

Name of the course	Gynecology and Obstetrics			Code	MSE507
Type of study program:	Integrated university study program, Medicine			Year of study:	5
Credits (ECTS):	11	Semester:	IX	Number of hours per semester (L+S+E)	200 70+60+70
Status of the course:	obligatory	Preconditions:	According to the Rulebook on Studying	Comparative conditions:	/
Access to course:	Fifth year students			Hours of instructions:	According to schedule
Course teacher:	Full Professor Vajdana Tomić, MD, PhD				
Consultations:	As agreed with students				
E-mail address and phone number:	vajdana.tomic@mef.sum.ba tel/fax +387 36 336211				
Associate teachers	Full Professor Herman Haller, MD, PhD Full Professor Marko Vulić, MD, PhD Associate Professor Držislav Kalafatić, MD, PhD Assistant Professor Vladimir Banović, MD, PhD Associate Professor Tatjana Barišić, MD, PhD Assistant Professor Martina O. Vlaho, MD, PhD Ana Dugandžić Šimić, MD, MSc Nikolina Penava, MD Dejan Tirić, MD				
Consultations:	Agreement with the student via email				
E-mail address and phone number:	-				
The aims of the course:	To acquaint students with the basic principles of gynecology and obstetrics. Expand the knowledge and skills necessary for understanding the basic pathophysiological mechanisms, recognition of clinical symptoms, differential diagnostic conclusions, critical evaluation of laboratory findings and rational treatment of the most common gynecological diseases and complications of pregnancy.				
Learning outcomes (general and specific competences):	<u>General outcomes</u> <ul style="list-style-type: none"> Plan independent learning through study in a way of critical and self-critical questioning of scientific truths. Demonstrate the possession of personal qualities (teamwork and personal contribution, interest, active listening and building positive relationships with group members). <u>Specific outcomes:</u> <ol style="list-style-type: none"> Explain and interpret the anatomy of the pelvis and female genital organs Present and interpret the normal function of the menstrual cycle and connect the mutual physiological relationships and mechanisms by which individual organ participate in the hypothalamus- pituitary-ovary axis Critically judge and explain pathophysiological mechanisms, clinical and laboratory features, treatment and prevention of the most common gynecological diseases Explain and interpret the etiological factors of clinical conditions in human reproduction, and list modern methods of assisted reproductive technology List and distinguish between family planning and contraception methods, and explain basic physiological changes and therapeutic options for menopausal changes Explain and interpret the etiopathogenic mechanisms of most common disease in gynecological oncology, and present diagnostic options and modern methods of therapy List and describe the basic principles of antenatal care 8. Present and explain physiological changes during normal pregnancy, 				

	<p>childbirth and puerperium as well as basic events in the newborn age</p> <p>9. Critically judge and explain pathophysiological mechanisms, clinical and laboratory findings, treatment and prevention of the most common complications of pregnancy, childbirth and puerperium</p> <p>10. List and classify by importance emergency conditions in obstetrics and recommend a therapeutic approach</p> <p>Outcomes will be evaluated through continuous testing of knowledge, active forms of learning during lectures and seminars, and the final exam.</p>			
Course content (Syllabus):	Classes include learning of the fundamental principles of obstetrics and gynecology as well as acquisition of basic clinical skills. Classes are organized in several separate thematic sections that include lectures, seminars and exercises in small groups. Students participate in the everyday tasks of the clinic and thoroughly process patients with the help of assistants during exercises. After attending classes, the students are given a written, practical and oral exam.			
Format of instruction (mark in bold)	Lectures	Exercises	Seminars	Independent assignments
	Consultations	Work with mentor	Field work	Other
	Remark: work in clinic (interactive teaching)			
Student responsibilities	<p>Attendance and active participation in all forms of teaching - lectures, seminars and exercises.</p> <p>During exercises: anamnesis and clinical examination of patients with the planning of laboratory workup and treatment.</p> <p>Students are required to attend classes, it is allowed to be absent from 20% of all classes.</p> <p>The final exam consists of a written, practical and oral part.</p>			
Monitoring and evaluation of student work (mark in bold)	Class attendance	Class participations	Seminar work	Practical training
	Oral exam	Written exam	Continuous assessment	Essay
Detailed evaluation within a European system of points				
STUDENTS RESPONSIBILITIES	HOURS	PROPORTIONS OF ECTS CREDITS	PROPORTIONS OF MARK	
Class attendance and participations	130	4.3	0%	
Work in small groups (exercises)	70	2.3	0%	
Practical exam	20	0.7	0%	
Written exam	50	1.7	50%	
Oral exam	60	2	50%	
TOTAL:	330	11	100%	
<p>Additional clarification:</p> <p>Exam in gynecology and obstetrics is taken after attended course, and consists of written, practical (examination of patients with interpretation) and an oral part. Written exam is compulsory and qualifying for access to practical and oral exam. To pass the written exam, students need to achieve the score of 55% of total points or more, which is elimination threshold.</p> <p>According to the regulations of the study, grade is obtained:</p> <p>A = 91-100% 5</p> <p>B = 79 to 90% 4</p> <p>C = 67 to 78% 3</p> <p>D = 55 to 66% 2</p> <p>F = 0 to 54% 1</p>				

<p>The oral part of exam consists of four questions from different areas (from each area by one): 1. Practical obstetrics (delivery and puerperium), 2. Perinatology (pregnancy, fetus and newborn), 3. General gynecology with gynecological oncology and urology, 4. Humane reproduction and gynecological endocrinology (four groups of questions-cards). The final grade is the average score of the written and oral exam.</p>	
Required literature:	1. Reece E.A., Barbieri R. L. Obstetrics and Gynaecology: The Essentials of Clinical Care. Stuttgart & New York: Thieme, 2010.
Optional literature:	<ol style="list-style-type: none"> 1. Berek J, Hacker N. Practical Gynecology Oncology. Seventh edition. Lippincott Williams&Wilkins, 2020. 2. Cunningham F et al. 24th Edition. Williams Obstetrics. Mc Graw-Hill Companies, 2014. 3. http://emedicine.medscape.com/obstetrics_gynecology
Additional information about the course	<p>Methods of monitoring the quality of teaching:</p> <ul style="list-style-type: none"> - Student questionnaire - Analysis of the quality of teaching by students and teachers - Analysis of exam results - Report of the Quality assurance office - Self-evaluation and external evaluation (visit of the team from Quality assurance office)

Annexes: calendar classes

<i>The number of teaching units (l+e+s)</i>	TOPICS AND LITERATURE
I.	Title: Introduction to the course and historical review
	Short description: The aims of the gynecology and obstetrics course. Historical development of obstetrics and gynecology, neonatology and part of gynecological cytology. Overview and importance of vital statistics.
	Literature: required and optional
II.	Title: Pelvic and perineum anatomy. Embryology.
	Short description: Overview and practical anatomy of the pelvis, pelvis bone, peritoneum. Pelvic and urogenital diaphragms. Blood vessels, nerves and lymph vessels of the pelvis. Female genital organs. The pelvis planes and spaces. Developmental phases in embryology.
	Literature: required and optional
III.	Title: Gynecological-obstetrics propedeutics
	Short description: Anamnesis and diagnostic methods in gynecology and obstetrics. Gynecological and obstetric examination; Papanicolaou (PAPA) test; Ultrasound diagnostics, Colposcopy and biopsy; Cardiography (CTG); Laboratory tests; X-ray diagnostics; Endoscopic diagnostic methods-laparoscopy and hysteroscopy.
	Literature: required and optional
IV.	Title: Fertilization and implantation
	Short description: The basics of the menstrual cycle, the physiology of fertilization and blastocyst implantation.
	Literature: required and optional
V.	Title: Early diagnosis of pregnancy, Development and function of placenta, Physiology and pathology of amniotic fluid.
	Short description: Methods of early pregnancy diagnosis. Development of placenta, placental function. Composition and alteration of amniotic fluid, determination of fetal maturity and potential threats to the fetus, ultrasonic evaluation of amniotic fluid amount.
	Literature: required and optional

VI.	Title: Fetal growth and development. Restricted and accelerated fetal growth.
	Short description: Physiology of fetal growth. Basic pathophysiological events in various types of slowed and accelerated fetal growth. Diagnostic procedures for detecting restricted and accelerated fetal growth as well as procedures for monitoring and completing pregnancy.
	Literature: required and optional
VII.	Title: Physiological changes during pregnancy
	Short description: Get acquainted with the physiological changes of genital and extragenital organs, as well as organic systems in pregnancy, including changes in laboratory findings in normal pregnancy. Physiology of pregnancy and metabolism of nutrients in pregnancy. Endocrinology of pregnancy.
	Literature: required and optional
VIII.	Title: Reproductive physiology-normal menstrual cycle
	Short description: Neuroendocrinology, hypothalamus, pituitary gland, sex hormones, menstrual cycle physiology, cyclic endometrial changes and follicular development.
	Literature: required and optional
IX.	Title: Antenatal care and monitoring of normal pregnancy
	Short description: Basic principles of antenatal care, number of examinations and diagnostic procedures used to monitor normal pregnancy. Standard laboratory tests for monitoring of normal pregnancy as well as interpretation of lab findings.
	Literature: required and optional
X.	Title: Diabetes and pregnancy
	Short description: Definition, screening, diagnostic criteria, complications and treatment of Gestational Diabetes. DM type 1/2 and pregnancy- preconception diagnostic treatment, monitoring and treatment, complications.
	Literature: required and optional
XI.	Title: Hypertension in pregnancy
	Short description : Basic characteristics of hypertensive disorders in pregnancy including definition, classification, epidemiology, etiology,pathophysiology, clinical features and treatment.
	Literature: required and optional
XII.	Title: Hereditary diseases and pregnancies, biochemical screening tests, invasive prenatal diagnosis
	Short description: Numerical and structural chromosomal disorders, monofactorial diseases inherited by Mendel's laws, polygenic and multifactorial diseases. Methods and objectives of prenatal diagnosis of fetal chromosomal abnormalities and malformations.
	Literature: required and optional
XIII.	Title: Rh immunization and fetal hydrops. Intrahepatic cholestasis in pregnancy
	Short description: Definition and diagnosis of disorders, specificity of fetal monitoring, clinical relevance and prevention. Fetal hydrops etiology, pathophysiology and treatment procedures. Definition of intrahepatic cholestasis, etiology, differential diagnosis, treatment and prognosis.
	Literature: required and optional
XIV.	Title: Premature labor. Post-term pregnancy
	Short description: Definition, risk factors, treatment and complications of premature labor. Post-term pregnancy- definition, clinical significance and procedures.
	Literature: required and optional
XV.	Title: Multiple pregnancy. Metabolism and nutrition in pregnancy.
	Short description: Epidemiology, classification and specificity of multiple pregnancy and the birth of twins. Importance of proper diet in pregnancy.Nutrition of overweight and underweight pregnant women.
	Literature: required and optional
XVI.	Title: Newborn

	<p>Short description: Initial care of the newborn. Perinatal asphyxia, pulmonary diseases (transitory tachypnea, meconium aspiration syndrome, hyaline membrane disease, bronchopulmonary dysplasia, pneumonia), apnea, hypoglycemia, newborn dermatitis, newborn jaundice, congenital bacterial infection.</p> <p>Literature: required and optional</p>
XVII.	<p>Title: Bleeding in the second half of pregnancy and during delivery. Blood clotting disorders in pregnancy and puerperium.</p> <p>Short description: Causes of late pregnancy bleeding (placenta previa, placental abruption, marginal sinus rupture) and during delivery (uterine rupture) and their treatment. Learn about blood clotting disorders in pregnancy and puerperia, basic mechanisms and therapeutic guidelines</p> <p>Literature: required and optional</p>
XVIII.	<p>Title: Urinary tract infections and TORCH during pregnancy. Intraamniotic infections.</p> <p>Short description: Diagnosis, treatment and prevention of urinary tract infections in pregnancy and their influence on the course and outcome of pregnancy. Definition, diagnosis, treatment and prevention of TORCH and intraamniotic infections.</p> <p>Literature: required and optional</p>
XIX.	<p>Title: The mechanism of normal labor. Fetal surveillance in late pregnancy and during labor.</p> <p>Short description: Get acquainted with theories about the beginning of delivery, physiological delivery mechanisms including birth factors. Get to know stages of labor. Introduce and be able to interpret all movements during physiological birth in cephalic position. Basic information on methods for assessing fetal well-being during pregnancy and delivery.</p> <p>Literature: required and optional</p>
XX.	<p>Title: Physiology and pathology of the third and fourth stages of labor. Labor analgesia and anesthesia.</p> <p>Short description: Third stage of labor, signs of placental separation, placental examination, fourth stage of labor, complications of third and fourth stages of labor - bleeding, uterine atony, uterus inversion, peripartum hysterectomy, maternal mortality. Physiology of transmitting pain sensations, relieving labor pain, analgesia and anesthesia during delivery and during surgery in pregnancy and delivery.</p> <p>Literature: required and optional</p>
XXI.	<p>Title: Puerperium physiology and pathology</p> <p>Short description: Physiological processes of puerperium, postpartum care, and the most important postpartum complications. Postpartum bleeding, puerperal infections- mastitis, thrombosis and thromboembolism, urinary tract infections; postpartum mental changes and psychiatric disorders - causes, diagnosis and treatment.</p> <p>Literature: required and optional</p>
XXII.	<p>Title: Pathology of labor (anomaly of position and presentation, dystocia, c/p disproportion). Obstetrics surgery.</p> <p>Short description: Pathology of labor including abnormalities of position and presentation, uterine contraction and birth canal abnormalities (small pelvis, cephalo-pelvic disproportion). Obstetrics surgery: episiotomy, vacuum extraction and forceps delivery, manual placenta removal, uterine exploration, caesarean section.</p> <p>Literature: required and optional</p>
XXIII.	<p>Title: Ovarian and fallopian tube cancer</p> <p>Short description: Risk factors, etiopathogenesis, symptoms, diagnosis and treatment. Survival, prognosis and monitoring of patients, quality of life.</p> <p>Literature: required and optional</p>
XXIV.	<p>Title: Premalignant and malignant disorders of the vulva and vagina</p> <p>Short description: Risk factors, etiopathogenesis, symptoms, diagnosis and treatment. Survival, prognosis and monitoring of patients, quality of life.</p>

	Literature: required and optional
XXV.	Title: Uterine cancer
	Short description: Risk factors, etiopathogenesis, symptoms, diagnosis and treatment. Survival, prognosis and monitoring of patients, quality of life.
	Literature: required and optional
XXVI.	Title: Premalignant and malignant disorders of the cervix
	Short description: Human papilloma virus. Classification of cervical intraepithelial neoplasia. Procedures for diagnosing and treating premalignant cervical lesions. Epidemiology, spreading pathways, symptoms, diagnosis and cancer staging. Modalities of treatment - surgical treatment, radiotherapy and chemotherapy. Survival, prognosis and monitoring of patients, quality of life. Cervical cancer in pregnancy.
	Literature: required and optional
XXVII.	Title: Abnormal (Dysfunctional) uterine bleeding
	Short description: Pathophysiology of abnormal uterine bleeding. Juvenile uterine bleeding. Diagnosis and treatment. Endometrial biopsy, endometrial ablation, Mirena and hysterectomy.
	Literature: required and optional
XXVIII.	Title: Minimally invasive and major surgical procedures in gynecology, preoperative and postoperative care. Uterine fibroids treatment.
	Short description: Get to know basic surgical principles and operating techniques in gynecology. Preoperative and postoperative care. Hysterectomy indications and techniques.
	Literature: required and optional
XXIX.	Title: Puberty and menarche. Pediatric and adolescent gynecology.
	Short description: Normal female puberty development. Congenital anomalies and abnormal pubertal development. Characteristics, symptoms, diagnostic and methods of treatment in Pediatric and Adolescent Gynecology.
	Literature: required and optional
XXX.	Title: Miscarriage and recurrent miscarriages. Trophoblastic disease. Ectopic pregnancy
	Short description: Types of miscarriages, causes, identification of risk factors, clinical features, diagnostic and therapeutic procedures. Classification of gestational trophoblastic disease and its incidence. The origin of complete and partial moles, diagnosis and treatment. Monitoring of patients after molar pregnancy. Diagnosis and classification, as well as the treatment options of gestational trophoblastic neoplasia. Clinical features of ectopic pregnancy, etiologic factors, symptoms, diagnosis and treatment.
	Literature: required and optional
XXXI.	Title: Family planning. Contraception.
	Short description: Definition and goals of family planning. Family planning methods. Natural methods. Barrier Methods. Chemical contraception. Intrauterine contraception. Hormone contraception. Urgent contraception. Permanent contraception methods.
	Literature: required and optional
XXXII.	Title: Urinary incontinence. Pelvic floor defects.
	Short description: Definition, clinical features and therapeutic possibilities of pelvic floor defects, descendens and prolapse of uterus. The basics of the miction/urination. Incontinence - types, diagnosis, treatment. Urinary tract fistulas.
	Literature: required and optional
XXXIII.	Title: Endometriosis
	Short description: Introduction to epidemiology and etiology of endometriosis, pathogenesis, histopathology and most common symptoms. Critical approach to diagnosing and classifying endometriosis. Understand the importance of endometriosis in human reproduction. Therapeutic options.
	Literature: required and optional
XXXIV.	Title: Inflammation of the lower part of the genital tract and pelvic inflammatory disease

	Short description: Introduction to the etiology of inflammation of the lower and upper part of the female genital system, pathogenesis and symptoms of the disease. Diagnostic and therapeutic approach. Understanding the term chronic pelvic inflammatory disease.
	Literature: required and optional
XXXV.	Title: Perimenopause and Postmenopause
	Short description: Definition, endocrine and clinical features of perimenopause and postmenopause. Hot wave mechanism. Osteoporosis. Cardiovascular diseases. Hormone replacement therapy, indications and contraindications.
	Literature: required and optional
XXXVI.	Title: Amenorrhea and chronic anovulation
	Short description: Definition of amenorrhea. Classification. Four levels of amenorrhoea disorders. Diagnostic algorithms of individual levels: I - uterus and vagina, II - ovarian, III - pituitary, IV - hypothalamus. Hormone tests for diagnosis of individual disorders. Principles of treatment. PCO syndrome - theories about the causes, hereditary factors, fetal programming. Symptoms and signs of PCOS. Diagnostic criteria. PCOS treatment options and their risks. Long-term PCOS health effects.
	Literature: required and optional
XXXVII.	Title: Infertility diagnosis and treatment.
	Short description: Infertility definition. Diagnostic procedure. Spermogram. Determining ovulation. Fallopian tube function testing. Examination of ovarian reserve. Principles of induction of ovulation. Micro-surgical principles of treatment of diseased oviducts. Uterine corrective surgery. Other surgical interventions affecting fertility. Procedures for medical implantation. Program for freezing, storing and storing biological material. Gamete donation program.
	Literature: required and optional