

National Pirogov Memorial Medical University, Vinnytsya

"APPROVE"

Academic Rector of HEI

Viktoriiia PETRUSHENKO

"31" august 2023 y.

"AGREED "

Head of the Department Orthopedics
and Traumatology

professor of HEI Volodymyr FISCHENKO

"29" august 2023 year

SYLLABUS
of academic discipline
Traumatology and Orthopedics

Specialty	222 Medicine
Educational level	the second (master's) level
Educational programme	For example, EPPDentistry, 2022
Academic year	2023-2024
Department	Orthopedics and Traumatology
Lecturer (if lectures are given)	PhD A.V. Makogonchuk
Contact information	<i>traumatology@vnmu.edu.ua, street Kyivska, 68</i>
Syllabus compiler	Assistant I.G.Kyryshchuk

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1. Status and structure of the discipline

Discipline status	Compulsory
Discipline code in EPP/ discipline place in EPP	CC 50, discipline of professional training
Course / semester	<i>Eg, 5rd year (IX-X semester)</i>
The amount of discipline (the total number of hours/number of credits ECTS)	<i>Eg. 90 hours/3 credits ECTS</i>
Number of content modules	<i>Eg, 3 modules</i>
The structure of the discipline	Lectures - 10 hours Practical classes 36 hours Independent work 44 hours
Language of study	English
Form of study	Full – time (during quarantine limitation - remote learning)

2. Description of the discipline

Short annotation of the course, relevance. In the general system of medical training, traumatology and orthopedics is the one of the surgical disciplines. The main task of the course of traumatology and orthopedics is to teach students the methods of examination of the patient, diagnosis and treatment of the most common traumatic injuries, orthopedic diseases, organizational measures to prevent injuries, labor expertise. During the analysis of traumatic injuries and diseases, the issues of pathogenesis, clinical picture, diagnosis, treatment, prevention, medical-labor examination, medical, social and occupational rehabilitation should be covered.

Prerequisites. To successfully master the discipline the student needs knowledge gained in the process of studying disciplines from the cycle of humanities, fundamental and professional: Latin and medical terminology, human anatomy, histology, cytology and embryology, physiology, pathomorphology, pathophysiology, propaedeutics of internal medicine, propaedeutics of pediatrics, radiology.

The purpose of the course and its significance for professional activities. Formation of practical skills of diagnosis and treatment of patients with injuries and diseases of the musculoskeletal system.

Postrequisites. In the process of studying the discipline, knowledge is acquired necessary for successful mastering of professional disciplines, namely: surgery, military surgery, pediatric surgery, neurosurgery, anaesthesiology and intensive care, where surgical treatments are used, which integrates teaching with these disciplines and skills of applying knowledge in the process of further study and professional activity.

3. Learning outcomes.

Learning outcomes for the discipline:

According to the requirements for the second (master's) level of higher education and the educational-professional program "Medicine", students must:

Know:

1. Define the concept of "traumatology and orthopedics", know the historical stages of specialty development, orthopedic schools of Ukraine.
2. Master the principles of classification of congenital pathology of the apparatus of support and movement.
3. Master the principles of early diagnosis of congenital pathology of the apparatus of support and movement.

4. Master the main stages of treatment of congenital pathology of the apparatus of support and movement, depending on the age of the child.
5. Know the methods of treatment of congenital pathology of the apparatus of support and movement in outpatient and inpatient settings.
6. Master the principles of prevention of congenital orthopedic pathology of the apparatus of support and movement.
7. Know the mechanism of damage to the spine, bones and joints of the girdle, upper and lower extremities.
8. Master the principles of classification of injuries of the spine, bones, joints, belts, upper and lower extremities.
9. Master the principles of diagnosis of injuries of the spine, bones and joints of the girdle, upper and lower extremities.
10. Know the algorithm of conservative and surgical treatment of injuries of the spine, bones and joints of the girdle, upper and lower extremities.
11. Master the system of prevention of complications of injuries of the spine, bones and joints of the belts, upper and lower extremities.
12. Conduct examinations of orthopedic patients, formulate a preliminary and make a differential diagnosis of destructive-dystrophic and inflammatory lesions of the musculoskeletal system.
13. Know modern ideas about the etiology and pathogenesis of osteochondrosis and osteoarthritis.
14. Master the system of diagnosis, prevention, rehabilitation of patients with osteochondrosis and osteoarthritis.
15. Know about the etiology and pathogenesis of scoliotic disease, classification of scoliotic disease and the clinic of different degrees of scoliosis, methods of conservative and surgical treatment of scoliosis and indications for them.
16. Know the schemes of clinical and laboratory diagnosis and treatment of inflammatory and tumor lesions of bones and joints.
17. Know about the etiology and pathogenesis of static foot deformities, classification and clinic of static foot deformities, methods of conservative and surgical treatment and indications for them.
18. Master the classification of tumors of cartilage and bone origin, their clinical and radiological signs, methods of treatment.

4. Content and logistic of the discipline

Module 1	8,9 semester 90 hours / 3 credits	Lectures № 1-5 Practical classes № 1-18 Topics for self- study № 1-15
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The course includes 18 topics, which are divided into 3 thematic modules.

Module 1

Thematic modules 1. General issues of traumatology.

Topic 1. Introduction to Traumatology and Orthopaedics. Examination of traumatological and orthopaedic patients.

Topic 2. Injuries of ligaments, tendons and muscles. Traumatic dislocations.

Topic 3. Traumatic disease. Polytrauma. Modern principles of cure of dislocations.

Topic 4. Situational task and writing a medical history according to the task.

Topic 5. Amputation of extremities. Rehabilitations and prosthetics of people with defects of extremities.

Topic 6. Cure of traumatological and orthopaedic patients in ambulatory conditions.

Thematic modules 2. Injury to bones and joints.

Topic 7. Injuries of upper extremities. Injuries of shoulders.

Topic 8. Injuries of forearm and hand.

Topic 9.Injuries of spine. Injuries of pelvic.

Topic 10.Injuries of thigh-bone and knee.

Topic 11.Injuries of shin and foot.

Thematic modules3. Destructive - dystrophic, inflammatory and tumor diseases of bones and joints.

Topic 12.Destructive-dystrophic diseases of spine. Destructive-dystrophic diseases of joints.

Topic 13.Congenital deformations of spine (torticollis, Klippel-Feyl's disease, Grisel's disease, scoliosis, etc.)

Topic 14.Congenital deformation of thigh-bone, syndactilia, clubfoot.

Topic 15.Static deformations of foot.

Topic 16.Tumours of bones and joints.

Topic 17.Summary.

The topics of the lecture course reveal the problematic issues of the relevant sections of the discipline.

Practical classes provide a theoretical justification of the main issues of the topic and the acquisition of the following practical skills:

1. Examine patients with injuries and diseases of the musculoskeletal system, formulate a preliminary diagnosis and examination and treatment plan.
2. Perform a temporary stop of external bleeding.
3. Perform anaesthesia of the fracture site of the long bone diaphysis.
4. Provide transport immobilization with standard tires.
5. Perform therapeutic immobilization with simple plaster bandages (distal upper and lower extremities).
6. Assess the condition of the limb in a plaster cast.
7. Apply and remove the plaster bandage.

The student's independent work provides preparation for practical classes and intermediate tests, study of topics for independent extracurricular work, writing essays, preparation of presentations, tables. The control of mastering the topics of independent extracurricular work is carried out at the intermediate control classes and the final control of the discipline.

Individual work includes the study of scientific literature, preparation of reviews on the topics provided for presentation at the meetings of the student scientific circle, the implementation of scientific and practical researches, participation in specialized competitions, scientific and practical conferences and organization of students' research works.

Thematic plans of lectures, calendar plans of practical classes, thematic plan of independent extracurricular work, volume and directions of individual work are published on the website of the department.

The route for obtaining materials: Department Orthopaedics and Traumatology/ for students / Full-time education/ Medicine /5course /Educational materials/ or through the link [https://www.vnmu.edu.ua/en/departamentOrthopedics and Traumatology/](https://www.vnmu.edu.ua/en/departamentOrthopedics%20and%20Traumatology/). Access to the materials is carried out through the student's corporate account s000XXX@vnmu.edu.ua.

5. Forms and methods of monitoring academic performance

Current control in practical studies	Current control is carried out at each practical lesson in accordance with the specific objectives of each topic. Methods: a) individual oral interviews; b) solving typical situational problems; c) interpretation and evaluation of laboratory and
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	instrumental results; d) control of practical skills during the patient examination. e) test tasks with the choice of correct answers.
Control of mastering the thematic section of the discipline at intermediate control lessons	Methods: oral or written survey, electronic testing, situational problem solving, control of practical skills
Final semester control (credit) at the end of the 9 semester	According to the Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link https://www.vnmu.edu.ua/en/general-regulations)
Final control of the discipline - <i>differential credit</i>	Methods: protection of the educational history of the disease, individual oral interviews. (according to the regulations on the organization of the educational process in National Pirogov Memorial Medical University, Vinnytsya link: https://www.vnmu.edu.ua/en/general-information)
Learning success diagnostic tools	Theoretical questions, tests, clinically-oriented situational tasks, interpretation and evaluation of clinical trials, description of Ro - gram, demonstration of practical skills in the method of examination of patients, methods of anaesthesia, bandaging and transport immobilization

6. Assessment criteria

Knowledge assessment is carried out in accordance with the Regulations of the Academic process in National Pirogov Memorial Medical University, Vinnytsya
(link <https://www.vnmu.edu.ua/en/general-information>)

Continuous assessment	On a four point system of traditional assessments: 5 «excellent», 4 «good», 3 «satisfactory», 2 «unsatisfactory»
Midpoint separation assessment	On a four-point system of traditional assessments
Control of practical skills	According to the four-point system of traditional assessments
Pass-fail exam	On a 200-point scale (the arithmetic average grade for the semester is converted into points) Credited: 120 to 200 points Not credited: less than 120 points (See Grading Scale)
Final control of the discipline	<i>Sum of points for protection of the educational history of the disease (20-40 points) and individual oral interviews (30-40 points)</i> Exam grade: 71-80 points - "excellent" 61-70 points - "good" 50-60 points - "satisfactory" Less than 50 points - "unsatisfactory" / did not pass
Discipline assessments:	Current academic assessment - from 72 to 120 points (conversion of the average traditional assessment of practical class on a 120-point scale): 60% of the grade for the discipline

	Final control - from 50 to 80 points: 40% of the grade for the discipline Individual work - from 1 to 12 points From 122 to 200 points in total.
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Discipline Score Scale: National and ECTS

The sum of grades for all types of educational activities	Score ECTS	Score on a national scale	
		For exam, course project (work), practice	for credit test
180-200	A	excellent	credited
170-179,9	B	good	
160-169,9	C		
141-159,9	D	satisfactory	
122-140,99	E	satisfactory	-
0-121,99	FX	unsatisfactory with the possibility of reassembly	is not credited with the possibility of reassembling
	F	unsatisfactory with a mandatory reexamination of discipline	is not credited with mandatory reexamination of discipline

7. Policy of discipline

The student has the right to receive high-quality educational services, access to contemporary scientific and educational information, qualified advisory assistance during the study of discipline and mastering practical skills. The policy of the department during the providing of educational services is a student-centered, based on normative documents of the Ministry of Education and the Ministry of Health of Ukraine, the Statute of the University and the Procedure for the Providing of Educational Services regulated by the main principles of the organization of the educational process in National Pirogov Memorial Medical University, Vinnytsya and the principles of academic integrity(<https://www.vnmu.edu.ua/en/general-information>).

Adherence to the rules of National Pirogov Memorial Medical University, Vinnytsya, safety techniques in practical classes.

Requirements for preparation for practical classes. The student should be prepared for practical classes, test tasks for the current topic should be solved in a workbook, diagrams and tables are filled.

You should come to class on time, without delay. A student who is more than 10 minutes late for class is not allowed to the lesson and must re-work it in the established order.

In practical classes, the student must be dressed in a work uniform (medical gown, hat). Students who do not have a work uniform are not allowed to study.

The student must follow the rules of safety in practical classes and during the stay in the department.

When discussing theoretical issues, students should demonstrate tolerance, courtesy and respect for their colleagues and the teacher; when performing practical tasks, the workplace should be kept in order and cleaned after the practical work.

Usage of mobile phones and other electronic devices. The use of mobile phones and other electronic devices in the classroom is allowed only during electronic testing or interviews.

Academic integrity. When studying the discipline, the student must be guided by the Code of Academic Integrity and Corporate Ethics of National Pirogov Memorial Medical University, Vinnytsya (link: <https://www.vnmdu.edu.ua/en/general-information>). In case of violation of the norms of academic integrity during the current and final controls student receives a grade of "2" and must work it out to his teacher in the prescribed manner within two weeks after receiving an unsatisfactory assessment.

Missed classes. Missed classes are working out in the manner prescribed by Regulations of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmdu.edu.ua/en/general-information>) at the time of work out schedule (published on the website of the department

<https://www.vnmdu.edu.ua/en/department/department> Orthopedics and Traumatology) to the teacher on duty. To re-work the missed lesson, the student must provide a completed workbook protocol on the relevant topic, take a test and answer questions in writing or orally to the topic of the lesson.

The procedure for admission to the discipline final control is given in the Regulations of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmdu.edu.ua/en/general-information>). To the final control allowed students who do not have missed practical classes and received an average traditional grade of at least "3".

Additional points. Individual points in the discipline (from 1 to 12) that student can receive for individual work, the amount of which is published on the website of the department in the educational methodical materials of the discipline, the number of points is determined by the results of IRS according to Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (<https://www.vnmdu.edu.ua/en/general-information>).

Conflict resolution. In case of misunderstandings and complaints to the teacher because of the quality of educational services, knowledge assessment and other conflict situations, student should submit his / her claims to the teacher. If the issue is not resolved, the student has the right to apply to the head of the department according to Complaints Consideration Procedure in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmdu.edu.ua/en/general-information>)

Politics in terms of remote learning. Distance learning regulated by the Regulations of the elements of remote learning in National Pirogov Memorial Medical University, Vinnytsya (<https://www.vnmdu.edu.ua/> General information). The main training platforms for studying are Microsoft Team and Google Meets. Practical classes, exercises and consultations during distance learning is published on the website of the department (<https://www.vnmdu.edu.ua/> Department of Orthopedics and Traumatology/ to Students or [https://www.vnmdu.edu.ua/en/department/Orthopedics and Traumatology](https://www.vnmdu.edu.ua/en/department/Orthopedics%20and%20Traumatology)).

The procedure for receiving an "Air alarm" signal.

1. The teacher, who conducts classes with the study group, immediately conveys the signal to the students with the command "Attention! Air alarm!". Students pack their things, put on outerwear (in the cold season), leave the classroom, and, accompanied by a teacher, arrive at the shelter.
2. In the shelter, the rules of behavior and safety measures are followed, if possible, the teacher continues to conduct classes.
3. Stay in the shelter until you receive the "Airborne alarm sound" signal.

In the building, it is forbidden to smoke, make noise, carry dangerous devices, in particular for lighting, which can cause a fire, it is not allowed to move around the premises without a special need, it is necessary to observe discipline and move as little as possible. It is also forbidden to bring flammable substances or substances with a strong smell, bulky things, and bring animals to

the shelter. For a complete rest, it is allowed to keep in the building or take with you light bedding and small pillows made of foam rubber, sponge rubber or other synthetic material. The procedure for receiving the "Airborne alarm bounce" signal.

1. Students leave the shelter in an organized and fuss-free manner, arrive at the auditorium and prepare for further classes.

2. After making sure that all students have left the shelter, the teacher arrives at the classroom, checks the presence of students and continues the lesson.

Feedback from teachers is via messengers (Viber, Telegram, WhatsApp) or e-mail (at the teacher's choice) during working hours.

8.Educational resources.

1.Educational and methodological support of the discipline is published on the website of the department (<https://www.vnmu.edu.ua/en/> department of Orthopedics and Traumatology / for students). Consultations are held twice a week according to the schedule.

2.The timetable and distribution of groups with assigned teachers are published on the web page of the department ((<https://www.vnmu.edu.ua/en/> department Orthopedics and Traumatology / for students).

3. Questions to the intermediate and final semester control (credit) of the discipline are published on the web page of the department (<https://www.vnmu.edu.ua/en/> department Orthopedics and Traumatology / for students).

The syllabus of the discipline "**Traumatology and Orthopaedics**" was discussed and approved at the meeting of the Department Orthopaedics and Traumatology (record № 1, dated "29" August 2023)

Responsible for the academic
discipline _____

(signature)

Assistant Igor KYRYSHCHUK

(full name)

Head of the department _____

(signature)

Professor of HEI Volodymir FISCHENKO

(full name)

