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| 1. | Subject | NEONATOLOGY | | | |
| 2. | Code | DA – 113 | | | |
| 3. | Study program: | Three-year professional studies for graduate obstetricians | | | |
| 4. | Conducted by | UKIM – Medical faculty Department of Pediatrics | | | |
| 5. | Degree of education (first or second cycle) | Integrated cycle | | | |
| 6. | Academic year/semester | First/I | 7. | Credits | 1.5 |
| 8. | Professor | Responsible professor: Prof. d-r Aspazija Sofijanova Head of the Department: Prof. d-r Kata Martinova *the lessons are held by all the members of the Department of Pediatrics | | | |
| 9. | Prerequisite | | | | |
| 10. | Goals | <p>The students get acquainted with the field where they will be working, interventions in obstetrical care related to care and nutrition of a healthy newborn especially in encouraging breastfeeding and its benefits for the newborn. Special attention is paid to making the students able to (gain knowledge and skills) assess the vitality of the infant after birth, monitor the condition of the newborn during the adaptation to extrauterine life and recognizing the irregularities. The students will also get acquainted with the obstetrical interventions on a vitally endangered and pre-term baby, assessing the dangers and performing intervention in case of different infant conditions and diseases.</p> <p>After passing the exam the student will be able to:</p> <ul style="list-style-type: none"> • Assess the condition and vitality of an infant after birth • Accept and give primary care to the infant • Recognize the importance of an early contact “skin to skin” and the importance of the first breastfeeding in the delivery room • Admit the infant in the nursery “rooming in” • Monitor the infant in the early postnatal period • Explain the characteristics of a healthy newborn • List the characteristics of a endangered newborn • Explain the characteristics of the adaptation of the newborn to the extrauterine life • Differentiate the adapting difficulties, predict the risk factors • Explain the breathing, bloodstream, thermoregulation adaptation and recognize the irregularities to the adaptation to the extrauterine life • Provide hygiene, bathing and taking care of the stump • Educate the mother about care and breastfeeding • Assess successful breastfeeding and recognize the irregularities • Explain and follow the rule “10 steps to successful breastfeeding” • Recognize different pathological conditions and disease symptoms in a newborn • Recognize the breathing changes in a newborn • Recognize physiological jaundice and differentiate it from the pathological jaundice, predict the development | | | |

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| | | <ul style="list-style-type: none"> • Recognize chromosomeopathies and malformations • List the characteristics of a pre-term baby and recognize the risks • Perform veinpuncture and take blood and urine samples for laboratory analysis • Keep obstetrical records |
| 11. | <p>Content summary:</p> <p>Theoretical lessons 30 lessons in the I semester:</p> | <ol style="list-style-type: none"> 1. Characteristics of the neonatal period 2. Adaptation of the newborn to the extrauterine life (monitoring the newborn in the early postnatal period) 3. First aid to a newborn (assessing vitality, early and late clamping of the umbilical cord, importance of the first contact (skin to skin, the importance of the first breastfeeding in the delivery room, prophylaxis) 4. Screening tests 5. Admitting the newborn in the nursery “rooming in” 6. Physiological characteristics of a newborn 7. Newborn’s hygiene (wrapping and bathing, skin hygiene, taking care of the stump) 8. Physiological jaundice (characteristics, occurrence) 9. Reflexes 10. Vaccination in the neonatal period 11. Breastfeeding and nutrition (benefits of breastfeeding, techniques, irregularities, helping and education the mother) 12. Newborn at risk (delivering a newborn with risks, characteristics, asphyxiation, assessing vitality) 13. Birth traumas, evolution and prognosis (brain injuries and damage, seizures, hydrocephalus, microcephaly, craniosynostosis) 14. Resuscitation of a newborn 15. Placing the newborn in an incubator (using oxygen, placing a vein catheter – infusion, parenteral feeding and therapy, taking venous blood, peripheral blood, constant monitoring) 16. Breathing problems (respiratory distress syndrome – RDS, newborn sleep apnea, meconium aspiration syndrome, transitory tachupnea, respiratory infections) 17. Chromosome abnormalities and congenital malformations 18. Characteristics of pre-term babies (appearance and functional characteristics) 19. Care characteristics of a pre-term baby, care in an incubator, oxygen therapy 20. Nutrition of a pre-term baby (enteral feeding, placing a gastrostomy tube, parenteral feeding) 21. Diseases and consequences due to pre-term birth 22. Newborn with neurological risks (early intervention) 23. Bleeding disorder in a newborn (bleeding of the newborn) 24. Anemia in the neonatal period 25. Jaundice (hemolytic disease, phototherapy, exchange transfusion) 26. Infections (Soor, conjunctivitis, infections of the stump, sepsis, meningitis, connatal infectious diseases) 27. Neonatal nephro-urology (most common pathological conditions) 28. Acute heart and circulation weakness in the neonatal period 29. Veinpuncture and taking blood and urine sample for laboratory analysis 30. Keeping obstetrical records <p>Seminars – Practical lessons: 5 lessons</p> |

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| | 1. Evaluation of a blood sample 2. Laboratory diagnosis of sepsis in a newborn (microbiologic and viral analysis) 3. Laboratory diagnosis in case of respiratory distress syndrome 4. Laboratory test in case of jaundice 5. Laboratory analysis of electrolyte and metabolic disorders (ABC evaluation) | | |
| 12. | Teaching methods: Interactive classes 30, problem-related seminars 5 lessons | | |
| 13. | Total classes: | 45 | |
| 14. | Organization | Theoretical lessons: 35 classes Learning at home: 10 classes | |
| 15. | Types of teaching activities | 15.1 | Lessons: theoretical classes 35 |
| | | 15.2 | Practical lessons |
| 16. | Other types of activities | 16.1 | Practice |
| | | 16.2 | Self-supporting practice |
| | | 16.3 | Learning at home 10 |
| 17. | Knowledge assesment | | Points |
| | 17.1 | Tests | Mid-term exam 1: points 15-25 Written form (multiple choice) Final exam: 25-40 points |
| | 17.2 | Paper/project | |
| | 17.3 | Active participation | Min. – Max. Points Theoretical lessons 2 - 5 Seminars(Practical lessons) 8 - 10 |
| 18. | Grading criterion (points/grades) | Theoretical lessons | 2-5 |
| | | Seminars (practical lessons) | 8-10 |
| | | Mid-term exam 1 | 15-25 |
| | | Oral exam | 25-40 |
| | | Total | 50-80 |
| 19. | Requirements for obtaining a signature and attending the final examination | To obtain a signature, the student must gain minimum points from visiting the theoretical lessons and the seminars. To attend the final exam, the student must pass the mid-term exams and gain minimum points. The final grade for the subject is formed according to the table for grading, and is based on the sum of the points from all the activities, mid-term exams and final exam. | |
| 20. | Language | Macedonian | |
| 21. | Method of evaluating the quality of the lessons | Students' attendance and active participation in the theoretical and practical lessons. | |
| 22. | Literature | | |
| | 22.1 | Mandatory literature | |
| | | 1. | Mary Rudolph, Tim Lee, Malcolm Leven, Pediatrics and |

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| | | Children's Health, Ars Lamina, 2011 |
| | 2. | Robert C. Taker, Robert J. McLur, Carlo L. Acerinm Pediatrics Handbook, Ars Lamina, 2014 |
| | 3. | Ljubinka Marinkovikj, Health Care in Pediatrics, Belgrade, Primal, 2007 |
| | 4. | Authorized lectures of the Department |
| | 5. | Kuzmanovska D., Grujovska S., Physical Diagnosis in Pediatrics, Medical Faculty, UKIM, 2011 |
| 22.2 | Additional literature | |
| | 1. | Elizabeta Zisovska, Pediatrics and Care – textbook for medical nurses and medical technicians, University Goce Delchev – Shtip, 2019 |
| | 2. | Sunil Sinha, Lawrence Miall, Luke Jardine, 5 th edition Essential Neonatal Medicine, Wiley-Blackwell Publishing, 2013 |
| | 3. | Kenner Carole, Altimer Leslie, Comprehensive Neonatal Nursing Care 6 th edition, Springer Publishing, 2019 |