microscope slides, hysteroscope, laparoscopic rack) |
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11.2 Information and methodical support

| Essential Reading | |
|-----------------------------|--|
| 1 | Obstetrics. Volume 1. Basic course. Likhachev V.K. Publisher: New book. 2021.392 p. |
| 2 | Gynecology. 2nd edition: a guide for doctors. Likhachev V.K. Publisher: New book, 2021; 688 p. |
| 3 | Williams Obstetrics, 25th Edition, Study Guide 25th Edition by Shivani Patel, Scott Roberts, Vanessa Rogers, Ashley Zink, Elaine Duryea, Jamie Morgan. USA. Mc. Graw Hill Education. 2021. 1340 p |
| 4 | William Gynecology, Fourth Edition by Barbara L. Hoffman, John O.Schorge, Lisa M. Halvorson, Cherine A. Hamid, Marlen M. Corton, Joseph I. Schaffer. Mc Graw-Hill Education. New York. 2020. 1253 p. |
| 5 | Clinical Obstetrics and Gynaecology: 4th Edition / Brian A. Magowan, Philip Owen, Andrew Thomson. All-Ukrainian specialized publishing house "Medytsina", 2021. 454 p. |
| Supplemental Reading | |
| 1 | Н. Лигирда. Практична кольпоскопія. 2-е видання, доповнене. -К.: ТОВ "Поліграф плюс". 2020. 280 с. |
| 2 | Бойко В. І. Антенатальний догляд при багатоплідній вагітності : навчальний посібник. Бойко В. І., Нікітіна І. М., Калашник Н. В. Суми : Сумський державний університет, 2016. 105 с. |
| 3 | Прогнозування, лікування і профілактика акушерської та перинатальної патології в жінок із багатоплідною вагітністю : монографія. І.М. Нікітіна, В.І. Бойко, А.В. Бойчук, А.М. Лобода ; за заг. ред. І.М. Нікітіної. Суми : СумДУ. 2021. 317 с. |
| 4 | Te Linde's Operative Gynecology. Twelfth edition. Victoria L. Handa, Linda Van Li. Hardcover edition. New York. 2019. 339 p |
| 5 | Obstetrics and Gynecology in 2 vols, vol.2 Gynecology, edited V.I. Gryshchenko, M.O. Shcherbina, edition "Medytsina", 2022. 352 p |
| 6 | Oxford Textbook of Obstetrics and Gynaecology , Arulkumaran Sabaratnam, Ledger William, Denny Lynette, Doumouchsis Stergios, "Oxford University Press" , 2020. 872 p |
| 7 | Cunningham and Gilstrap's Operative Obstetrics, Third Edition 3rd Edition, Kindle Edition. Edward R. Yeomans, Barbara L. Hoffman, Larry C. Gilstrap, F. Gary Cunningham. Mc Graw-Hill Education. New York. 2020. 1253 p. |
| 8 | Obstetrics and Gynecology in 2 vols, vol.1 ,Obstetrics, edited V.I.Gryshchenko, M.O. Shcherbina, edition "Medytsina", 2020. 392 p |

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|----|--|
| 9 | Практикум з акушерства: навчальний посібник / І.І. Бачинська. — 2-е видання К. : Медицина, 2021, . – 104 с. |
| 10 | Gabbe's Obstetrics Study Guide: A Companion to the 8th Edition Vanita D. Jain, Audrey A. Merriam, Eva K. Pressman, Rini Banerjee Ratan, Alyssa Stephenson-Famy, Thaddeus P. Waters. Copyrighted by Elsevier. 2021. 1346 p. |

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|  | <p style="text-align: center;">UNIVERSITY POLICIES FOR THE COURSE «Obstetrics and Gynecology»</p> <p>Higher education level The Second Level Of Higher Education, National Qualifications Framework Of Ukraine – The 7th Level, QF-LLL – The 7th Level, FQ-EHEA – The Second Cycle Major: Educational programme 222 Medicine: Medicine Year of study 2023 Semester 11, 12 semester Mode of study full-time course Language of instruction English</p> |
| Teacher(s) | Nikitina Iryna Mykolaivna, Herasymenko Svitlana Fedorivna |
| Contact | канд. мед. наук, асистент кафедри акушерства, гінекології та планування сім'ї Герасименко Світлана Федорівна, e-mail: s.herasymenko@med.sumdu.edu.ua доктор мед. наук, професор, доцент кафедри акушерства, гінекології та планування сім'ї Нікітіна Ірина Миколаївна, e-mail: i.nikitina@med.sumdu.edu.ua |
| Time and room for giving consultations | KNP SOR "Regional Clinical Perinatal Center", every Thursday 16.00-18.00 |
| Links to online educational platforms | https://elearning.sumdu.edu.ua/works/7295/nodes/2181597#anchor2181597 https://elearning.sumdu.edu.ua/works/7295/nodes/2181665#anchor2181665 https://elearning.sumdu.edu.ua/works/7295/nodes/2181666#anchor2181666 https://elearning.sumdu.edu.ua/works/7295/nodes/2181667#anchor2181667 https://elearning.sumdu.edu.ua/works/7295/nodes/2186246#anchor2186246 https://elearning.sumdu.edu.ua/works/5071/nodes/1051769#anchor1051769 https://elearning.sumdu.edu.ua/works/5071/nodes/1051773#anchor1051773 |
| Syllabus | https://pg.cabinet.sumdu.edu.ua/report/syllabus/2470189a8a3682823d7a20dc775183a63808256 |
| Channels for maintaining contact with the group for receiving and working on materials | Mix.sumdu.edu.ua, електронна скринька, telegram, viber |

POLICIES

Academic integrity policy

Participants must complete all tasks according to the course requirements independently. Participants are not allowed to cheat during the written module or summative test. The assignments should not contain plagiarism, facts of fabrication, falsification, cheating. Manifestations of other types of academic dishonesty determined by the Academic Integrity policy are also unacceptable. If a teacher reveals violations of

academic integrity by students during the course, the former have the right to take one of the following actions: - to reduce points by up to 40% for practical assignments; - to give recommendations for improving and resubmitting mandatory homework assignments with the reduction of points by up to 25%; - to not accept mandatory homework assignments without the right to resubmit; - set a date for retaking the written module or the summative test with a reduction of points by up to 15%; - to not allow to retake the written module or the summative test.

Політика щодо використання інструментів штучного інтелекту при виконанні завдань навчальної дисципліни

Політика використання інструментів штучного інтелекту (ChatGPT, Tome тощо) оголошується викладачем на початку курсу.

The policy for the use of artificial intelligence tools (ChatGPT, Tome, etc.) is announced by the teacher at the beginning of the course.

Несанкціоноване використання інструментів штучного інтелекту є порушенням академічної доброчесності.

Політика щодо використання матеріалів з джерел відкритого доступу

When students use materials from open access sources for the preparation of works defined by the syllabus and regulations of the academic discipline, they must comply with the terms of the Creative Commons licenses for the use of copyright objects.

Attendance policy

The student must attend 100% practical and 60% lecture classes. In case of missing classes, the student must make up for the missed classes in accordance with the practice schedule approved on the department in the presence of the appropriate order of the dean's office.

Deadlines and course retake policy

In case of an unsatisfactory result, the student has the right to retake twice the semester exam - the first time for the examiner, appointed by the head of the department, the second - to the commission that is being created dean's office. Retaking the exam is carried out separately schedule approved by the dean's office. Students who did not appear for the exam without a valid reason, are considered to have received unsatisfactory rating. The student's refusal to take the exam the task is certified as an unsatisfactory answer. The student has the right to receive an explanation of the received assessment.

Assessment appeals policy

The results of the module and semester assessment are subject to appeal. A student must lodge an appeal to the director/dean on the day of certification or after announcing the results, but no later than the next working day. The appeal commission is established by the director/dean's order. The appeal commission's decision may change the grade in case of violations revealed during the attestation.

Assessment criteria

Assessment policy

When learning the materials of the module, the student is awarded a maximum of 5 points for each practical session (the grade is given in the traditional 4-point grading system). At the end of the academic year, the student's arithmetic average is calculated. The maximum number of points that a student can receive in practical classes during the academic year is 100. The number of points of a student is calculated using the formula of multiplying 100 by the arithmetic average and dividing by 5. For diagnostic testing, the student receives a maximum of 10 points. The minimum number of points that a student must receive is 6 points. The maximum number of points for the student's current educational activity is 120. The student is admitted to the diff. credit provided that the requirements of the educational program are met and in the event that he scored at least 72 points for the current educational activity: 60 points during practical classes, 6 points for the implementation of a practical case (preparation, presentation, defense) and 6 points for testing. Diff. settlement is carried out according to the schedule at the end of the cycle. The tickets contain 3 theoretical

questions on a variety of topics and cover all sections of the academic discipline (15 points each), 1 practical task (15 points) and questions on providing emergency care (20 points). The credit is given to the student if he scored at least 48 points out of 80. Encouraging points are added to the grade in the discipline for the implementation of an individual research project (defense of the student thesis 12 points, speech at the conference 5 points, poster presentation at the conference 4 points, theses of the reports 3 points). The total score for the discipline cannot exceed 200 points.

Alignment of learning outcomes with teaching and learning activities and assessment

For 222 Medicine:

| Competences/ learning outcomes | Learning outcomes | Types of training | Learning activities | Teaching methods | Material and technical support | Methods and criteria for assessment |
|--------------------------------|-------------------|--------------------|---|-------------------------|--|-------------------------------------|
| PO2 | LO1 | pr.tr.1, pr.tr.2 | LA4, LA7, LA10, LA1, LA3, LA5, LA9, LA11, LA2 | TM1, TM2, TM3, TM4, TM5 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8 | SA2, SA5, SA4, SA1 |
| PO1 | LO2 | pr.tr.3, pr.tr.4 | LA7, LA10, LA1, LA3, LA5, LA9, LA11 | TM2, TM3, TM4 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7 | SA2, SA5, SA4 |
| PO3 | LO3 | pr.tr.5, pr.tr.6 | LA7, LA10, LA1, LA3, LA5, LA9, LA11 | TM2, TM3, TM4 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8 | SA2, SA5, SA4 |
| PO4 | LO4 | pr.tr.7, pr.tr.8 | LA4, LA7, LA10, LA1, LA3, LA5, LA9, LA11, LA2 | TM1, TM2, TM3, TM4, TM5 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8 | SA2, SA5, SA4, SA1 |
| PO13 | LO5 | pr.tr.10, pr.tr.9 | LA4, LA7, LA10, LA1, LA3, LA5, LA9, LA11, LA2 | TM1, TM2, TM3, TM4, TM5 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8 | SA2, SA5, SA4, SA1 |
| PO5 | LO6 | pr.tr.11, pr.tr.12 | LA4, LA7, LA10, LA1, LA3, LA5, LA9, LA11 | TM1, TM2, TM3, TM4 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8 | SA2, SA5, SA4 |

| Competences/ learning outcomes | Learning outcomes | Types of training | Learning activities | Teaching methods | Material and technical support | Methods and criteria for assessment |
|--------------------------------|-------------------|--|--|--------------------|--|-------------------------------------|
| PO9 | LO7 | pr.tr.13, pr.tr.14 | LA4, LA1, LA3, LA5, LA9, LA11 | TM1, TM3, TM4 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8 | SA2, SA5, SA4 |
| PO8 | LO8 | pr.tr.15, pr.tr.16 | LA4, LA1, LA3, LA5, LA9, LA11, LA2 | TM1, TM3, TM4, TM5 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8 | SA2, SA5, SA4, SA1 |
| PO12 | LO9 | pr.tr.17, pr.tr.18, pr.tr.19 | LA4, LA1, LA3, LA5, LA9, LA11, LA6 | TM1, TM3, TM4, TM6 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7 | SA2, SA5, SA4 |
| PO11 | LO10 | pr.tr.14, pr.tr.15, pr.tr.16, pr.tr.17, pr.tr.18, pr.tr.19, pr.tr.20, pr.tr.21 | LA4, LA1, LA3, LA5, LA9, LA11, LA8, LA12 | TM1, TM3, TM4, TM7 | MTS4, MTS5, MTS7 | SA2, SA5, SA4, SA3 |
| PO6 | LO11 | pr.tr.23, pr.tr.24 | LA4, LA7, LA10, LA1, LA3, LA5, LA9, LA11 | TM1, TM2, TM3, TM4 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8 | SA2, SA5, SA4 |
| PO15 | LO12 | pr.tr.25, pr.tr.26 | LA4, LA7, LA10, LA3, LA5, LA9, LA11, LA2 | TM1, TM2, TM4, TM5 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8 | SA5, SA4, SA1 |
| PO14 | LO13 | pr.tr.27, pr.tr.28 | LA3, LA5, LA9, LA11, LA6 | TM4, TM6 | MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8 | SA5, SA4 |

| Competences/ learning outcomes | Learning outcomes | Types of training | Learning activities | Teaching methods | Material and technical support | Methods and criteria for assessment |
|--------------------------------|-------------------|---|-------------------------------------|--------------------|--------------------------------|-------------------------------------|
| PO7 | LO14 | pr.tr.1, pr.tr.10, pr.tr.11, pr.tr.12, pr.tr.13, pr.tr.14, pr.tr.15, pr.tr.16, pr.tr.17, pr.tr.18, pr.tr.2, pr.tr.3, pr.tr.4, pr.tr.5, pr.tr.6, pr.tr.7, pr.tr.8, pr.tr.9 | LA4, LA3, LA5, LA9, LA11, LA8, LA12 | TM1, TM4, TM7 | MTS1, MTS2, MTS5 | SA5, SA4, SA3 |
| PO16 | LO15 | pr.tr.14, pr.tr.15, pr.tr.16 | LA3, LA5, LA9, LA11, LA6, LA8, LA12 | TM4, TM6, TM7 | MTS1, MTS2, MTS5 | SA5, SA4, SA3 |
| PO10 | LO16 | pr.tr.1, pr.tr.10, pr.tr.11, pr.tr.12, pr.tr.13, pr.tr.14, pr.tr.15, pr.tr.16, pr.tr.17, pr.tr.18, pr.tr.19, pr.tr.2, pr.tr.20, pr.tr.3, pr.tr.4, pr.tr.5, pr.tr.6, pr.tr.7, pr.tr.8, pr.tr.9 | LA4, LA1, LA3, LA5, LA9, LA11, LA6 | TM1, TM3, TM4, TM6 | MTS2, MTS3, MTS4, MTS5 | SA2, SA5, SA4 |