



UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN
Faculty of Medicine

Course syllabus – part A

Course code: 48SJ-OWT
Cycle: 2025Z
ECTS: 3.00

Orthopedics with Traumatology
Orthopedics with Traumatology

Legal acts specifying learning outcomes:
672/2020;

ISCED Code: -

Status: Obligatory

Group of courses: B - major course

Discipline: Medicine

Language: ANG

Classes: Lecture (10h); Seminar (10h); Classes (30h);

Program: Medicine

Phase: 4th year 8th semester, Medicine in English

Profile: -

Form: full-time

Level of studies: uniform master's studies

Introductory subject: anatomy, physiology, diagnostic imaging

Prerequisites: anatomy, physiology, diagnostic imaging

Organized by the unit:

Coordinators:

Ireneusz Kowalski, rehab@uwm.edu.pl

SUBJECT MATTER CONTENT:

Seminar – 1. Injuries in sport • Etiology and epidemiology of sport injuries • The most common sports injuries: diagnosis and treatment 2. Congenital and acquired defects in children • The most common birth defects in children - diagnostics and treatment • The role of early diagnosis of birth defects and acquired in children - why does it mean better earlier? 3. Osteoporosis: diagnosis and treatment • Etiology and epidemiology of osteoporosis • The role of orthopedist in the treatment of osteoporosis. • Prevention of osteoporosis. 4. Surgical treatment of musculoskeletal injuries • General principles of fracture treatment • Indications and contraindications for surgical treatment • Complications after surgery 5. Polytrauma patients • Causes of the increase in the number of patients with traumatic orthopaedic injuries • Trauma patient - the multidisciplinary polytrauma activation.

Classes – 1. Features of the structure of the skeletal and muscular systems. 2. Getting to know the principles of orthopaedic examination. 3. Principles of diagnosis and treatment of injuries of the osteoarticular system. 4. Classification of fractures. 5. Open fractures - Gustilo Anderson scale. 6. The specificity of fracture healing. Basics of Osteosynthesis. 7. Complications of fractures: pseudo-joint and retarded union, necrosis, infections, compartment syndrome. 8. Damage to the upper limb girdle. 9. Fracture of scapula and clavicle, sternoclavicular and clavicle-brachial dislocation, dislocation of the shoulder joint, fracture of the neck and shaft of the humerus. 10. Supracondylar fracture of the humerus. 11. Fracture of the condyles of the humerus. 12. Dislocation of the elbow joint. 13. Dislocation of the head of the radial bone. 14. Fracture of the ulna. 15. Fracture of the shafts of the forearm bones. 16. Fracture and exfoliation of the distal epiphysis of the radius. 17. Fracture of the wrist bones. 18. Fracture of the metacarpal bones and fingers. 19. Open hand injuries, principles of diagnosis and treatment. 20. Upper limb replantations. 21. Damage to the lower limb girdle. 22. Fractures of the pelvis. 23. Traumatic dislocations of the hip joint. 24. Fracture of the neck of the femur. 25. Cross- and subtrochanteric fracture of the femur. 26. Fracture of the shaft of the femur. 27. Supracondylar fracture of the femur. 28. Dislocations and fractures of the patella. 29. Dislocation of the knee joint. 30. Injury of knee ligaments and other radionegative injuries. 31. Intra-articular fractures of the knee. 32. Fractures of the shin bones. 33. Fracture of the ankles of the ankle joint. 34. Traumatic foot injuries. 35. Dislocation of the ankle joint. 36. Damage to nerves and vessels of the upper and lower limbs. 37. Degenerative and degenerative changes in hip and knee joints - practical diagnosis and treatment analysis. 38. Characteristics of an orthopaedic examination of a child. 39. Characteristics and differences of fractures in children. Salter-Harris classification. The most common fractures in a child. Methods of treating fractures in children. 40. Principles of installing gypsum fixings. 41. Lateral curvature of the spine in children. Types of scoliosis. Examination of a child with scoliosis. Treatment methods. 42. Developmental dysplasia of the hip joints. Diagnosis, treatment, the role of ultrasound examination, method. Graf. 43. Congenital clubfoot. Clinical picture. Treatment with the Ponseti method. 44. The causes of a child limping. Transient hip arthritis, Perthes disease, juvenile desquamation of the femoral head.

Lecture – 1. History and evolution of world and Polish orthopaedics and traumatology. 2. Osteoarthritis; etiology, epidemiology, pathogenesis, clinical symptoms, diagnostic imaging, treatment methods. 3. Osteoarthritis of the hip joint - etiology, epidemiology, pathogenesis, clinical symptoms, diagnostic imaging, differential diagnosis, treatment methods. 4. Hip arthroplasty - indications, types, treatment results, complications. 5. Osteoarthritis of the knee joint - etiology, epidemiology, pathogenesis, clinical symptoms, diagnostic imaging, differential diagnosis, treatment methods. 6. One, two and three-compartment knee arthroplasty - indications, types, treatment results, complications. 7. Foot deformities in adults - hallux valgus, flat valgus static foot - diagnosis, prevention and treatment. 8. Shoulder diseases - diagnostics and modern methods of treatment. 9. Primary and metastatic neoplasms of the musculoskeletal system - diagnosis, differentiation, modern methods of treatment. 10. Osteoarthritis - etiology, epidemiology, diagnosis and treatment. 11. Orthopaedics and traumatology in geriatrics - review of problems, principles of prevention and treatment. 12. Osteoporosis - definition of the phenomenon, epidemiology, review of treatment options. 13. Back pain syndromes - diagnosis, prevention and treatment. Scoliosis - types, diagnosis.

TEACHING OBJECTIVE:

Education aims to acquire knowledge and skills in the field of dealing with patients in the area of - immobilization of damage to the musculoskeletal system, transport, wound care - diagnosis of disorders related to the osteoarticular and muscular systems, - proposing appropriate diagnostics and treatment.

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY

Symbols for outcomes related to the discipline:

M/NM++++++, M/NMA_P7S_KO++++, M/NMA_P7S_KR++++, M/NMA_P7S_UW+++

Symbols for outcomes related to the field of study:

K.1.+, K.2.+, K.4.+, K.3.+, F.U8.+, F.U7.+, E.U35.+

Symbols for outcomes related to the field of study:

W1 – Knows and understands the causes, symptoms, principles of diagnosing and applying therapeutic procedures in most frequent diseases requiring surgical intervention, the uniqueness of infancy taken into account, in particular: 1) acute and chronic abdominal diseases, 2) chest diseases, 3) limb and head diseases, 4) bone fractures and organ injuries;

W2 – Knows and understands the rules of qualifying for basic surgical operations and invasive diagnostic and treatment procedures, the principles of performing them and their most frequent complications;

W3 – Knows and understands the rules of perioperative safety, patient preparation for the surgery, performance of general and local anaesthesia and controlled sedation;

W4 – Knows and understands post-operative treatment with pain therapy and post-operative monitoring;

U1 – Can immobilise a limb temporarily, select the type of immobiliser necessary in typical clinical situations, and control the correct blood flow in the limb once the immobilising dressing has been applied;

U2 – Can assess the results of radiological tests for the most frequent types of fractures, especially long bone fractures;

U3 – Can assessing bedsores and applying the proper dressing.

K1 – He can establish and maintain a deep and respectful contact with the patient, as well as show understanding for worldview and cultural differences.

K2 – He is guided by the good of the patient.

K3 – He takes actions towards the patient based on ethical principles, with the awareness of social conditions and limitations resulting from the disease.

K4 – Adheres to medical confidentiality and patient rights.

Symbols for outcomes related to the field of study:

Seminar – ['K1', 'K2', 'K3', 'K4', 'U1', 'U2', 'U3', 'W1', 'W2', 'W3', 'W4'] – Seminar discussion - after introducing the topic by the tutor, students' opinions are expressed, which are then summarized by the tutor. Then the group evaluates the statements and introduces comments and supplements. The lecturer summarizes the topic. The group makes conclusions. Active participation of students - work in groups - preparation of a multimedia presentation on a given topic.

Classes – ['K1', 'K2', 'K3', 'K4', 'U1', 'U2', 'U3', 'W1', 'W2', 'W3', 'W4'] – Exercises take place in the hospital ward, they consist of accompanying the doctor at work, examining patients, analyzing the history of diseases and results, discussing the therapy and its goals.

Lecture – ['K1', 'K2', 'K3', 'K4', 'U1', 'U2', 'U3', 'W1', 'W2', 'W3', 'W4'] – The method of a traditional lecture, supported by an audiovisual presentation.

FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:

Lecture (Part in the discussion) – ['K1', 'K2', 'K3', 'K4', 'U1', 'U2', 'U3', 'W1', 'W2', 'W3', 'W4'] – Presence.

Seminar (Evaluation of the work and cooperation in the group) – ['K1', 'K2', 'K3', 'K4', 'U1', 'U2', 'U3', 'W1', 'W2', 'W3', 'W4'] – Class attendance, involvement and participation in discussions.

Classes (Evaluation of the work and cooperation in the group) – ['K1', 'K2', 'K3', 'K4', 'U1', 'U2', 'U3', 'W1', 'W2', 'W3', 'W4'] – Participation in the discussion, patient examination, analyzing medical history and results, discussing therapy and its goals.

Lecture (Oral exam) – ['K1', 'K2', 'K3', 'K4', 'U1', 'U2', 'U3', 'W1', 'W2', 'W3', 'W4'] – Form and manner of obtaining credit in the course Rehabilitation: 1. The course ends with an oral examination. 2. A student is allowed to take the examination in Rehabilitation only after receiving positive credits from lectures, practical classes and seminars. 3. For the final evaluation of Rehabilitation learning outcomes a standardised oral exam (OSCE – Objective Structured Clinical Examination) has been introduced. The exam is held in groups of 4-5 students, in front of the a commission composed of professor, assistant and/or lecturer. 3. The exam questions are divided into two groups - theoretical and practical: - theoretical questions cover material from lectures and seminars, - practical questions cover material from seminars and practical classes, - during the exam student draws two questions: one theoretical and one practical. 4. The exam the commission evaluates student's answers according to the following criteria: a) the scope of theoretical knowledge, b) general understanding of the issue, c) skills of analyzing the problem, d) skills of problem resolving, e) concision of the answer, f) skills of giving practical recommendations. 5. The final examination grading system is as follows: - 5 (very good) – obtaining 6 points according to the criteria - 4.5 (more than good) – obtaining 5 points according to the criteria - 4 (good) - obtaining 4 points according to the criteria - 3.5 (fairly good) - obtaining 3 points according to the criteria - 3 (satisfactory) - obtaining 2 points points according to the criteria - 2 (fail) - obtaining 1 or no points according to criteria II.

Literature:

1. Essential Orthopaedics and Trauma 2, Dandy J.D.; Churchill Livingstone; 1993; Pages: ; Tome: ; Required literature
2. Testy kliniczne w badaniu kości, stawów i mięśni, Gaździk (red).; PZWL; 2007; Pages: ; Tome: ; Required literature
3. Natarajan"s textbook of Orthopaedics and Traumatology 8th edition, Natarajan M.V.; Wolters Kluwer; 2018; Pages: ; Tome: ; Required literature
4. Essential Orthopaedics and Trauma: witch student consult, Dandy J.D., Edwards D.J.; Elsevier; 2009; Pages: ; Tome: ; Required literature



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Detailed description of ECTS credits awarded - part B

Course code: 48SJ-OWT

Cycle: 2025Z

ECTS: 3.00

Orthopedics with Traumatology

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1. Contact hours with the academic teacher:

- participation in: Lecture	10 h
- participation in: Seminar	10 h
- participation in: Classes	30 h
- consultation	5 h
Total:	55 h

Independent work of a student:

Total: 0 h

1 ECTS credit = 25-30 h of an average student's work, number of ECTS

ECTS Points = 55 h : 25 h/ECTS = 3.00 ECTS

Average: 3.00 ECTS

- including the number of ECTS credits for contact hours with the direct participation of an academic teacher - 3.00 ECTS pts

- including the number of ECTS credits for hours of independent work of a student - 0.00 ECTS pts