



Integrated academic studies medicine

FIFTH YEAR

2023/2024.

PEDIATRICS

Subject:

PEDIATRICS

The course is evaluated with 14 ECTS. There are 7 hours of active teaching per week (3 hours of lectures, 3 hours of practice and 1 hour of seminar)

Teachers:

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

COURSE STRUCTURE:

Semester	Name of the module	Week	Lectures weekly	practice weekly	seminar weekly	Teacher
winter	general pediatrics	15	3	3	1	All
summer	special pediatrics	15	3	3	1	
						$\Sigma 90+90=30=210$

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 15 points for activity during lectures, up to 15 points for activity during exercises and up to 10 points for seminar.

FINAL EXAM:

A student can earn up to 60 points by passing a practical exam (up to 10 points) and an oral exam (up to 50 points). 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, that is, the final exam.

	Examination methods (maximum 100 points)		
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during Lectures	15	practical examination	10
practical classes/tests	15	oral examination	50
Seminars/homework	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 the final exam.

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

THE PROGRAM:

TEACHING UNIT 1 (FIRST WEEK):

GROWTH, DEVELOPMENT OF CHILDREN, DISORDER OF GROWTH AND DEVELOPMENT

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none">• Somatic development of the child, stages of growth• Growth disorders - short growth and high growth• Basic aspects of puberty and its disorders	<ul style="list-style-type: none">• Practical application of percentile growth curves• Laboratory diagnostics of short and tall stature• Calculation of body mass index and assessment of children's nutritional status

TEACHING UNIT 2 (SECOND WEEK):

PUBERTY AND ADOLESCENCE

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none">• Developmental characteristics of normal puberty• Premature puberty, classification, causes, diagnosis, treatment• Delayed puberty, causes, diagnosis and treatment	<ul style="list-style-type: none">• Practical application of percentile growth curves• Determining the stage of puberty using Tanner tables• Laboratory examination of premature and late puberty

TEACHING UNIT 3 (THIRD WEEK):

VACCINATION OF CHILDREN

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none">• Immunization calendar in Serbia and the world• Basic principles of vaccine and serum application• General, special, epidemiological contraindications for immunization in children• The principle of implementing a cold chain in the process of storing vaccines• Significance and monitoring of vaccination effectiveness	<ul style="list-style-type: none">• The choice of vaccine according to the age of the child, the epidemiological situation, possible contraindications and adverse reactions• Recognition of an adverse reaction to a vaccine or serum, procedure for reporting adverse reactions• Identifying failures in the implementation of the cold chain for the storage of vaccines

TEACHING UNIT 4 (FOURTH WEEK):

HOMEOSTASIS AND DISORDERS OF WATER AND ELECTROLYTE TRANSPORT

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none">• Homeostasis of water and electrolytes in children• Types of dehydration in children: hypernatremic, hyponatremic and isoosmolar• Determining the type and degree of dehydration	<ul style="list-style-type: none">• Practical determination of the degree and type of dehydration• Practical consideration of fluid replacement and correction of acid-base and electrolyte imbalance

- Therapeutic approach to water and electrolyte disorders
- Principles of oral and intravenous rehydration
- Causes and types of acid-base balance disorders, clinical picture and therapy

TEACHING UNIT 5 (FIFTH WEEK):

NUTRITION OF A HEALTHY CHILD

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none"> • Natural nutrition; • Adapted milk formulas and cow's milk; • Nutrition of premature infants; • Artificial nutrition; • Mixed nutrition; 	<ul style="list-style-type: none"> • Acquaintance of students with nutrition anamnesis, the technique of preparing food for infants and special diets • Practical assessment of nutritional status • Acquaintance with the most important symptoms and signs in children suffering from malnutrition and various forms of selective nutritional deficit

TEACHING UNIT 6 (SIXTH WEEK):

EATING DISORDERS

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none"> • Therapeutic diets in pediatrics • Malnutrition • Rachitis and tetany 	<ul style="list-style-type: none"> • Getting to know the objective examination of children and the method of assessing the state of nutrition • calculation of body mass index • the most important symptoms and signs in children suffering from malnutrition and various forms of selective nutritional deficiency

TEACHING UNIT 7 (SEVENTH WEEK):

ALLERGIC DISEASES IN CHILDREN

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none"> • Basic characteristics of allergic immune response in children • Clinical picture of allergic diseases in children • Basic diagnostic procedures for allergic diseases in children • Types of prevention of allergic diseases in children • Atopic dermatitis, nutritional allergy • Allergic rhinitis and conjunctivitis in children • Drug allergy • Urticaria, angioedema, systemic anaphylaxis 	<ul style="list-style-type: none"> • Introducing students to the implementation of diagnostic procedures in pediatric immunology and allergology • Introducing students to an adequate therapeutic approach to allergic diseases in children

TEACHING UNIT 8 (EIGHT WEEK):

GENETIC DISEASES AND SYNDROMES IN PEDIATRICS

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none"> • Chromosomes and genes; • Types of inheritance and hereditary diseases; • Congenital anomalies; • Genetic counseling center; • Prenatal diagnostics; • Neonatal screening for hereditary diseases 	<ul style="list-style-type: none"> • Clinical examination of children with the most common monogenic hereditary diseases • Clinical examination and observation of typical clinical signs in the most common chromosomal pathologies. • Getting to know the possibilities of prenatal diagnosis • Taking material and making a karyotype. • Genetic counseling, the way the genetic counseling center functions

TEACHING UNIT 9 (NINTH WEEK):

PRIMARY AND SECONDARY IMMUNODEFICIENCY

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none"> • Components and way of functioning of the immune system • Immunological characteristics of breast milk • Clinical features associated with immunodeficiencies • Laboratory diagnosis of primary immunodeficiencies • Division of primary immunodeficiencies • Clinical picture, diagnosis and treatment of primary immunodeficiencies • Secondary immunodeficiencies 	<ul style="list-style-type: none"> • Introduction to students with anamnestic data and clinical findings in congenital immunodeficiency • Presentation of laboratory algorithms in diagnosis of immunodeficiency • Review of patients with immunodeficiency

TEACHING UNIT 10 (TENTH WEEK):

CONGENITAL METABOLIC DISORDES

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none"> • frequency and types of inheritance of congenital mistakes of metabolism • Clinical approach to the most common innate mistakes of metabolism in children • Innate disorders of amino acid metabolism (phenylalnin, tyrosine, methionine, cysteine, triptophan, valin, leucin, isoleucin) • Defects of lipid metabolism (lipidoses, mucolipidosis) • Defects of carbohydrate metabolism (glycogenosis, defects of galactose metabolism and mucopolisaccharidosis) 	<ul style="list-style-type: none"> • Acidobase balance disorders: Causes, types, clinical picture and therapy • Views of cases of the most common congenital disorders of metabolism

CHING UNIT 11 (ELEVENTH WEEK):

PHARMACOTHERAPY IN CHILDREN

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none">• Pharmacokinetics and pharmacodynamics in children;• Doses of medicines in children;• Medicines and breastfeeding;• Necessity of taking medication anamnesis.	<ul style="list-style-type: none">• Dosage of antibiotics in children• Dosage of antipyretics in children• Roads of drug applications in children

TEACHING UNIT 12 (TWELFTH WEEK):

INFECTIOUS DISEASES IN CHILDREN

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none"> • rash fever • chickenpox • meningitis • measles 	<ul style="list-style-type: none"> • diagnosis of febrile condition in children • Meningitis therapy in children • Lumbar puncture, examination of cerebral fluid

TEACHING UNIT 13 (THIRTEENTH WEEK):

PHYSIOLOGY OF A NEWBORN

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none"> • Basic principles of adequate access to the newborn, Apgar Skor • Features of newborns born before or after term and with a small body mass for gestational age • Neurological status of a healthy newborn • Most common birth injuries • Newborn hyperbillerubine: Physiological or pathological. • Pathology of the navel of the newborn • Newborn infections • Resuscitation and transport of life-endangered newborn 	<ul style="list-style-type: none"> • Clinical overview of the newborn. • Neurological examination of the newborn. • Placing a Nazogastric catheter

TEACHING UNIT 14 (FOURTEENTH WEEK):

PATHOLOGY OF THE NEWBORN

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none"> • Respiratory distress syndrome and surfactant application • Silent drainage and application of nitrogen oxide by unionatology • Bronchopulmonal dysplasia, oxygeno therapy and mechanical ventilation in neonatology • Congenital diaphragmal hernia 	<ul style="list-style-type: none"> • Drugs in neonatology and dosage • Antimicrobial therapy in neonatology. • Reference values of laboratory analyzes in neonatology

- Necrotic Enterocolitis
- neonatal hepatitis
- Glucose metabolism disorders
- Intracranial bleeding
- neonatal hospital infections

TEACHING UNIT 15 (FIFTEENTH WEEK):

PEDIATRIC CARDIOPULMONARY RESUSCITATION

Lectures: 3 hours	Practice: 3 hours
<ul style="list-style-type: none"> • Resuscitation, emergency situations in pediatrics: • Cardiopulmonary-cerebral resuscitation in pediatrics; • Reanimation and therapeutic procedures in certain specific emergency situations in pediatrics (drowning, lightning - electric shock). 	<ul style="list-style-type: none"> • Poisoning in childhood and prevention. • Urgent conditions and resuscitation in pediatrics.

WEEKLY COURSE SCHEDULE

COURSE	TUESDAY
PEDIATRICS (3+3)	LECTURES 08:00-10:15 (H44)

SCHEDULE OF PRACTICE

PRACTICE (3x9 group) - according to the schedule of the department

week	type	method unit name	teacher
1	L	Growth, development of children, disorder of growth and development	Prof dr Biljana Vuletic
1	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
2	L	Puberty and adolescence	Doc dr Sanja Knezevic
2	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
3	L	Vaccination of children	Prof dr Andjelka Stojkovic
3	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
4	L	Homeostasis and disorders of water and electrolyte transport	Prof dr Biljana Vuletic
4	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
5	L	Nutrition of a healthy child	Prof dr Biljana Vuletic
5	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
6	L	Eating disorders	Prof dr Biljana Vuletic
6	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic

week	type	method unit name	teacher
7	L	Allergic diseases in children	Prof dr Andjelka Stojkovic
7	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
8	L	Genetic diseases and syndromes in pediatrics	Doc dr Sanja Knezevic
8	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
9	L	Primary and secondary immunodeficiency	Prof dr Andjelka Stojkovic
9	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
10	L	Congenital metabolic disorders	Prof dr Biljana Vuletic
10	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
11	L	Pharmacotherapy in children	Prof dr Andjelka Stojkovic
11	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
12	L	Infectious diseases in children	Prof dr Andjelka Stojkovic
12	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic

week	type	method unit name	teacher
13	L	Physiology of a newborn	Doc dr Sanja Knezevic
13	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
14	L	Pathology of the newborn	Doc dr Sanja Knezevic
14	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic
15	L	Pediatric cardiopulmonary resuscitation	Doc dr Sanja Knezevic
15	P		Prof dr Biljana Vuletic Prof dr Andjelka Stojkovic Doc dr Sanja Knezevic