

Course: Pediatrics

Course Coordinator: Jelena Roganović, MD, PhD, Full Prof.

Department: Department of Pediatrics, Faculty of Medicine

Study program: Integrated Undergraduate and Graduate University Study of Dental Medicine

Study year: 3.

Academic year: 2022/2023

SYLLABUS

Course description (a brief description of the course, general instructions, where and in what form the lessons are organized, necessary equipment, instructions for attendance and preparation for classes, student obligations, etc.):

The course **Pediatrics** is a compulsory course in the third year of the Integrated Undergraduate and Graduate University Study of Dental Medicine in English. It consists of 20 hours of lectures and 5 hours of practicals, a total of 25 hours.

The objectives of the course are to acquire basic knowledge and skills in the field of pediatrics, with the emphasis on those conditions that can cause problems in dental practice.

Expected learning outcomes

I. Cognitive domain - Knowledge

- Define tasks and unitarist approach to pediatrics
- Identify the significance of the special care for children's health
- Describe the basic vital statistical terminology related to pediatrics and organization of maternal and child health care
- Recognize the importance of prevention in children's health
- Associate main symptoms and signs of the most common childhood diseases with specific clinical conditions and syndromes
- Explain a multidisciplinary approach to the pediatric patient

II. Psychomotor domain - Skills

- Practice taking a pediatric history
- Apply physical examination of the child
- Recognize the normal physical growth and development of the child and disturbances in growth and development
- Master basic resuscitation skills of children
- Distinguish the most common childhood diseases

The content of the course is as follows:

- Pediatric propedeutics with the focus on the peculiarities of young age, pediatric history (direct anamnestic data and heteroanamnesis), physical examination of the child, communication skills with children, and multidisciplinary approach to the sick child;
- General pediatrics with theoretical and practical aspects of the physiology and pathology of growth and development, nutrition, and a medical psychology of the child;

- Special pediatrics that includes pathological conditions related to certain developmental age segments and pathological conditions related to certain organs and organ systems, with special attention to diseases and conditions encountered in the dental practice.

The content of the course includes following thematic units:

- Introduction to pediatrics
- Social pediatrics
- Growth and development of the child
- The newborn infant
- History and physical examination of the child
- Nutrition and eating disorders
- Diseases of the digestive system and liver
- Cardiovascular diseases
- Diseases of the blood and blood-forming organs
- Malignant diseases
- Rare diseases and dental-craniofacial manifestations
- Diseases of the urinary system
- Respiratory diseases
- Allergic diseases
- Diseases of the endocrine system
- Diseases of the central nervous system and neuromuscular disorders
- The critically ill child
- Medical psychology of the child

Classes (lectures and practicals) are held for 10 days in a row, at the Department of Pediatrics, Clinical Hospital Center Rijeka – locality Kantrida. Lectures are common for all students, and for practicals students are divided into 2 groups. After the end of the course, students have a final written and oral exam.

Students will be provided with all necessary information about classes on a regular basis through the Merlin platform.

Assigned reading:

Kliegman RM et al. Nelson textbook of pediatrics. 21st edition. Philadelphia, Elsevier Saunders, 2020.

Optional/additional reading:

Chaurasia DD. Pediatrics for Students and Practitioners. 2nd edition. CBS Publishers & Distributors Pvt Ltd, India, 2021. ISBN : 9789388725576

Marc dante K, Kliegman R. Nelson Essentials of Pediatrics. 8th Edition. Elsevier, 2018. eBook ISBN: 9780323528061

COURSE TEACHING PLAN:

The list of lectures (with topics and descriptions):

L1. Introduction to pediatrics

Learning outcomes

Define pediatrics. Describe the tasks of pediatrics. Label the basic historical development of pediatrics. Describe the organization of maternal and child health care. Identify the significance of preventive measures in the children's health.

L2. Social pediatrics

Learning outcomes

Define social pediatrics. Describe the tasks of social pediatrics. Describe the basic vital statistical terminology related to pediatrics. Define the factors affecting the health of mothers and children.

L3-4. Growth and development

Learning outcomes

Quote growth factors. Describe normal height growth and weight growth in children. Describe growth and development by age. Illustrate growth charts. Recognize alterations from normal growth and development.

L5. The newborn infant

Learning outcomes

Define physiological characteristics of the neonate and premature infant. Describe care and nutrition of the healthy newborn. Quote birth injuries. Explain physiological and pathological neonatal jaundice. Define critically ill newborn.

L6. History and physical examination of the child

Learning outcomes

Describe history taking and heteroanamnesis in pediatrics. Discuss the peculiarities of the physical examination of the child. Extract and describe throat examination and blood pressure measurement in children.

L7. Nutrition and eating disorders

Learning outcomes

Describe healthy nutrition of children. Quote the advantages of the breastfeeding. Define protein-energy malnutrition. Define obesity.

L8. Diseases of the digestive system and liver

Learning outcomes

Describe oral cavity diseases. Quote the causes of vomiting. Explain causes and characteristics of acute diarrhea and constipation. Describe malabsorption syndrome. Label chronic inflammatory bowel diseases. Describe basic characteristics of liver diseases.

L9. Cardiovascular diseases

Learning outcomes

Describe characteristics of cardiologic history and physical examination in children. Quote main diagnostic procedures in cardiovascular diseases. Quote and classify most frequent congenital heart diseases. Quote most frequent disturbances of heart rate and rhythm.

L10. Diseases of the blood and blood-forming organs

Learning outcomes

Describe structure and function of the hematopoietic system. Quote diagnostic tests in pediatric hematology. Explain the approach to the child with blood disorder. Define anemia. Quote the

causes of anemia. Quote coagulation disorders. Explain the importance of the collaboration between dentist and pediatric hematologist in oral health as an integral part of general health.

L11. Malignant diseases

Learning outcomes

Describe specific etiology and epidemiology of malignant diseases in children. Classify pediatric malignant diseases. Quote main features of the most frequent malignant diseases in children. Recognize the most frequent adverse effects of chemotherapy and radiotherapy. Extract and describe oral mucositis.

L12. Rare diseases and dental-craniofacial manifestations

Learning outcomes

Define rare diseases. Summarize rare diseases associated with dental-craniofacial manifestations. Describe the most frequent dental and craniofacial alterations in rare diseases.

L13. Diseases of the urinary system

Learning outcomes

Describe the most frequent symptoms and signs of the urinary tract diseases in children. Quote diagnostic tests in urinary tract diseases. Describe urinary tract infection. List main features of the acute kidney injury. Define arterial hypertension in children and describe causes.

L14. Respiratory diseases

Learning outcomes

Describe main features of the respiratory tract related to developmental age. Quote the most important congenital anomalies of the respiratory tract. Classify and describe upper respiratory tract infections. Classify pneumonia in children. Define and describe clinical characteristics of childhood asthma. Recognize suspicion of foreign body aspiration and describe therapeutic approach.

L15. Allergic diseases

Learning outcomes

Define basic terminology in allergology. Classify allergic and atopic diseases. Quote most frequent allergens in childhood. Define drug allergy. Define anaphylaxis and cite its frequent causes. Discuss the treatment of anaphylaxis. Classify types and list the causes of urticaria. Cite the therapeutic approach to urticaria and hereditary angioedema.

L16. Diseases of the endocrine system

Learning outcomes

Describe the most frequent symptoms and signs of endocrine diseases. List the most important endocrine diseases. Extract and describe diabetes.

L17. Diseases of the central nervous system and neuromuscular disorders

Learning outcomes

Describe characteristics of history and physical examination in the neuropsychiatry. List main diagnostic tests in neuropsychiatry. Describe the most frequent symptoms and signs of the diseases of the central nervous system and neuromuscular disorders.

L18. The critically ill child

Learning outcomes

Recognize critically ill child. Define cardiac arrest and resuscitation. Describe basic resuscitation skills. Extract and describe respiratory distress and shock.

L19. Medical psychology of the childLearning outcomes

Describe emotional development of the child. Explain the importance and experience of being ill in childhood. List most frequent psychological disorders in childhood and adolescence. Extract and describe reactions of chronically ill child.

L20. How to learn pediatrics?Learning outcomes

Interpret and summarize what was learned. Illustrate clinical cases and discuss them. Distinguish the most common childhood diseases

The list of seminars with descriptions:

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The list of practicals with descriptions:

Practicals are held after lectures. Students are obliged to acquire theoretical knowledge before practicals.

P1. HistoryLearning outcomes

Complete correct history (direct anamnestic data and/or heteroanamnesis). Apply history taking in pediatrics. Illustrate family tree. Demonstrate basic principles of communication with sick kid and parents.

P2. Physical examinationLearning outcomes

Describe the general appearance of the child. Complete pediatric physical exam. Extract and demonstrate blood pressure measurement, pulse palpation and bone age assessment.

P3. Recognition of the seriously ill childLearning outcomes

Recognize life-threatening condition. Demonstrate basic life support measures. Describe the procedure after successful resuscitation.

P4. Special pediatrics ILearning outcomes

Recognize and discuss the most frequent pathologic conditions in the following fields of pediatrics: neonatology, cardiology, pulmonology, allergology, and gastroenterology.

P5. Special pediatrics IILearning outcomes

Recognize and discuss the most frequent pathologic conditions in the following fields of pediatrics: hematology, oncology, endocrinology, nephrology, and neurology.

Students' obligations:

1. Students are required to attend classes regularly (lectures and practicals). Attendance at all forms of teaching is checked.
2. A student has the right to miss up to 30% of classes, exclusively for health reasons. The absence from classes is justified by medical certificate. The compensation of practicals is possible with the agreement of the Course Coordinator.
3. Students are required to attend practicals in clean medical coats. Depending on the epidemiological situation, protective masks, latex gloves, and other protective equipment will be used.

Students' assessment (types of exams, description of the written / oral / practical exam, scoring and grading criteria)

The ECTS grading system is carried out in accordance with the valid Study Regulations of the University of Rijeka.

The activity and knowledge of students is evaluated and assessed during the course and at the final exam. Out of a total of possible 100 points, a student can achieve a maximum of 50 points during the course and up to 50 points at the final exam. Student progress assessment is performed using ECTS (A- F) and a numerical system (1-5). ECTS grades (relative grades) are assigned according to the distribution of absolute grades.

During the course, the student acquires points by attendance and activities during the lectures (20 points), and activities, knowledge and skills demonstrated during the practicals (30 points).

Achievement in lectures is evaluated according to the following table:

Rating	Points
excellent (5)	20
very good (4)	17
good (3)	14
sufficient (2)	10
insufficient (1)	0

Achievement in practicals is evaluated according to the following table:

Rating	Points
excellent (5)	30
very good (4)	25
good (3)	20
sufficient (2)	15
insufficient (1)	0

A student who achieves 25 or more points during the course can take the final exam. The final grade reflects the sum of points earned during the course and those earned at the final exam. If the final exam is graded as insufficient, it is considered that the student has not passed the exam regardless of the number of points earned during the course.

The final exam consists of a written and oral part. The Written exam has 30 multiple choice questions. A student has passed a written test if he/she answers at least 50% of the questions correctly. The student can earn up to 20 points.

The results of the Written exam are evaluated according to the following table:

Correct answers	Rating	Points
27 - 30	excellent (5)	20
23 - 26	very good (4)	17
18 - 22	good (3)	14
15 - 17	sufficient (2)	10
≤ 14	insufficient (1)	0

The oral part of the final exam covers the entire teaching material of the course, the ability to conclude and to connect theoretical knowledge.

The Oral exam is graded according to the following table:

Result	Points
excellent (5)	30
very good (4)	25
good (3)	20
sufficient (2)	15
insufficient (1)	0

The final grade is the sum of ECTS grades achieved during the course and at the final exam. It is expressed by the corresponding percentage, the letter of the alphabet and the numerical grade according to the following table:

Final grade	
A (90-100% or 90-100 points)	excellent (5)
B (75-89,9% or 75-89 points)	very good (4)
C (60-74,9% or 60-74 points)	good (3)
D (50-59,9% or 50-59 points)	satisfactory (2)
F (students who achieved less than 25 points during the classes or did not pass final exam)	unsatisfactory (1)

Other important information regarding to the course:

The classes (lectures and practicals) are held at the Department of Pediatrics, Clinical Hospital Centre Rijeka – locality Kantrida.

Students will be provided with all necessary information about classes on a regular basis through the Merlin platform.

After the end of the course, students fill out a survey anonymously to evaluate teachers and the topics and make suggestions for the improvement.

COURSE SCHEDULE (for academic year 2022. /2023.)

Date	Lectures (time and place)	Practicals (time and place)	Instructor
31.10.2022.	L1 (09.00 – 09.45)		Prof. J. Roganović
31.10.2022.	L2 (10.00 – 10.45)		Prof. J. Roganović
31.10.2022.	L3, 4 (11.00 – 12.30)		Prof. J. Roganović
02.11.2022.	L5 (09.00 – 09.45)		Prof. J. Roganović
02.11.2022.	L6 (10.00 – 10.45)		Prof. J. Roganović
02.11.2022.	L10 (11.00 – 11.45)		Prof. J. Roganović
02.11.2022.	L11 (12.00 – 12.45)		Prof. J. Roganović
03.11.2022.	L7 (09.00 – 09.45)		Prof. I. Prpić
03.11.2022.	L8 (10.00 – 10.45)		Prof. I. Prpić
03.11.2022.	L9 (11.00 – 11.45)		Prof. S. Banac
03.11.2022.	L13 (12.00 – 12.45)		Prof. J. Roganović
04.11.2022.	L14 (09.00 – 09.45)		Prof. S. Banac
04.11.2022.	L15 (10.00 – 10.45)		Prof. S. Banac
04.11.2022.	L16 (11.00 – 11.45)		Prof. S. Severinski
04.11.2022.	L17 (12.00 – 12.45)		Prof. I. Prpić
07.11.2022.	L12 (09.00 – 09.45)		Prof. J. Roganović
07.11.2022.	L18 (10.00 – 10.45)		Ass. Prof. K. Lah Tomulić
07.11.2022.	L19 (11.00 – 11.45)		Ass. Prof. I. Vlašić Cicvarić
07.11.2022.	L20 (12.00 – 12.45)		Prof. J. Roganović
08.11.2022.		P1 A, B (09.15 – 10.00)	Prof. J. Roganović/ N. Brajenić, MD
08.11.2022.		P2 A, B (10.15 – 11.00)	N. Brajenić, MD / Prof. J. Roganović
08.11.2022.		P3 A, B (11.15 – 12.00)	N. Brajenić, MD / Prof. J. Roganović
09.11.2022.		P4 A, B (10.30 – 11.00)	D. Marinić, MD / Prof. J. Roganović
09.11.2022.		P5 A, B (11.15 – 12.00)	I. Vrsaljko, MD / Prof. J. Roganović

List of lectures and practicals:

	LECTURES (Topics)	Teaching hours	Location/Lecture room
L1	Introduction to pediatrics	1	Department of Pediatrics
L2	Social pediatrics	1	Department of Pediatrics
L3, 4	Growth and development of the child	2	Department of Pediatrics
L5	The newborn infant	1	Department of Pediatrics
L6	History and physical examination of the child	1	Department of Pediatrics
L7	Nutrition and eating disorders	1	Department of Pediatrics
L8	Diseases of the digestive system and liver	1	Department of Pediatrics
L9	Cardiovascular diseases	1	Department of Pediatrics
L10	Diseases of the blood and blood-forming organs	1	Department of Pediatrics
L11	Malignant diseases	1	Department of Pediatrics
L12	Rare diseases and dental-craniofacial manifestations	1	Department of Pediatrics
L13	Diseases of the urinary system	1	Department of Pediatrics
L14	Respiratory diseases	1	Department of Pediatrics
L15	Allergic diseases	1	Department of Pediatrics
L16	Diseases of the endocrine system	1	Department of Pediatrics
L17	Diseases of the central nervous system and neuromuscular disorders	1	Department of Pediatrics
L18	The critically ill child	1	Department of Pediatrics
L19	Medical psychology of the child	1	Department of Pediatrics
L20	How to learn pediatrics?	1	Department of Pediatrics
	TOTAL TEACHING HOURS	20	

	PRACTICALS (Topics)	Teaching hours	Location/Lecture room
P1	Medical history	1	Department of Pediatrics
P2	Physical examination	1	Department of Pediatrics
P3	Recognition of the seriously ill child	1	Department of Pediatrics
P4	Special pediatrics I	1	Department of Pediatrics
P5	Special pediatrics II	1	Department of Pediatrics
	TOTAL TEACHING HOURS	5	

	FINAL EXAM DATES
1.	10.11.2022.
2.	28.11.2022.
3.	15.12.2022.