



Integrated academic studies medicine

SIXTH YEAR

2025/2026.

Intensive care and therapy in pediatrics

Subject:

INTENSIVE CARE AND THERAPY IN PEDIATRICS

The course is evaluated with 3 ECTS. There are 3 hours of active teaching per week (2 hours of lectures, 1 hours of practice)

Teachers:

РБ	name and surname	E-mail address	Title
1.	Biljana Vuletić	sibil.kg@gmail.com	Full professor
2.	Andjelka Stojković	andja410@mts.rs	Full professor
3.	Sanja Knežević	sanjaknez1980@yahoo.com	Assistant professor
4.	Marija Radovanović	marijaradovanovic939@gmail.com	Assistant professor

COURSE STRUCTURE:

Semester	Name of the module	Week	Lectures weekly	practice weekly	Teacher
summer	Intensive care in pediatrics	15	2	1	All

EVALUATION:

The grade is equivalent to the number of points earned (see table). Points are earned in three ways:

EXAM PREREQUISITES:

A student can earn up to 40 points: up to 30 points for activity during lectures and practical classes, up to 10 points for seminars during semester.

FINAL EXAM:

A student can earn up to 60 points by passing tests. In order for the student to pass the exam, he must achieve more than 50% of points on each of the defined elements of the pre-exam activities and final tests.

	Examination methods (maximum 100 points)		
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during Lectures and practical classes in summer semester	30	Test	60
Seminars/homework during semester	10		

The final grade is formed as follows:

In order to pass the course, the student must obtain a minimum of 51 points, pass pre-exam activities and pass two module tests.

number of points won	grade
0 - 50	5
51 - 60	6
61 - 70	7
71 - 80	8
81 - 90	9
91 - 100	10

LITERATURE:

the name of the textbook	authors	publisher
Nelson Textbook og Pediatrics 21 st ed.	Kliegman RM, St. Geme JW, Blum NJ, Shah SS, Tasker RC, Wilson KM	Philadelphia : Elsevier-Saunders ; 2019.

THE PROGRAM:

TEACHING UNIT 1 (FIRST WEEK):

EMERGENCIES IN PEDIATRICS PULMONOLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none">• Croup syndrome• Acute respiratory failure• Asthma attack• Foreign bodies in the respiratory tract• Mechanical ventilation and air leakage syndrome - pneumothorax; pneumomediastinum; pneumoperitoneum• Acute respiratory distress syndrome in children• Threatening sudden infant death syndrome	<ul style="list-style-type: none">• Principles of invasive and non-invasive monitoring of vital functions• Imaging methods in emergency situations• Endotracheal and orotracheal intubation

TEACHING UNIT 2 (SECOND WEEK):

EMERGENCIES IN PEDIATRICS ALLERGOLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none">• Anaphylactic shock• Venoms	<ul style="list-style-type: none">• Acute care of respiratory insufficiency in children• The skill of examining the skin and available mucous membranes in children• Skill in examining a child exhibiting a severe systemic allergic reaction• The skill of recognizing the clinical picture of an allergic disease• To systematize clinical symptoms and signs into a clinical picture of a particular allergic disease

TEACHING UNIT 3 (THIRD WEEK):

EMERGENCIES IN PEDIATRICS CARDIOLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none">• Disorders of heart rhythm• Treatment of life threatening cardiac arrhythmias in children• Sudden Arrhythmia Death Syndromes• Acute myocarditis and pericarditis in children	<ul style="list-style-type: none">• Rapid recognition of basic heart rhythm disorders• Use of an automated external defibrillator• Monitoring of vital function• Diagnostic imaging technique of acute pathology in pediatric cardiology

TEACHING UNIT 4 (FOURTH WEEK):

EMERGENCIES IN PEDIATRICS CARDIOLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none"> • Pediatric and neonatal cardiopulmonary resuscitation • Pediatric critical care transport • Congenital heart defects, • Treatment of ductus dependent complex congenital heart disease • Cardiogenic shock and treatment 	<ul style="list-style-type: none"> • Basic and advanced life support in children • Emergency treatments of cardiogenic shock • Acute therapy of newborn with critical congenital heart disease

TEACHING UNIT 5 (FIFTH WEEK):

EMERGENCIES IN PEDIATRICS NEUROLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none"> • Hypoxic Ischemic Encephalopathy • Intracranial hemorrhage • Acute Central Nervous System (CNS) infections – meningitis, encephalitis, • ADEM (Acute Disseminated encephalomyelitis), Transverse Myelitis • Cerebrovascular accidents • Acute hemiplegia, acute ataxia • Guillain-Barre Syndrome 	<ul style="list-style-type: none"> • Anamnesis in emergency conditions in pediatrics • Neurological examination • Assessment of the state of consciousness • Neuroradiology imaging

TEACHING UNIT 6 (SIXTH WEEK):

EMERGENCIES IN PEDIATRICS NEUROLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none"> • Febrile seizures • Status epilepticus • Headache and migraine • Raised intracranial pressure, hydrocephalus • Coma 	<ul style="list-style-type: none"> • Treatment of convulsions and status epilepticus • Electroencephalography • Administration of drugs in a critically ill children (analgesia and sedation)

TEACHING UNIT 7 (SEVENTH WEEK):

EMERGENCIES IN PEDIATRICS NEPHROLOGY

Lectures: 2 hours	Practice: 1 hours
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- Electrolyte and acid-base balance disorders in a critically ill pediatric patient
- Acute kidney failure and methods of renal function replacement in the pediatric intensive care unit
- Hypertension in the pediatric intensive care unit

- Correction of electrolyte and acid-base disorders
- Methods of renal function replacement in the pediatric intensive care unit
- Emergency treatment for hypertensive crisis

TEACHING UNIT 8 (EIGHT WEEK):

EMERGENCIES IN PEDIATRICS NEFROLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none"> • Urin tract infection • Renal colic and stones • Urin abnormalities (blood, protein) 	<ul style="list-style-type: none"> • Emergency menagment of children with acute glomerulonephritis, nephrotic and nephritic syndrome • Tools for the diagnosis of rnal disease

TEACHING UNIT 9 (NINTH WEEK):

EMERGENCIES IN PEDIATRICS ENDOCRINOLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none"> • Emergency conditions in congenital metabolic diseases • Hypoglycemia, hyperglycemia, • Hypocalcemia, hypokaliemia • Therapy in Disorders of Acid Base Balance 	<ul style="list-style-type: none"> • Introduction to students with anamnestic data and clinical findings in congenital metabolic diseases • Presentation of laboratory algorithms in diagnosis of congenital metabolic diseases

TEACHING UNIT 10 (TENTH WEEK):

EMERGENCIES IN PEDIATRICS ENDOCRINOLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none"> • Congenital adrenal hyperplasia • Thyrotoxicosis • Diabetic ketoacidosis 	<ul style="list-style-type: none"> • Endocrine emergency: recognizing signs and sytomes • Diagnosis in pediatric endocrine emergencies

TEACHING UNIT 11 (ELEVENTH WEEK):

EMERGENCIES IN PEDIATRICS HEMATHOLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none">• Thromboembolism in critically ill pediatric patients• Acute anemia• Thrombocytopenia• Transfusion of blood and blood derivatives	<ul style="list-style-type: none">• Anamnesis in Emergency conditions in Hematology• Diagnosis, laboratory tests

TEACHING UNIT 12 (TWELFTH WEEK):

EMERGENCIES IN PEDIATRICS HEMATHOLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none">• Hematological and oncological problems in intensive care units• Febrile neutropenia• Hyperleukocytosis• Tumour lysis syndrome	<ul style="list-style-type: none">• Anamnesis in Emergency Conditions in Oncology• Diagnosis and management of oncologic emergencies

TEACHING UNIT 13 (THIRTEENTH WEEK):

EMERGENCIES IN PEDIATRICS GASTROENTEROLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none">• Acute liver failure and Rey's syndrome• Acute abdomen• Volvulus• Peritonitis• Necrotizing enterocolitis	<ul style="list-style-type: none">• Assess for signs and symptoms of an acute abdomen• Imaging techniques of the GIT• Initial treatment of children with acute abdomen

TEACHING UNIT 14 (FOURTEENTH WEEK):

EMERGENCIES IN PEDIATRICS GASTROENTEROLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none">• Foreign bodies in the digestive tract• Gastrointestinal hemorrhage• Pancreatitis• Gastroenteritis and severe dehydration	<ul style="list-style-type: none">• Paediatric gastrointestinal endoscopy• Treatment and management

TEACHING UNIT 15 (FIFTEENTH WEEK):

EMERGENCIES IN PEDIATRICS NEONATOLOGY

Lectures: 2 hours	Practice: 1 hours
<ul style="list-style-type: none">• Neonatal sepsis• Hypothermia• Perinatal asphyxia• CPR of newborn• Respiratory distress• Seizure in newborn• Hypoglycemia• Shock in newborn	<ul style="list-style-type: none">• The most important symptoms and signs, laboratory and image tests to identify critically ill infant• Rapid assessment and management of newborn life-threatening conditions

WEEKLY COURSE SCHEDULE

LECTURE SCHEDULE

09:00-10:30

FRIDAY

(Hall on the 8th floor of UCCK)

SCHEDULE OF PRACTICE

11:00-11:45

FRIDAY

(Hall on the 8th floor of UCCK)

module	week	type	method unit name	teacher
1	1	L	EMERGENCIES IN PEDIATRICS PULMONOLOGY	Prof. dr Andjelka Stojkovic
1	1	P		Prof. dr Andjelka Stojkovic
1	2	L	EMERGENCIES IN PEDIATRICS ALLERGOLOGY	Prof. dr Andjelka Stojkovic
1	2	P		Prof. dr Andjelka Stojkovic
1	3	L	EMERGENCIES IN PEDIATRICS CARDIOLOGY	Asst. Prof. dr Sanja Knezevic
1	3	P		Asst. Prof. dr Sanja Knezevic
1	4	L	EMERGENCIES IN PEDIATRICS CARDIOLOGY	Asst. Prof. dr Sanja Knezevic
1	4	P		Asst. Prof. dr Sanja Knezevic
1	5	L	EMERGENCIES IN PEDIATRICS NEUROLOGY	Asst. Prof. dr Marija Radovanovic
1	5	P		Asst. Prof. dr Marija Radovanovic
1	6	L	EMERGENCIES IN PEDIATRICS NEUROLOGY	Asst. Prof. dr Marija Radovanovic
1	6	P		Asst. Prof. dr Marija Radovanovic
module	week	type	method unit name	teacher

1	7	L	EMERGENCIES IN PEDIATRICS NEFROLOGY	Asst. Prof. dr Sanja Knezevic
1	7	P		Asst. Prof. dr Sanja Knezevic
1	8	L	EMERGENCIES IN PEDIATRICS NEFROLOGY	Asst. Prof. dr Sanja Knezevic
1	8	P		Asst. Prof. dr Sanja Knezevic
1	9	L	EMERGENCIES IN PEDIATRICS ENDOCRINOLOGY	Asst. Prof. dr Marija Radovanovic
1	9	P		Asst. Prof. dr Marija Radovanovic
1	10	L	EMERGENCIES IN PEDIATRICS ENDOCRINOLOGY	Asst. Prof. dr Marija Radovanovic
1	10	P		Asst. Prof. dr Marija Radovanovic
1	11	L	EMERGENCIES IN PEDIATRICS HEMATOLOGY	Asst. Prof. dr Marija Radovanovic
1	11	P		Asst. Prof. dr Marija Radovanovic
1	12	L	EMERGENCIES IN PEDIATRICS HEMATOLOGY	Asst. Prof. dr Marija Radovanovic
1	12	P		Asst. Prof. dr Marija Radovanovic
module	week	type	method unit name	teacher

1	13	L	EMERGENCIES IN PEDIATRICS GASTROENTEROLOGY	Prof. dr Biljana Vuletic
1	13	P		Prof. dr Biljana Vuletic
1	14	L	EMERGENCIES IN PEDIATRICS GASTROENTEROLOGY	Prof. dr Biljana Vuletic
1	14	P		Prof. dr Biljana Vuletic
1	15	L	EMERGENCIES IN PEDIATRICS NEONATOLOGY	Asst. Prof. dr Sanja Knezevic
1	15	P		Asst.Prof. dr Sanja Knezevic