

**DESCRIPTION OF COURSE UNIT FOR DOCTORAL STUDIES
AT VILNIUS UNIVERSITY**

Scientific Area/eas, Field/ds of Science	Medical and Health Sciences (M 000): Medicine (M 001)			
Faculty, Institute, Department/Clinic	Faculty of Medicine Institute of Clinical Medicine Clinic of Obstetrics and Gynecology			
Course unit title (ECTS credits, hours)	Perinatal Medicine, Fetal Development and Pathological Conditions 9 credits (243 hours)			
Study method	Lectures	Seminars	Consultations	Self-study
Number of ECTS credits	-	1	1	7
* seminars are organized if course is chosen by 5 and more students				
Method of the assessment (in 10 point system)	Presentation and assessment of the thesis on maternal and child health. The topic of the thesis is defined with one of the consulting lecturers. The doctoral student presents the thesis during the meeting of the Clinic of Obstetrics and Gynecology or the clinical conference of the Center for Obstetrics and Gynecology of Vilnius University Hospital. The doctoral student must analyze, review, and present the latest scientific publications related to the target topic or provide an analysis of a clinical case. The report is evaluated on a 10-point scale: 10 - excellent; 9- very good; 8- well; 7 - on average; 6 - satisfactory; 5 - weakly; 4 - 1 point - unsatisfactory. The criteria to be assessed - content of the report (idea/hypothesis, clearly stated purpose, explanation of the literature search strategy, provided analysis of the clinical case, clarity of results and conclusions), technical / visual presentation (clarity of tables and figures, compliance with literature citation requirements, the text without grammatical and style errors, presentation visually appealing), presentation of the report (ability to participate in discussion, question management, oratory skills).			
PURPOSE OF THE COURSE UNIT				
The doctoral student will be able to know the organization of perinatal care in Lithuania, the principle of regionalization, the basics of perinatal medicine, perinatal health care, high perinatal risk factors, methods of evaluation of the fetal well-being during pregnancy and labour, the most important pathological fetal conditions, the most common diseases of pregnant women. The doctoral student will be able to differentiate and manage this conditions and diseases, to know the treatment of pathology, prevention, choosing appropriate pregnancy management, place, time and method of childbirth. The doctoral student will be able to know the principles of postpartum care, the principles of postpartum counselling on breastfeeding, contraception, planning of the next pregnancy.				
THE MAIN TOPICS OF COURSE UNIT				
<p><u>Perinatal medicine.</u> Organization of perinatal care in Lithuania. Perinatology centers: tasks, goals, functions. Risk factors, high and low risk pregnancy, significance. Antenatal, perinatal and postnatal periods. Baby friendly, family friendly hospital initiatives. Childbirth at home - relevance, possibilities of providing the service.</p> <p><u>Preterm birth.</u> Definition, relevance of the problem. Epidemiology of preterm birth, social, economic and medical factors. Prediction of preterm delivery, prognostic signs, possible prevention. Etiology of preterm birth. Preterm prelabor rupture of membranes (PPROM): causes, signs, management, complications, prevention. Intrauterine infection, evaluation, management, treatment options. Aims, methods, effectiveness of preterm birth treatment. Induction of preterm birth - indications, criteria, methods, management.</p>				

Causes and prognosis of prematurity. Interpretation of the causes of premature birth, their elimination, measures of prevention, their effectiveness. Family education, preparing for next pregnancy, explaining and eliminating risk factors. Multiple pregnancy. Chorionicity. Diagnosis of chorionicity, the role of ultrasound. Prognosis of multiple pregnancy, peculiarities of the management of multiple pregnancy, maternal and fetal complications, the time and method of termination of pregnancy.

Assessment of the fetus well-being during pregnancy and childbirth. Non - invasive and invasive methods. Fetal movement counting. Fetal heart auscultation, clinical value. Basic principles and technical aspects of the ultrasound examination. Ultrasound screening of pregnant women. Indications for additional ultrasound examination. Ultrasound evaluation of amniotic fluid. Oligohydramnios. Polyhydramnios. Invasive diagnostic procedures during pregnancy (chorionbiopsy, amniocentesis, cordocentesis): indications, methods, preparing for the procedure, complications, clinical value. Cardiotocography: indications, methodology, clinical significance. Evaluation of fetal cardiotocogram during pregnancy. Non-stress test. Biophysical profile: indications, methodology. The assessment of the fetoplacental circulation with continuous wave Doppler ultrasound. The physical principles of the Doppler effect. Indications for Doppler ultrasound examination during pregnancy.

Fetal diseases. Ultrasound diagnosis of fetal malformations: characteristics of neural tube, gastrointestinal and abdominal wall, kidney, heart abnormalities. The use of ultrasound in the prenatal diagnosis of fetal genetic syndromes. Prenatal diagnosis. Fetal tumors. Possibilities, indications, most common operations and procedures for fetal surgery.

Fetal Arrhythmia/Dysrhythmia: ventricular extrasystole, tachycardia, tachysistolia, atrioventricular (AV) block. Non-stress test. Biophysical profile of the fetus: indications, methodology.

Rh incompatibility during pregnancy: background, pathophysiology prevention of isoimmunization. Assessment and management of Rh isoimmunization, evaluation of fetal damage, intrauterine treatment and timing of pregnancy termination. Intrauterine blood transfusion: indications, methodology, methods, complications. Intrauterine growth restriction, relevance of the problem, possible causes, types, their causes. Diagnosis of intrauterine growth restriction, significance of ultrasound dopplerometry, management and fetal well-being assessment, treatment options, the timing for pregnancy termination, assessment of fetal well-being during labour.

The most common diseases of pregnant women. Hypertensive disorders, maternal and fetal complications, pregnancy management. Bleeding. Gestational diabetes. Intrahepatic cholestasis. Anemia. Gestational thrombocytopenia. General diseases and pregnancy.

Critical conditions in obstetrics: bleeding, eclampsia, HELLP syndrome, pulmonary embolism and deep venous thrombosis, sepsis.

Postnatal period. Postpartum assessment of the newborn. Factors influencing the condition and adaptation of the newborn. Care of the newborn, vaccination, follow up. Breastfeeding. Transitional conditions. Neonatal jaundice, differential diagnosis, treatment. Neonatal asphyxia, possible causes, perinatal CNS injury, convulsions. Resuscitation of the newborn. Neonatal sepsis, clinic, diagnosis, treatment, prognosis. Neonatal TORCH infections, diagnosis, treatment options, prevention. Premature infant: physiology, nursing, nutrition, stabilization, survival. New technologies in the diagnosis and treatment of neonatal diseases.

RECOMMENDED LITERATURE SOURCES

1. Akušerijos ir neonatologijos diagnostikos ir gydymo metodikos 2019-2020. <https://sam.lrv.lt/lt/veiklos-sritys/programos-ir-projektai/sveicarijos-paramos-programa/akuserijos-ir-neonatologijos-diagnostikos-ir-gydymo-metodikos>.
2. Williams Obstetrics. F. G. Cunningham, K. J. Leveno, J.S. Dashe, B. L. Hoffman, C. Y. Spong, B. M. Casey. 26th ed. Mc Grow Hill Education 2022. The McGraw-Hill Companies; <https://accessmedicine.mhmedical.com/book.aspx?bookID=2977>

3. Nassar, Anwar H.; Visser, Gerard H.A.; Nicholson, Wanda Kay; Ramašauskaitė, Diana; Kim, Yoon Ha; Barnea, Eytan R. FIGO statement: vaccination in pregnancy // International journal of gynecology and obstetrics: Special section: From the FIGO Safe Motherhood & Newborn Health Committee. Hoboken : Wiley. ISSN 0020-7292. eISSN 1879-3479. 2021, vol. 152, iss. 2, p. 139-143..
4. Voiniušytė, Austėja; Černiauskaitė, Miglė; Paliulytė, Virginija; Ramašauskaitė, Diana. COVID-19 ir HELLP sindromo diferencinės diagnostikos savitumai nėštumo laikotarpiu // Lietuvos akušerija ir ginekologija. Kaunas : Vitae litera. ISSN 1392-5091. 2021, t. 24, Nr. 3, p. 252-257. [DB: Index Copernicus]
5. Balčiūnienė, Greta; Kvederaite-Budrė, Greta; Gulbinienė, Violeta; Pilypienė, Ingrida; Drąsutienė, Gražina Stanislava; Ramašauskaitė, Diana. Antenatalinė chorioamnionito diagnostika // Lietuvos akušerija ir ginekologija. Kaunas : Vitae litera. ISSN 1392-5091. 2021, t. 24, Nr. 33, p. 190-194. [DB: Index Copernicus]
6. Visser GHA, Nicholson WK, Barnea ER, Ramasauskaite D, Nassar AH; FIGO Safe Motherhood, Newborn Health Committee, Fernanda Escobar M. FIGO position paper on reference charts for fetal growth and size at birth: Which one to use? Int J Gynaecol Obstet. 2021 Feb;152(2):148-151.
7. Myra H. Wyckoff et all. Neonatal life support: 2020 international consensus on cardiopulmonary resuscitation and emergency cardiovascular care science with treatment recommendations.
8. Puopolo KM, Benitz WE, Zaoutis TE; Committee on fetus and newborn; Committee on infectious diseases. Management of Neonates Born at ≥ 35 0/7 Weeks' Gestation With Suspected or Proven Early-Onset Bacterial Sepsis. Pediatrics. 2018 Dec;142(6):e20182894.
9. Puopolo KM, Benitz WE, Zaoutis TE; Committee On Fetus And Newborn; Committee On Infectious Diseases. Management of Neonates Born at ≤ 34 6/7 Weeks' Gestation With Suspected or Proven Early-Onset Bacterial Sepsis. Pediatrics. 2018 Dec;142(6):e20182896.
10. Yvonne Wu. <https://www.uptodate.com/contents/clinical-features-diagnosis-and-treatment-of-neonatal-encephalopathy> 2020.
11. Ramašauskaitė, Diana. Management of pregnancy and delivery in prenatally diagnosed congenital anomalies // Congenital anomalies: from the embryo to the neonate / edited by: Stefania Tudorache. London : IntechOpen, 2018. ISBN 9781789231144. eISBN 9781789231151. p. 469-502.
12. Barnea, Eytan R; Nicholson, Wanda; Theron, Gerhard; Ramašauskaitė, Diana; Stark, Michael; Albin, S Mark; Nassar, Anwar H. From fragmented levels of care to integrated health care: framework toward improved maternal and newborn health // International journal of gynecology and obstetrics. Hoboken : Wiley. ISSN 0020-7292. eISSN 1879-3479. 2021, vol. 152, no. 2, p. 155-164.
13. Česnaitė, Gerda; Domža, Gintautas; Ramašauskaitė, Diana; Volochovič, Jelena; Bužinskienė, Diana. Factors affecting maternal-fetal relationship = Veiksniai, darantys įtaką motinos ir vaisiaus ryšiui // Acta medica Lituanica. Vilnius : Lietuvos mokslų akademijos leidykla. ISSN 1392-0138. eISSN 2029-4174. 2019, vol. 26, no. 2, p. 118-124.
14. Donaldsson S, Drevhammar T, Li Y, Bartocci M, Rettedal SI, Lundberg F, Odelberg-Johnson P, Szczapa T, Thordarson T, Pilypiene I, Thorkelsson T, Soderstrom L, Chijenass V, Jonsson B; CORSAD Trial Investigators. Comparison of Respiratory Support After Delivery in Infants Born Before 28 Weeks' Gestational Age: The CORSAD Randomized Clinical Trial. JAMA Pediatr. 2021 Sep 1;175(9):911-918.

CONSULTING LECTURERS

1. Coordinating lecturer: Diana Ramašauskaitė (Prof. Dr.).

2. Gintautas Domža (Assist. Prof. Dr.).

3. Ingrida Pilypienė Assist. Prof. Dr.)

4. Dalia Laužikienė (Assoc. Prof. Dr.).

APPROVED:

By Council of Doctoral School of Medicine and Health Sciences at Vilnius University:
29th of September 2022

Chairperson of the Board: Prof. Janina Tutkuvienė