„Carol Davila" University of Medicine and Pharmacy Bucharest
The Quality Assurance Commission

SUBJECT OUTLINE

1. Programme of study description

1.1.	**THE "CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY**
1.2.	**THE FACULTY OF MEDICINE**
1.3.	**CLINICAL DEPARTMENT 14, ORTHOPEDICS-ATI**
1.4.	**DISCIPLINE ORTHOPEDICS AND TRAUMATOLOGY**
1.5.	**DOMAIN OF STUDY: HEALTHCARE -REGULATED SECTOR WITHIN THE EU**
1.6.	**CYCLE OF STUDIES: BACHELOR'S DEGREE**
1.7.	**PROGRAMME OF STUDY: MEDICINE**

2. DISCIPLINE DESCRIPTION

2.1.	**Name of the discipline in the curriculum: ORTHOPAEDICS AND TRAUMATOLOGY**				
2.2.	**Discipline code:**				
2.3.	**Type of discipline (DF/DS/DC): DS**				
2.4.	**Discipline regime: MANDATORY DISCIPLINE**				
2.5.	**Course activities holder:**				
2.6.	**Holder of seminar activities**				
2.7. Year of study	**IV**	**2.8. Semester**	**I, II**	**2.9. Evaluation type (E/C)**	**E**

3. Total estimated time (hours/semester of teaching and preparation/individual study)

I. University training (teaching, practical application, evaluation)						
3.1. No hours per week	**25**	**of which:**	**3.2. course**	**10**	**3.3. seminar/laboratory**	**15**
3.4. Total hours in the curriculum	**100**	**of which:**	**3.5. curs**	**40**	**3.6. seminar/laboratory**	**60**
Evaluation (no. hours): 10 hours						
II. Individual preparation/study 50 hours						
Distribution of time fund						**hours**
Study of course materials, textbooks, books, study of the minimum recommended bibliography						25
Additional documentation in the library, documentation via the internet						10
Carrying out specific preparation activities for the project, laboratory, preparation of assignments, reports						10
Preparation for presentations or checks, preparation for the final examination						3
Consultations						2

Other activities	
3.7. Total hours of individual study	**50 hours**
3.9. Total hours per semester (3.4.+ 3.7.)	100
3.10. Number of credits	**5**

4. Preconditions (where applicable)

4.1. of curriculum	Fundamental knowledge of the anatomy and physiology of the musculoskeletal system
4.2. of skills	General clinical examination of the patient, general surgical techniques and maneuvers

5. Conditions (where applicable)

5.1. course	The classes will be held in an interactive system, and the information provided will be emphasized through video projections and radiographs in an amphitheater dedicated to the classes. Required: multimedia projector, negatoscope, laptop, osteosynthesis materials, external fixators, primary and revision joint endoprosthetics, digital imaging database, plastic skeleton parts, etc.
5.2. seminar / laboratory	The clinical internship consists of students' contact with patients through visits to the ward, the emergency room, participation in the operating room, additional information will be provided with IT, radiological support and through the hospital's intranet system. Required: negatoscope, computer / laptop, multimedia projector

6. Learning outcomes*

Knowledge	Skills	Responsibility and autonomy
The student describes, explains and analyzes the general principles of surgical interventions, as well as perioperative care techniques, correlated with various types of surgical pathologies and approached multidisciplinary in orthopedics and traumatology.	The student correctly uses and integrates clinical and paraclinical assessment methods and techniques; improves his/her practical skills, under appropriate supervision, through the assessment and management of perioperative care and treatments.	The student collaborates and supports the activities of the medical team, actively participating, under appropriate supervision, in surgical interventions, as well as in perioperative care.
The student recognizes, identifies, describes and summarizes the causes, clinical and therapeutic aspects associated with the main nosological entities in orthopedics and traumatology, as well as the methods of the skilled	The student demonstrates skills in applying techniques and methods for developing, designing and implementing the care process in the field of orthopedics and traumatology and skilled care.	The student/graduate adequately manages the care process by assuming responsibility for the planning, organization, evaluation and provision of medical services as well as all acts and techniques practiced in the field of orthopedics and traumatology.

care process in the field of skilled care in the specialty of orthopedics and traumatology, and of skilled care.		
The student recognizes, identifies, describes and summarizes the signs and symptoms associated with various surgical pathologies, the causes, clinical and therapeutic aspects of surgical nosological entities in orthopedics and traumatology.	The student demonstrates skills in implementing the concepts of orthopedics and traumatology in medical practice.	The student adequately manages the care process by assuming responsibility for the planning, organization, evaluation and provision of medical services as well as all acts and techniques practiced for patients with surgical and orthopedic conditions.
The student describes, identifies and summarizes the theoretical foundations of orthotics and prosthetics, of achieving recovery in orthopedic pathology, as well as of postoperative recovery and sports-related conditions and athlete pathology.	The student demonstrates the ability to apply orthopedic rehabilitation programs, postoperative recovery and sports-related conditions and athlete pathology, as well as in the case of orthotics and prosthetics.	The student adequately manages the process of implementing recovery programs in various pathologies, within the limits of professional autonomy, assuming responsibility for the planning, organization, evaluation and provision of medical services.

7. Subject objectives (correlated with learning outcomes)

7.1. The overall objective	At the end of the internship, the student must know: - the main diseases in the field of orthopedics and traumatology - the degree of medical and surgical emergency - establishing the correct diagnosis and treatment principles - cultivating the principles of medical ethics in orthopedics and traumatology
7.2. Specific objectives	Designing and implementing a therapeutic plan appropriate for each pathology. Establishing a good and efficient communication relationship between doctor and patient in orthopedic pathology; developing the doctor-patient interrelationship, as well as in the cases of multidisciplinary teams (orthopedic - plastic surgeon/vascular/oncologist/etc.).

8. Content

8.1. Curse	**Teaching methods**	**Observations**
Course 1 Fractures - generalities	The courses are taught in the amphitheater and in rooms technically equipped for this purpose with a screen, blackboard, laptop, video projector, negatoscope. All courses have electronic support and are updated in	Use of computer and projector – projection of static and dynamic images, interactive discussions, questions,
Course 2 Fractures of the upper limb 1		
Course 3 Fractures of the upper limb 2		

Course 4 Pelvic fractures	terms of information, according to treaties, specialized journals, books edited by teachers who carry out their activity within the discipline, as well as new data appearing online. There are, at the level of the spaces related to the discipline, multiple possibilities of access, online. There are, at the level of the spaces related to the discipline, multiple possibilities of access online, in order to obtain the medical information necessary for the clinical approach in orthopedic pathology.	additional explanations upon request
Course 5 Fractures of the lower limb 1		
Course 6 Fractures of the lower limb 2		
Course 7 Polytrauma		
Course 8 Sprains		
Course9 Dislocations		
Course10 Spine fractures		
Course 11 Spine deformities		
Course 12 Bone infections		
Course 13 Osteoarticular tuberculosis		
Course 14 Osteoarticular tumors - general information		
Course 15 Benign bone tumors		
Course 16 Malignant bone tumors		
Course 17 Knee osteoarthritis		
Course 18 Hip osteoarthritis		

8.2. Clinical internship	**Teaching methods**	**Observations**
Practical laboratory 1 Semiology of orthopedic disorders.	The teaching methods aim to: Interrelationship between orthopedic student and patient, to establish the best possible communication relationship based on ethical principles. Knowledge of specific methods of diagnosis and treatment, both surgical and orthopedic, in close correlation with paraclinical examinations, in order to establish the most correct diagnosis. Presentations of daily clinical cases, with varying degrees of diagnostic difficulty and degree of urgency, all being correlated with the study program. Interactive discussions related to the logic of diagnosis and about the different diagnostic and treatment protocols.	Use of laptop and projector - projections of static and dynamic images, interactive discussions, questions, additional explanations following requests.
Practical laboratory 2 Semiology of traumatic disorders.		
Practical laboratory 3 Concepts of bone radiology, normal and pathological.		
Practical laboratory 4 Paraclinical laboratory investigations, pathological anatomy, MRI, CT, scintigraphy.		
Practical laboratory 5 Osteosynthesis materials for the upper limb I		
Practical laboratory 6 Osteosynthesis materials for the upper limb II		
Practical laboratory 7 Osteosynthesis materials for the lower limb I+II		
Practical laboratory 8 Plasters		
Practical laboratory 9 Osteosynthesis materials for the pelvis I		
Practical laboratory 10 Osteosynthesis materials for the pelvis II		
Practical laboratory 11 First aid in traumatic conditions		
Practical laboratory 12 Maneuvers to reduce the most common fractures		
Practical laboratory 13 Maneuvers to reduce the most common dislocations		
Practical laboratory 14 Trans-skeletal extension		

Practical laboratory 15 Thoraco-brachial immobilization		
Practical laboratory 16 Wound care		
Practical laboratory 17 Medical simulator		
Practical laboratory 18 Case presentations		

Bibliography

1. F.C.Cirstoiu – Orthopedics Traumatology, ED. UMFCD, 2019
2. Dinu Antonescu – Pathology of the locomotor system, vol I, ED Medical, 2006
3. Dinu Antonescu – Pathology of the locomotor system, vol II, ED Medical, 2008

9. Evaluation

Type of activity	9.1. Evaluation criteria	9.2. Evaluation methods	9.3. Final grade percent
9.4. Course	Knowledge of the theoretical concepts of the subject	Written exam, 30 questions with 5 options each, only one correct answer (simple complement)	**50%**
9.5. Seminar/laboratory	Attendance at the internship, involvement in daily activity at the patient's bedside, case presentations and various other diagnostic and treatment issues in orthopedics, continuous evaluation throughout the internship through interactive discussions on various pathologies.	Practical exam with the group assistant	**25%**
	Ability to interpret clinical and imaging examinations	Oral exam with the course holder	**25%**
9.5.1. Individual project	-	-	-
9.6. Minimum Performance Standard **The passing grade is Grade 5. The final grade is determined based on the evaluation criteria taken into consideration in a weighted manner with the relationship: 25%, 25%, 50%.** **The oral test combined with the practical exam, as well as the failed grid test, each represent eliminatory tests.**			

Date: 1.10.2026 **Head of Discipline's Signature** **Laboratory Owner's Signature**

Department Council Approval Date

Department Director's Signature
Prof.Univ.Dr. Radu Rădulescu