

**DISCIPLINE SHEET****ACADEMIC YEAR****2022- 2023****1. DATA ABOUT THE STUDY PROGRAM**

1.1 Institution of higher education	UNIVERSITY OF MEDICINE AND PHARMACY CRAIOVA
1.2 Faculty	<b>MEDICINE</b>
1.3 Department	<b>8</b>
1.4 Study Domain	HEALTH
1.5 Study cycle	LICENCE
1.6 Study program/ Qualification	MEDICINE

**2. DATA ABOUT THE DISCIPLINE**

2.1. Discipline name	<b>NEONATOLOGY</b>				
2.2. Discipline code	MED6102				
2.3 The holder of course activities	Mihaela Gheonea				
2.4 The holder of seminar activities	Mihaela Gheonea, Carmen-Mirela Sirbu				
2.5. Academic degree	<b>Course:</b> Lecturer <b>Seminar activities:</b> Lecturer/ Assistant Prof.				
2.6. Employment (base norm/associate)	Base norm				
2.7. Year of study	<b>VI</b>	2.8. Semester	<b>I</b>	2.9. Course type (content) 2.10. Regime of discipline (compulsoriness)	<b>CSD</b>

**3. THE ESTIMATED TOTAL TIME (teaching hours per semester)**

3.1 Number of hours per week	<b>2</b>	From which: 3.2 course	<b>1</b>	3.3 seminary/laboratory	<b>1</b>
3.4 Total hours in curriculum	<b>28</b>	From which: 3.5 course	<b>14</b>	3.6 seminary/laboratory	<b>14</b>
Time found distribution (hours):					
Study from manual, course support, bibliography, and notes					<b>10</b>
Additional documentation in the library, specialized electronic platforms and, on the field					<b>10</b>
Training seminars / labs, homework, reports, portfolios, and essays					<b>5</b>
Tutoring					<b>5</b>
Examinations					<b>10</b>
Other activities, counselling, student scientific programs					<b>7</b>
3.7 Total hours of individual study	<b>47</b>				
3.9 Total hours per semester	<b>75</b>				
3.10 Number of credits	<b>3</b>				

**4. PREREQUISITES (where appropriate)**

4.1 curriculum	The students have to have solid background knowledge of Anatomy, Physiology, Pediatrics
4.2 competency	-

**5. CONDITIONS (where appropriate)**

5.1. of course deployment	Lecture Hall with projector / online
5.2. of seminary/ lab deployment	Neonatology departments and wards / demonstration rooms / online

**6. SPECIFIC COMPETENCES ACCRUED**

<b>PROFESSIONAL COMPETENCES</b>	<p><b>C1</b> – To identify and evaluate disorders and to establish the correct diagnosis</p> <p><b>C4</b> – To address health issues/illness from the perspective of community specifics, directly related to the social, economic and/or the cultural specificity.</p> <p><b>C5</b> – To initiate and to perform scientific research and formative activities in the area of competences</p>
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<b>TRANSVERSAL COMPETENCES</b>	<p><b>CT1. Autonomy and responsibility</b></p> <ul style="list-style-type: none"> <li>the acquisition of moral reference points, the formation of professional and civic attitudes, that will allow to the students to be fair, honest, helpful, understanding, nonconflictual, to cooperate and to be comprehensive in the face of suffering, to be available to help people, and to be interested in community development;</li> <li>to know, to respect and to contribute to the development of moral values and professional ethics;</li> <li>to learn how to recognize the problems when they arise, and provide solutions for solving them.</li> </ul> <p><b>CT2. Social interaction</b></p> <ul style="list-style-type: none"> <li>to recognize and to have respect for diversity and multiculturalism;</li> <li>to have or to learn how to develop teamwork skills;</li> <li>to communicate orally and in writing the manner of work requirements, the obtained results, to consult with the team;</li> <li>to engage themselves in voluntary activities, to know the essential problems of the community.</li> </ul> <p><b>CT3. Personal and professional development</b></p> <ul style="list-style-type: none"> <li>to commit to lifelong learning;</li> <li>to be aware of self-study as a basis of personal autonomy and professional development;</li> <li>to derive the optimum and creative potential in their own collective activities;</li> <li>to know how to use information and communication technologies.</li> </ul>
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**7. DISCIPLINE OBJECTIVES (based on the grid of specific competences acquired)**

7.1 The general objective of the discipline	<p>The goal of Neonatology is to provide the sixth-year students informational and logistical support to understand and explain the normal growth and development of the human body during the neonatal period and to study the most common and relevant disorders of these age group. A central objective is to allow the medicine student to develop into a proficient provider for the community in regards of all professional and moral aspects.</p> <p>All the activities at the discipline are performed by naturally integrating the lectures content into the practical activities at the bedside. The teaching staff provides the students with the means and the guidance necessary to achieve the abilities and the competences desired and is constantly evaluating the understanding and the motivation of the students.</p>
7.2 The specific objectives of the discipline	<p>Upon completion of the Neonatology theoretical and practical courses, students will acquire the following types of skills:</p> <p><b>COGNITIVE</b>, which will allow the student to:</p> <ul style="list-style-type: none"> <li>To assess the somatic and psychomotor characteristics of the healthy newborn, define the term and premature newborn; identify anatomical-physiological peculiarities on newborn devices and systems according to gestational age and birth weight;</li> <li>To know the nutritional needs of the newborn and apply the principles of correct nutrition during the neonatal period; promote the importance of natural nutrition, recommend the rules of feeding from birth until discharge from hospital and family insertion and to identify misfed infants and the repercussions on health;</li> <li>To provide resuscitation and perinatal intensive care for the newborn;</li> <li>To recognize cases of prematurity and low birth weight, distinguish the degrees of this pathology and infer their causes in order to correct them;</li> <li>To recognize clinical symptomatology, analyze the causes, carry out positive and differential diagnosis of various neonatal conditions;</li> <li>To acquire the skill of clinical reasoning leading to diagnosis, appropriation of treatment methods;</li> <li>To identify clinical situations of severity (newborn with birth pain, etc.);</li> <li>To recognize and manage "social" cases correctly;</li> <li>To conduct an effective anamnesis and make use of the information obtained;</li> <li>To assess and respond to the child's psychosocial needs.</li> </ul> <p><b>PRACTICAL SKILLS</b></p> <ul style="list-style-type: none"> <li>To examine the newborn, measure size and perimeters, body weight, safe for the patient;</li> <li>To palpate, percussive and perform the newborn's auscultation, including in situations detrimental to the examiner (extreme agitation);</li> <li>To properly examine the oral cavity of the newborn and identify abnormal aspects;</li> <li>To perform the neurological examination correctly;</li> <li>To perform some harvesting manoeuvres of biological products in the</li> </ul>

	<p>child;</p> <ul style="list-style-type: none"> <li>▪ To undertake basic manoeuvres to resuscitate vital functions</li> </ul> <p><b>ATTITUDES</b></p> <ul style="list-style-type: none"> <li>• To shape behavior, to establish professional attitudes to support students to be patient, cooperative, empathetic in the face of the suffering of the child and the family;</li> <li>• To be aware of his role and obligations in relation to the patient/caregivers and the rights and needs of the child;</li> <li>• To empathize in communication with caregivers and provide emotional support;</li> <li>• To achieve and develop their ability to work effectively within the medical team.</li> </ul>
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## 8. CONTENTS

8.1 Course (content units)	hours
<b>P6.C.1.</b> Introduction in Neonatology: Definitions. Neonatal Bioethics. End-of-life decision-making. Ambiguous Genitalia.	1
<b>P6.C.2.</b> The Normal Newborn	1
<b>P6.C.3.</b> Prematurity	1
<b>P6.C.4.</b> Neonatal nutrition.	1
<b>P6.C.5.</b> Temperature Regulation. Hypothermia and Excessive Heat Loss. Hyperthermia.	1
<b>P6.C.6.</b> Blood Abnormalities. ABO Incompatibility. Rh Incompatibility.	1
<b>P6.C.7.</b> Congenital Heart Disease. Common Multiple Congenital Anomaly Syndromes.	1
<b>P6.C.8.</b> Hyperbilirubinemia. Unconjugated (Indirect) Hyperbilirubinemia. Conjugated (Direct) Hyperbilirubinemia.	1
<b>P6.C.9.</b> Neonatal Sepsis. TORCH Infections.	1
<b>P6.C.10.</b> Intrauterine Growth Retardation (Small for Gestational Age Infant)	1
<b>P6.C.11.</b> Necrotizing Enterocolitis and Spontaneous Intestinal Perforation.	1
<b>P6.C.12.</b> Hydrocephalus. Intraventricular Hemorrhage. Neonatal Seizures.	1
<b>P6.C.13.</b> Perinatal Asphyxia. Bronchopulmonary Dysplasia. Hyaline Membrane Disease (Respiratory Distress Syndrome). Meconium Aspiration. Transient Tachypnea of the Newborn.	1
<b>P6.C.14.</b> Retinopathy of Prematurity.	1
<b>BIBLIOGRAFY</b>	
1. Lectures.	
2. Ghid Practic de Neonatologie Oxford ed.2 - Grenville Fox, Timothy Watts, Nicholas Hoque, Ed. Hipocrate, 2018	
3. Oxford Handbook of Neonatology (Oxford Medical Handbooks) 2-nd Ed., - Grenville Fox, Timothy Watts, Nicholas Hoque, Oxford University Press, 2017	
4. Cloherty si Stark: Ghid practic de neonatologie Ed.8, autori: E. Eichenwald, A. Stark, A. Hansen, C. Martin, S. Vladareanu, Ed. Hipocrate, 2019	
5. Cloherty and Stark's Manual of Neonatal Care, 8-th Edition, Eds.: E. Eichenwald, A. Stark, A. Hansen, C. Martin, Editura Wolters Kluwer, 2017	
8.2 Practical work (topics / themes)	hours
<b>P6.LP1.</b> Prenatal Testing. Prenatal Diagnosis. Tests of Fetal Lung Maturity.	1
<b>P6.LP2.</b> Delivery Room Management. Obstetric Anesthesia and the Neonate.	1
<b>P6.LP3.</b> Resuscitation of the Newborn – Basic CPR	1
<b>P6.LP4.</b> Resuscitation of the Newborn – Advanced CPR	1
<b>P6.LP5.</b> Assessment of Gestational Age. Classification. Methods of Determining Postnatal Gestational Age.	1
<b>P6.LP6.</b> Newborn Physical Examination.	1
<b>P6.LP7.</b> Respiratory Management. General Respiratory Support. Monitoring., Ventilatory Support and. Pharmacologic Respiratory Support. Surfactant. High-Frequency Ventilators, Techniques, and Equipment.	1
<b>P6.LP8.</b> Fluid and Electrolyte Balance and Requirements. Fluid Therapy.	1
<b>P6.LP9.</b> Temperature Regulation. Hypothermia and Excessive Heat Loss. Hyperthermia.	1
<b>P6.LP10.</b> Management of the Extremely Low Birth Weight Infant.	1
<b>P6.LP11.</b> Nutritional Management. Growth Assessment of the Neonate. Nutritional Requirements in the Neonate. Principles of Infant Feeding. Breast-feeding. Total Parenteral Nutrition. Caloric Calculations.	1
<b>P6.LP12.</b> Neonatal Radiology. Common Radiologic Techniques, Clinical Case Examples. Studies for Neurologic Evaluation. Neuroimaging. Electrographic Studies.	1
<b>P6.LP13.</b> Infant Transport.	1
<b>P6.LP14.</b> Follow-up of High-Risk Newborns.	1

<b>BIBLIOGRAFY</b>	
1. Discipline protocols.	
2. Ghid Practic de Neonatologie Oxford ed.2 - Grenville Fox, Timothy Watts, Nicholas Hoque, Ed. Hipocrate, 2018	
3. Oxford Handbook of Neonatology (Oxford Medical Handbooks) 2-nd Ed., - Grenville Fox, Timothy Watts, Nicholas Hoque, Oxford University Press, 2017	
4. Cloherty si Stark: Ghid practic de neonatologie Ed.8, autori: E. Eichenwald, A. Stark, A. Hansen, C. Martin, S. Vladareanu, Ed. Hipocrate, 2019	
5. Cloherty and Stark's Manual of Neonatal Care, 8-th Edition, Eds.: E. Eichenwald, A. Stark, A. Hansen, C. Martin, Editura Wolters Kluwer, 2017	

**9. CORROBORATING THE DISCIPLINE CONTENT WITH THE EXPECTATIONS OF EPISTEMIC COMMUNITY REPRESENTATIVES, PROFESSIONAL ASSOCIATIONS AND EMPLOYEE REPRESENTATIVES RELATING TO THIS PROGRAM**

- Neonatology is a fundamental clinical discipline, mandatory for a student in his preparation for becoming a doctor.
- The knowledges, practical skills and the attitudes learned on this discipline are offering the basics of the pathological processes that will be studied in other disciplines and it is the basis for comprehension and understanding and learning of every medical attitude regarding the prevention, diagnosis, curative and the recovery processes.

**10. MHETODOLOGICAL LANDMARKS**

Forms of activity	Techniques of teaching / learning, materials, resources: lecture, interactive group work, learning based problems / projects audio-video recordings, etc.
Cours	In case of special situations (alert states, emergency states, and other types of situations that limit the physical presence of people) the activity can be performed online using computer platforms endorsed by the faculty / university. The online education process will be adapted accordingly to ensure the fulfilment of all the objectives set out in the discipline sheet.
Practical work	The following combined methods are used: lecture, debate, and problematization.
Self-study	For the online version: lecture, debate, problematization based on materials provided in advance.

**11. RECOVERY PROGRAM**

Absences recoveries	No. absences that can recover	Location of deployment	Period	In charge	Scheduling of topics
	3	Neonatology wards / online	The last week of the semester	Teaching Assistant	According to the internal schedule
Schedule consultations / Students' Scientific Program	2 hours /week	Neonatology wards / online	Weekly	All teaching assistants	The theme of the week.
Program for students poorly trained	2 hours/ week	Neonatology wards / online	Weekly	All teaching assistants	According to the situation of each student Theme from that specific week

**12. ASSESMENT**

Activity	Types of assesment	Methodos of evaluation	Percentage from final grade
Lecture	Formative assesment through essays, projects and surveys during the semester Summative assesment during the exam	Multiple Choice Questions Answering System (MCQ)/MCQ.	60%
Practical work	Formative assesment through Multiple Choice Questions Answering System (MCQ) or/and descriptive, projects, survey during the semester. Periodic assesment during the semester Summative assesment during the exam	Multiple Choice Questions Answering System (MCQ) simultaneously with the one from the course /.	20%
Periodic assesment			10%

<b>Assesment of individual activity</b>			10%
<b>Minimum performance standard</b>	At least 50% for each component of the evaluation		
<b>13. GUIDANCE AND COUNSELLING PROGRAMS</b>			
<b>Professional guidance and counselling programs (2 hours/monthly)</b>			
<b>Scheduling the hours</b>	<b>Location</b>	<b>In charge</b>	
Every last Friday of the month	Neonatology wards /online	Lecture holders	

Endorsement date in the department: 04.09.2022

Department Director,  
Prof. Nicolae CERNEA

Study program coordinator,  
Prof. Marius Eugen CIUREA

Discipline holder,  
Lecturer Mihaela GHEONEA