**Ministry of Health of Ukraine**

**Kharkiv National Medical University**

**III Medical Faculty**

**Department of Pediatrics №1 and Neonatology**

**Educational program for training specialists of the second (master's)**

**level of higher education training 22 "Healthсare"**

**in specialty 222 "Medicine"**

**Syllabus for**

**CRITICAL CONDITIONS IN NEONATOLOGY**

|  |  |  |
| --- | --- | --- |
| The syllabus of the discipline was approved at the meeting of the Department of Pediatric #1 and Neonatology  Protocol from  “\_\_\_” \_\_\_\_\_\_\_\_ 2020 № \_\_\_\_  Head of Department  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ prof. Gonchar MO  (signature) (surname and initials)  “\_\_\_” \_\_\_\_\_\_\_\_ 2020  **Kharkiv – 2020** |  | Approved by the methodical commission of KhNMU on problems of professional training pediatric profile  Protocol from  “\_\_\_\_\_” \_\_\_\_\_\_\_\_\_ 20 \_\_\_\_\_ №  Chairman of the methodical commission of KhNMU on problems of professional training pediatric profile  \_\_\_\_\_\_\_\_\_\_\_\_ prof. Gonchar MO  (signature) (surname and initials)  “\_\_\_” \_\_\_\_\_\_\_\_ 2020 |

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**Direct consultations****:** time and location according to department schedule.

**On-line consultations**: Moodle, Zoom, Google Meet (schedule and location by prior agreement with a lecturer)

**Location:** Municipal Non-profit Organization of the Kharkiv Regional Council «Regional Clinical Hospital» Regional Perinatal Centrer

**General information**

|  |  |  |
| --- | --- | --- |
| Name of indicators | Field of knowledge, direction of training, educational and qualification level | Characteristics of the discipline |
| Full-time studies |
| Number of credits - 3 | Educational program for training specialists of the second (master's) level of higher education training 22 "Healthсare"  in specialty 222 "Medicine" | Normative |
| Number of hours– 90 | speciality:  222 «Medicine» | **Year of study:** |
| 6th |
| **Semester** |
| XI, XII |
| **Lectures** |
| Hours for full-time education form of study:  classrooms - 30  independent student work  - 60 | Education level:  Specialist of the second (master's) level | 0 h. |
| **Practical, seminars** |
| 30 h. |
| **Laboratory** |
| 0 h. |
| **Independent work** |
| 60h. |
| **Individual tasks:** |
| Type of control: credit |

Educational program of higher education of Ukraine, second (master's) level, educational qualification, assigned - master's degree, field of knowledge - 22 Healthcare, specialty 222 "Medicine is based on the Law of Ukraine "« Pro vyshchu osvitu (About higher education)» and the resolution of the Cabinet of Ministers of Ukraine 01.02.2017 № 53 «Pro vnesennya zmin do postanov y Kabinetu Ministriv Ukrayiny (On Amendments to the Resolution of the Cabinet of Ministers of Ukraine) 29.04.2015 р. № 266» ", in accordance with the order of the Ministry of Education and Science of Ukraine dated 01.06.2016 № 600 «Pro zatverdzhennya ta vvedennya v diyu Metodychnykh rekomendatsiy shchodo rozroblennya standartiv vyshchoyi osvity (On approval and introduction of methodological recommendations for the development of higher education standards)».

The program of the course determines the prerequisites for accessing objective of the program, amount of ECTS credits, a list of general and special (professional) competencies, mandatory and variable content of the discipline, learning results and quality control of the study.

The course is open for qualified students of any race, nationality, ethnicity, gender, age, religion, sexual orientation, veteran status or marital status, with any privileges and people with special needs.

Links to video annotation of the discipline (granting), etc.

The page of discipline in the system Moodle (granting)

**Objective:** to provide training of highly qualified specialists in the field of pediatrics, namely neonatology, capable to solve complex problems of diagnosis and treatment of newborns with different ages of gestation.

**The main objectives** of the course are the acquisition general and professional competencies of the educational and professional program "Medicine" of the second level of higher education, specialty 222 Medicine:

• Integrated competencies:

ability to solve typical and complex specialized tasks and practical problems in professional activities in the field of health care, or in the learning process, which involves research and/or innovation and is characterized by complex and uncertain conditions and requirements.

• General competencies:

ability for abstract thinking, analysis and synthesis, ability to learn and to be trained; the ability to apply knowledge in practical situations; knowledge and understanding of the subject area and understanding of professional activities; adaptability and action in a new situation; the ability to make informed decisions; work in a team; interpersonal interaction skills; ability to communicate effectively in certain language with using both personal skills and appropriate technology; to be certain and responsible for any activities and take into account all social aspects.

• Professional competencies in pediatrics:

Survey skills; ability to identify and evaluate alist of necessary laboratory and instrumental investigations; ability to establish a preliminary and clinical diagnosis of the disease; ability to determine the necessary regimens of work, rest and nutrition; the ability to define causes and principles of treatment of disease; ability to diagnose and provide an intensive care in emergency conditions; medical manipulation skills; the ability to plan and implement sanitary, preventive and anti-epidemic events, including infectious diseases; the ability to define tactics for the management of persons subject to dispensary supervision; ability to makemedical records.

The study of this discipline promotes development of the following soft skills:

• Communicability (implemented through: workingin groups with brainstorming during the analysis of clinical cases, presenting results of independent work to the group),

• teamwork (implemented through: workingin groups with brainstorming during the analysis of clinical cases),

• conflict management (implemented through: business games),

• time management (implemented through: self-organization during working in groups and individually),

• leadership skills (implemented through: presenting the results of individual work for the group).

**Discipline status:** the variable discipline - available for study in different forms: traditional classroom learning with elements of distance learning, which use savailable interactive information technology (ZOOM, Moodle), face-to-face and distance counseling.

**Methods of training.** Clinical (curation of children with somatic diseases), phantoms technologies, digital information (presentations, video, methodical recommendations, lectures), scientific (participation in scientific researches in the discipline), control (tests, situational tasks, assessment of practical skills defense a case history).

**Recommended literature**

1. NelsonTextbookofPediatrics 21th Edition. Robert M. Kliegman, JosephSt. Geme. Publisher: Elsevier. 2019. P. 4112.
2. Recommendations for V-VI students, Higher medical education institutions of the III-IV accreditation levels studying in English «Neonatology» KhNMU, 2012.
3. Pediatrics : textbook / O. V. Tiazhka [etal.] ; ed. O. Tiazhka. - 2nd ed., reprint. NovaKnyha, 2016.
4. MicormedeNeoFax. Essentials 2014. 869 р.
5. Neonatal jaundice. December 2017. MN17.7-V7-R22. Queensland Clinical Guidelines Health professionals in Queensland public and private maternity and neonatal services. Review date: December 2022
6. Calhoun AD (2018). Postnatal diagnosis and management of hemolytic disease of the fetus and newborn. In Kim SM (Ed.), UpToDate. Retrieved from March. 1, 2018.
7. NeonatalGuidelines 2017-19.<http://www.networks.nhs.uk/nhs->

networks/staffordshire-shropshire-and-black-countrynewborn/neonatal-guidelines

**Prerequisites and co-requisites of the discipline**

The discipline "Critical conditions in neonatology" is related to the disciplines of medical biology, normal and pathological anatomy, normal and pathological physiology, biochemistry, microbiology, propaedeutics of pediatrics, medical genetics, pharmacology and prescription, epidemiology and principles of evidence-based medicine, emergency care, emergency and also have practical skills in caring for pediatric patients and their management in outpatient and inpatient settings.

**Post-requisites of the discipline.**

The main provisions of the training discipline should be applied in the study of related disciplines during the 6 year of study, is the basis for preparing for the licensed exam, preparing for study in higher education institutions at the programs of the third educational and scientific level.

**Learning outcomes.**

This course focuses on the main issues of neonatology. The program covers topics related to the condition of the fetus, the impact of childbirth on the newborn, newborn care and critical conditions that may occur in the neonatal period. Clinical experience can be gained during practical classes of the course in Regional Perinatal Center, according to the schedule. During the course, students have the opportunity to participate in the supervision and demonstration of both healthy newborns and infants with various pathologies. That is, the course covers the main both practical and theoretical aspects of the future family doctor, pediatrician or neonatologist.

**Curriculum of the discipline.**

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CRITICAL CONDITIONS IN NEONATOLOGY**  **(90 hours) 3 credits** | | | |
| **Topics of practical classes (30 hours)** | | | |
| 1 | Topical issues of intensive care of newborns of different ages of gestation | 5 | |
| 2 | Differential diagnosis of cardiomegaly in newborns. Diagnosis and management. | 5 | |
| 3 | Pulmonary hypertension in newborns. Modern approach to diagnosis, monitoring, therapeutic tactics. | 5 | |
| 4 | Differential diagnosis of jaundice in newborns. Modern standards of diagnostics and management. |  | |
| 5 | Neonatal sepsis. International perspective on the approach to diagnosis and treatment. | 5 | |
| 6 | Socio-pharmaceutical aspects of drugs in neonatology. Test. | 5 | |
| **Total** |  | **30** | |
| **Independent works (60 hours)** | | | |
| 1 | Modern algorithms of extended neonatal screening | |  |
| 1 | Intrauterine developmental delay syndrome – antenatal and postnatal aspects. | | 5 |
| 3 | Modern management of premature infants | | 5 |
| 4 | Differential diagnosis of functional and organic heart murmurs in newborns. Critical congenital heart disease. Fetal communication in newborns | |  |
| 5 | Correction of anemia in newborns and young children. Differential diagnosis and prevention of bleeding in newborns according to European recommendations. | |  |
| 6 | Differential diagnosis of clinical and subclinical seizures of newborns. | | 5 |
| 7 | Dynamic observation of children from perinatal risk groups. | | 5 |
| 8 | Modern approachest of the organization of nutrition of premature infants | | 5 |
| 9 | Congenital an dearly postnatal infection of the fetus and newborn. Diagnosis and management | |  |
| 10 | European standard of parenteral nutrition of newborns | | 5 |
| 11 | EFONI: European standards for palliative care for newborns | | 5 |
| 12 | Follow-up observation of newborns. Problems, achievements, priorities | | 5 |
| **Total** |  | | **60** |

**The politics and values of discipline**.

In order to successfully complete the relevant course, it is necessary to attend practical classes regularly; to have theoretical preparation for practical classes; not to be late and not to miss classes; perform all necessary tasks and work actively during each lesson; be able to work in a group; contact the curators of the course on various issues on the subject of classes and receive it when you need it.

Students can discuss different tasks, but their performance is strictly individual. You are not allowed to write off, use any kind of software, tips, use a mobile phone, tablet or other electronic gadgets during classes for purposes other than the learning process. Students are not allowed to be late for practical classes.

Visiting patients during the curation in the hospital is possible, provided that students have the appropriate uniform, a health book with a note about the timely medical examination.

Students with special needs can meet with the teacher or warn him before the start of classes, it can be done by the head of the group on the students request. If you have any questions, please contact the teacher.

Students' participation in research and conferences on this topic is encouraged. All students of KhNMU are protected by the Regulations on prevention and settlement of Cases Related to Sexual Harassment and Discrimination at Kharkiv National Medical University, designed to determine an effective mechanism for resolving conflict situations related to discrimination and sexual harassment. on the basis of the following regulations of Ukraine: Constitution of Ukraine; Law of Ukraine "On Education"; Law of Ukraine "On Higher Education"; Law of Ukraine "On Principles of Prevention and Counteraction of Discrimination in Ukraine"; Law of Ukraine "On Ensuring Equal Rights and Opportunities for Women and Men"; Convention for the Protection of Human Rights and Fundamental Freedoms; Convention for the Suppression of Discrimination in Education; Convention on the Elimination of All Forms of Discrimination against Women; General Recommendation № 25 to Article 4, paragraph 1, of the Convention on the Elimination of All Forms of Discrimination against Women, General Comment № 16 (2005) "Equal rights for men and women to use economic, social and cultural rights" (Article 3 of the International Covenant on Economic, Social and Cultural Rights; Committee on Economic, Social and Cultural Rights of the United Nations); education in the spirit of respect for human rights and fundamental freedoms (UNESCO), the Concept of the State Social Program for Equal Rights and Opportunities for Women and Men until 2021. Kharkiv National Medical University ensures education and work, that is free from discrimination, sexual harassment, intimidation or exploitation. The University admits the importance of confidentiality. All persons, responsible for the implementation of this policy, (staff of deans' offices, faculties, institutes and the Center of Gender Education, members of the student government and ethics committee, vice-rector for research and teaching) are confidential, regarding those, who report or accuse of discrimination. or sexual harassment (except where the law requires disclosure and / or when disclosure by the University is necessary to protect the safety of others).

KhNMU creates a space of equal opportunities, free from discrimination of any national, racial or ethnic origin, sex, age, disability, religion, sexual orientation, gender, or marital status. All rights, privileges, programs and activities, granted to students or staff of the University, apply to anybody, without exception, in case they are properly qualified. The anti-discrimination policy and the policy of counteracting sexual harassment of KhNMU are confirmed by the Codex of Corporate Ethics and the Charter of KhNMU.

The rules of behavior in University and on classes

It is important for students to follow the rules of good behavior at the university. These rules are common to all, they also apply to all teachers and staff and are not fundamentally different from the generally accepted norms.

During classes it is allowed:

- leave the audience for a short time if necessary and with the permission of the teacher;

- drink soft drinks;

- take photos of presentation slides;

- take an active part in the class

Forbidden:

- eat (except for persons whose special medical condition requires another - in this case, medical confirmation is required);

- smoking, drinking alcohol and even low-alcohol beverages or drugs;

* - use obscene language or use words that offend the honor and dignity of colleagues and faculty;
* - gambling;

- to damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);

- shouting, shouting or listening to loud music in classrooms and even in corridors during classes.

**Plagiarism and academic integrity**

The Department of Pediatric №1 and Neonatology do not tolerate any form of the plagiarism. Students are expected to constantly raise their awareness on the academic writing. The first lessons will provide information on what to consider plagiarism and how to properly conduct research and scientific research.

**The procedure of informing about changes in the syllabus**: the necessary changes in the syllabus are approved at the methodological commission of KhNMU on the problems of professional training of the pediatric profile and are published on the website of Kharkiv National Medical University, the website of the Department of Pediatrics No. 1 and Neonatology of KhNMU.

**Policy of learningactivities assessment**

**Assessment of current learning activities (CLA).**Teachers make sure that every student received the necessary competence in the [province](https://www.multitran.com/m.exe?s=province&l1=1&l2=2) included in the topics of practical classes. Assimilation of the topic (current control) is controlled in a practical lesson according to the specific goals. The following tools are used to assess the level of preparation of students: tests, solving situational problems, interpretation and evaluation of laboratory tests, methods of prescribing therapy, monitoring the acquisition of practical skills.

When assessing the mastery of each topic of the discipline the student is graded according to the traditional 4-point system: "excellent", "good", "satisfactory" or "unsatisfactory".

**Assessment of the discipline.** The final lesson (FL) is conducted in accordance with the program of academic discipline during the semester on schedule, during classes. Assessment of the discipline is given to the student at the last (final) lesson. The final score for the current learning activity (CLA) and the final lesson (FL) is defined as the arithmetic mean of the traditional grades for each class and FL, rounded to 2 decimal places and listed in a multi-point scale according to the standard table 1 and «Instructions of assessment of current student’s learning activities» or recalculation average grades of CLA into score according to the ECTC, which teacher can get automatically using electronic journal of [Automated Control System](https://www.multitran.com/m.exe?s=automated+control+system&l1=1&l2=2) (ACS).Student should get minimum - 120 points, maximum - 200 points during the current learning activities.

**Assessment of students' independent work**

Assimilation of topics that are submitted only for independent work is checked during the current learning activities of topic on conformable classes.

**Assessment of individual student tasks (encouragement)** is carried out under the conditions of the teacher's tasks (report of the abstract in a practical lesson, report with a presentation in a practical lesson, report at scientific and practical conferences of the department, university, writing abstracts, articles, participation in the All-Ukrainian оlympiads). Points (not more than 10) are added as incentive additional points to the final score for current learning activities. The total amount of points for the current educational activity may not exceed 200 points.

Student should get minimum - 120 points, maximum - 200 points during the current learning activities.

After graduating from the discipline the student receives a credit.

**Recalculation of the average grade for the current activity into a multi-point scale**

Assessment of current learning activities (CLA).Recalculation of the average grade for current activities in a multi-point scale is carried according to the«Instructions of assessment of current student’s learning activities».

Assessment of the discipline.The final score for the current learning activity (CLA) and the final lesson (FL) is defined as the arithmetic mean of the traditional grades for each class and FL, rounded to 2 decimal places and listed in a multi-point scale according to the standard table 1.

Assessment of individual student tasks is carried out by the teacher:the abstract report at the practical lesson 0-2 points; report with presentation at the practical lesson 0-3 points,report at scientific and practical conferences of the department, university, writing theses, articles 0-5 points; participation in the All-Ukrainian оlympiads - for each activity 5 - 10 points (a total of not more than 10 points), which can be added as supplementaryencouraging points to the final score for current learning activities, calculated using Table 2 and are part of the assessment of the discipline.

Table 1

**Recalculation of the average grade for the current activity into a multi-point scale**

**(for disciplines completed by the credit)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 4-point scale | 200-point scale |  | 4-point scale | 200-point scale |  | 4-point scale | 200-point scale |
| 5 | 200 | 4.22-4,23 | 169 | 3.45-3,46 | 138 |
| 4.97-4,99 | 199 | 4.19-4,21 | 168 | 3.42-3,44 | 137 |
| 4.95-4,96 | 198 | 4.17-4,18 | 167 | 3.4-3,41 | 136 |
| 4.92-4,94 | 197 | 4.14-4,16 | 166 | 3.37-3,39 | 135 |
| 4.9-4,91 | 196 | 4.12-4,13 | 165 | 3.35-3,36 | 134 |
| 4.87-4,89 | 195 | 4.09-4,11 | 164 | 3.32-3,34 | 133 |
| 4.85-4,86 | 194 | 4.07-4,08 | 163 | 3.3-3,31 | 132 |
| 4.82-4,84 | 193 | 4.04-4,06 | 162 | 3.27-3,29 | 131 |
| 4.8-4,81 | 192 | 4.02-4,03 | 161 | 3.25-3,26 | 130 |
| 4.77-4,79 | 191 | 3.99-4,01 | 160 | 3.22-3,24 | 129 |
| 4.75-4,76 | 190 | 3.97-3,98 | 159 | 3.2-3,21 | 128 |
| 4.72-4,74 | 189 | 3.94-3,96 | 158 | 3.17-3,19 | 127 |
| 4.7-4,71 | 188 | 3.92-3,93 | 157 | 3.15-3,16 | 126 |
| 4.67-4,69 | 187 | 3.89-3,91 | 156 | 3.12-3,14 | 125 |
| 4.65-4,66 | 186 | 3.87-3,88 | 155 | 3.1-3,11 | 124 |
| 4.62-4,64 | 185 | 3.84-3,86 | 154 | 3.07-3,09 | 123 |
| 4.6-4,61 | 184 | 3.82-3,83 | 153 | 3.05-3,06 | 122 |
| 4.57-4,59 | 183 | 3.79-3,81 | 152 | 3.02-3,04 | 121 |
| 4.54-4,56 | 182 | 3.77-3,78 | 151 | 3-3,01 | 120 |
| 4.52-4,53 | 181 | 3.74-3,76 | 150 | Less than3 | Insufficient |
| 4.5-4,51 | 180 | 3.72-3,73 | 149 |  |  |
| 4.47-4,49 | 179 | 3.7-3,71 | 148 |
| 4.45-4,46 | 178 | 3.67-3,69 | 147 |  |  |
| 4.42-4,44 | 177 | 3.65-3,66 | 146 |  |
| 4.4-4,41 | 176 | 3.62-3,64 | 145 |  |  |
| 4.37-4,39 | 175 | 3.6-3,61 | 144 |  |  |
| 4.35-4,36 | 174 | 3.57-3,59 | 143 |  |  |
| 4.32-4,34 | 173 | 3.55-3,56 | 142 |  |  |
| 4.3-4,31 | 172 | 3.52-3,54 | 141 |  |  |
| 4,27-4,29 | 171 | 3.5-3,51 | 140 |  |  |
| 4.24-4,26 | 170 | 3.47-3,49 | 139 |  |  |

Head of the Department of Pediatrics No. 1 and

neonatology, MD, PhD, Professor Gonchar M.O.