JAGIELLONIAN UNIVERSITY
MEDICAL COLLEGE

Pediatrics

Educational subject description sheet

Basic information

Department Faculty of Medicine	**Didactic cycle** 2016/17
Field of study Medical Program	**Realization year** 2018/19, 2019/20, 2020/21, 2021/22
Study level long-cycle master's degree program	**Lecture languages** English
Study form full-time	**Block** obligatory for passing in the course of studies
Education profile general academic	**Mandatory** obligatory
Disciplines Medical science	**Examination** examination
Subject related to scientific research Yes	**Standard groups** C. Preclinical course, E. Clinical non-procedural medical disciplines

Subject coordinator	Przemko Kwinta
Lecturer	Przemko Kwinta, Krzysztof Fyderek, Jerzy Starzyk, Sławomir Kroczka, Walentyna Balwierz, Agnieszka Biedroń, Rafał Chrzan, Małgorzata Chmielowska-Trybek, Ewa Cichocka-Jarosz, Łukasz Cichy, Małgorzata Czogała, Magdalena Ćwiklińska, Barbara Dobrowolska-Glazar, Dorota Drożdż, Monika Drożdż, Aleksandra Dudzik, Wojciech Durlak, Magdalena Dutsch-Wicherek, Maria Dzierżęga, Aleksandra Gergont, Maja Gilarska, Andrzej Grudzień, Mateusz Jagła, Dominika Januś, Urszula Jedynak-Wąsowicz, Anna Kalicka-Kasperczyk, Grzegorz Lis, Anna Wędrychowicz, Andrzej Wędrychowicz, Stanisław Pieczarkowski, Natalia Podolec, Małgorzata Sładek, Anna Stochel-Gaudyn, Agata Wasilewska, Monika Miklaszewska, Anna Moczulska, Iwona Ogarek, Elżbieta Szczęsny-Choruz, Ewa Wierzchowska-Słowiaczek, Katarzyna Zachwieja, Kinga Kwiecińska, Tomasz Klekawka, Katarzyna Pawińska-Wąsikowska, Szymon Skoczeń, Aleksandra Wieczorek, Katarzyna Konarska, Jacek Kuźma, Elżbieta Olczykowska-Siara, Piotr Weryński, Wojciech Górecki, Małgorzata Steczkowska, Joanna Kwinta-Rybicka, Kinga Kowalska-Duplaga, Aleksandra Krasowska-Kwiecień, Barbara Hull, Małgorzata Wójcik, Marta Olszewska, Alina Sobczak, Katarzyna Starzec, Izabela Szymońska, Przemysław Tomasik

Periods Semester 5, Semester 6	**Examination** credit **Activities and hours** seminar: 68, classes: 66	**Number of ECTS points** 7.0

Periods Semester 7, Semester 8	**Examination** credit **Activities and hours** seminar: 26, classes: 32	**Number of ECTS points** 4.0

Periods Semester 9, Semester 10	**Examination** credit **Activities and hours** classes: 35, seminar: 39, simulations: 18	**Number of ECTS points** 6.0

Periods Semester 11, Semester 12	**Examination** examination **Activities and hours** clinical classes: 114, simulations: 6	**Number of ECTS points** 8.0

Goals

C1	To familiarize students with the basic information on developmental medicine
C2	Teaching basic practical skills, including collecting pediatric history and full physical examination of the child
C3	Explaining major issues in the fields of infectious diseases, pulmonology, allergology and children's gastroenterology
C4	Explaining major issues in the fields of cardiovascular, urinary tract, neonatal, connective tissue and environmental diseases
C5	Explaining major issues in the fields of pediatric oncology and hematology, endocrinology and neurology
C6	Teaching practical skills in pediatrics
C7	Preparation for independent work in the field of pediatrics

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge – Student knows and understands:			
W1	environmental and epidemiological determinants of the most frequent diseases	E.W1	multiple choice test
W2	the principles of nutrition of healthy and sick children, including breastfeeding, preventive vaccination and child health monitoring	E.W2	multiple choice test

W3	issues of abused child and sexual abuse, mental retardation and behavioral disorders – psychoses, addictions, eating disorders and excretion in children	E.W4	multiple choice test
W4	the most common life-threatening conditions in children and the rules of conduct in these conditions	E.W6	multiple choice test
W5	the causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases of children: (1) rickets, tetanus, convulsions, (2) heart defects, myocarditis, endocarditis, pericarditis, cardiomyopathy, arrhythmia, heart failure, hypertension, syncope, (3) acute and chronic diseases of the upper and lower airways, congenital defects of the respiratory system, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, anaphylactic shock, angioedema, (4) anemia, hemorrhagic diatheses, conditions of bone marrow failure, pediatric neoplastic diseases, including solid tumors typical of childhood, (5) acute and chronic abdominal pain, vomiting, diarrhea, constipation, gastrointestinal bleeding, peptic ulcer disease, non-specific intestinal diseases, pancreatic diseases, cholestasis and liver diseases, and other acquired diseases and congenital defects of the digestive tract, (6) urinary tract infections, congenital anomalies of the urinary system, nephrotic syndrome, renal stones, acute and chronic renal failure, acute and chronic nephritis, systemic kidney diseases, urinary tract disorders, vesicoureteral reflux disease, (7) growing disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, disorders of puberty and gonadal functions, (8) cerebral palsy, encephalomyelitis, meningitis, epilepsy, (9) the most common infectious diseases of childhood, (10) genetic syndromes, (11) diseases of connective tissue, rheumatic fever, juvenile arthritis, systemic lupus, dermatomyositis	E.W3	multiple choice test
W6	development, structure and functions of the human body in normal and pathological conditions	O.W1	multiple choice test
W7	symptoms and course of diseases	O.W2	multiple choice test
W8	methods of diagnostic and therapeutic procedures appropriate for specific disease states	O.W3	multiple choice test
W9	basic mechanisms of cell and tissue damage	C.W27	multiple choice test
W10	issues related to detailed pathology of organs, macro- and microscopic images and clinical course of pathomorphological changes in particular organs	C.W31	multiple choice test
W11	clinical forms of the most frequent diseases of particular systems and organs, metabolic diseases and disorders of water-electrolyte, hormonal and acid-base metabolism	C.W34	multiple choice test
W12	micro-organisms, including pathogenic and present in the physiological flora	C.W12	multiple choice test
W13	symptoms of iatrogenic infections, their pathways and pathogens causing changes in individual organs	C.W18	multiple choice test
W14	basics of microbiological and parasitological diagnostics basics of disinfection, sterilization and aseptic management	C.W19	multiple choice test

W15	basic principles of disinfection, sterilization and aseptic management	C.W20	multiple choice test
W16	genetic determinants of human blood groups and serological conflict in the Rh system	C.W6	multiple choice test
Skills – Student can:			
U1	carry out a medical interview with the child and his or her family	E.U2	booklet of professional skills, practical examination
U2	carry out a physical examination of a child of all ages	E.U4	booklet of professional skills, practical examination
U3	conduct routine health checks	E.U11	booklet of professional skills
U4	assess the degree of advancement of puberty	E.U10	practical examination
U5	compile anthropometric and blood pressure measurements with data on centile grids	E.U9	booklet of professional skills, practical examination
U6	perform differential diagnosis of the most common diseases of adults and children	E.U12	practical examination, multiple choice test
U7	plan diagnostic, therapeutic and prophylactic procedures	E.U16	practical examination, multiple choice test
U8	interpret the results of laboratory tests and identify the causes of abnormalities	E.U24	booklet of professional skills, practical examination
U9	apply nutritional treatment, including enteral and parenteral nutrition	E.U25	practical examination, multiple choice test
U10	qualify the patient for vaccination	E.U27	booklet of professional skills
U11	perform basic procedures and medical procedures including: 1) body temperature measurement, heart rate measurement, non-invasive blood pressure measurement, 2) monitoring of vital signs by means of a patient monitor, pulse oximetry, 3) spirometric examination, oxygen therapy, assisted ventilation and replacement ventilation, 4) introduction of the oropharyngeal tube, 5) intravenous, intramuscular and subcutaneous injections, cannulation of peripheral veins, collection of peripheral venous blood, collection of blood for culture, collection of arterialized capillary blood, collection of arterialized capillary blood, 6) taking nasal, throat and skin swabs, puncturing of the pleural cavity, 7) bladder catheterization in women and men, gastric tube, gastric lavage, gastric lavage, enema, 8) standard resting electrocardiogram with interpretation, electrical cardioversion and cardiac defibrillation, 9) simple strip tests and blood glucose measurements	E.U29	booklet of professional skills, practical examination
U12	assist in the performance of the following procedures and medical procedures: 1) transfusion of blood and blood-derived products, 2) drainage of the pleural cavity, 3) puncture of the pericardial sac, 4) puncture of the peritoneal cavity, 5) lumbar puncture, 6) fine-needle biopsy, 7) epidermal tests, 8) intradermal and scarification tests and interpret their results	E.U30	booklet of professional skills

U13	plan specialist consultations	E.U32	practical examination, multiple choice test
U14	maintain patient's medical records	E.U38	booklet of professional skills
U15	assist in the performance of the following procedures and medical procedures: (i) bone marrow aspiration biopsy	E.U39	booklet of professional skills
U16	select appropriate physical activity in the developmental period of children and adolescents and propose health training in adulthood, both in health and disease	E.U40	booklet of professional skills
U17	assess the condition of the newborn on the Apgar scale and its maturity, and examine neonatal reflexes	E.U8	booklet of professional skills
U18	identify medical problems and prioritize medical management	O.U1	booklet of professional skills, practical examination
U19	identify life-threatening conditions that require immediate medical intervention	O.U2	booklet of professional skills
U20	plan the diagnostic procedure and interpret its results	O.U3	booklet of professional skills, practical examination
U21	implement appropriate and safe therapeutic treatment and predict its effects	O.U4	booklet of professional skills, practical examination
U22	communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient	O.U7	classroom observation
U23	communicate and share knowledge with colleagues in a team	O.U8	classroom observation
U24	critically evaluate the results of scientific research and adequately justify the position	O.U9	classroom observation
U25	interpret the results of microbiological tests	C.U10	booklet of professional skills, multiple choice test
Social competences – Student is ready to:			
K1	to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures	O.K1	classroom observation
K2	to be guided by the well-being of a patient	O.K2	classroom observation
K3	respect medical confidentiality and patients' rights	O.K3	classroom observation
K4	take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease	O.K4	classroom observation
K5	promote health-promoting behaviors	O.K6	classroom observation
K6	use objective sources of information	O.K7	classroom observation
K7	formulate conclusions from own measurements or observations	O.K8	classroom observation

Calculation of ECTS points

Semester 5, Semester 6

Activity form	Activity hours*
seminar	68
classes	66
preparation for classes	50
preparation for test	20
Student workload	**Hours** 204
Workload involving teacher	**Hours** 134
Practical workload	**Hours** 66

* hour means 45 minutes

Semester 7, Semester 8

Activity form	Activity hours*
seminar	26
classes	32
preparation for classes	50
Student workload	**Hours** 108
Workload involving teacher	**Hours** 58
Practical workload	**Hours** 32

* hour means 45 minutes

Semester 9, Semester 10

Activity form	Activity hours*
classes	35
seminar	39
simulations	18

preparation for classes	50
preparation for test	20
Student workload	**Hours** 162
Workload involving teacher	**Hours** 92
Practical workload	**Hours** 53

* hour means 45 minutes

Semester 11, Semester 12

Activity form	**Activity hours***
clinical classes	114
simulations	6
preparation for classes	50
preparation for test	30
Student workload	**Hours** 200
Workload involving teacher	**Hours** 120
Practical workload	**Hours** 120

* hour means 45 minutes

Study content

No.	Course content	Subject's learning outcomes	Activities

1.	III year Seminars/case presentations: 1. Physical development. Assessment of growth 2. Fever 3. Fetal and neonatal circulation. Transition period. 4. Infectious diseases in neonates 5. Differential diagnosis of proteinuria, erythrocyturiaand pyuria 6. Congenital defects of kidney and urinary tract 7. Congenital heart defects. History and physicalexamination. Major and minor clinical signs 8. Vomiting, diarrhoea, dehydration 9. Lymphadenopathy, hepatoand splenomegaly 10. Anemias in children, bleeding disorders 11. Normal and abnormal growth 12. Normal and abnormal puberty 13. Assessment of motor, cognitive and speachdevelopment 14. Food allergy. Anaphylactic shock. 15. Diagnostic and therapeutic management of childrenwith acute and chronic respiratory disorders 16. Respiratory failure – definition, causes, diagnostics,treatment 17. Allergic diseases: asthma, allergic rhinitis, atopicdermatitis, (definition, diagnostic and therapeuticapproach). 18. Genetic lung diseases: Cystic fibrosis (definition,genetics, symptomatology, diagnosis, treatment andscreening). Primary cilliary diskinesia 19. The diagnosis of definitive or probable tuberculosis inchildren. A child who had a contact with adult withtuberculosis disease. 20. Pneumonia - classification, clinical course, imagingtechniquies - USG, CT 21. Jaundice 22. Nutrition of a healthy child and with gastrointestinaldiseases 23. Development of GI tract and congentalgastrointestinal anomalies 24. Chronic diarrhoea 25. Chronic abdominal pain. Functional disorders of GItract 26. Asterial hypertenssion 27. Acute renal injury 28. Chronic renal failure 29. Glomeluropathies- primary and secondary. Nephroticsyndrome 30. Renal failure treatment - peritoneal dialysis, renaltransplant 31. Nocturnal enuresis 32. Stones in urinary tract. Nephrocalcinosis 33. Pathology 34. Pathology	W1, W2, W5, W6, U1, U10, U2, U3, U4, U5, U6, K3, K5	seminar

2.	III year Practical exercises 1. Hospitalized child. The rules of patient and parentsrespect. Patient’s records. 2. Taking history in pediatrics 3. Assessment of general condition. 4. Assessment of growth and nutrition 5. Evaluation of healthy newborn 6. Evaluation of the patients in ICU 7. Skin, subcutaneous tissue, lymph nodes. 8. The chest: inspection, percussion, auscultation.Blood pressure measurement 9. The most common symptoms of respiratory tractdisorders:cough,dysponse, stridor, cyanosis, physiologicaland pathological ausculatory findings 10. The abdomen-inspection, bowles sounds,percussionand palpation. External genitalia examination 11. The most common symptoms of GI tractdisorders:pain, vomiting, diarrhea, constipations,hepatosplenomegaly 12. The muscular strenghtand tone. Deep tendonreflexes. Meningeal signs in different age. 13. Oral cavity, nose and pharynx. Symptoms of oralcavity disorders. The neck examination. 14. Examination of extremities and joints. Active andpassive range of movements. Hips examination. 15. Acute and chronic upper respiratory tract infections.Laryngitis and epiglottitis. 16. Bronchiolitis – management and prevention. 17. Asthma, chronic bronchitis, post nasal drip syndrome.The techniques of inhalations and nebulization. 18. Community acquired pneumonia. Complications –empyema, abscess. Nosocomial pneumonia – prevention. 19. Artificial ventilation. Chronic assisted ventilation.Tracheostomy. Blood gases analysis. 20. Chronic cough – diagnostic and therapeuticmanagement. Pulmonary function tests: spirometry,challenge tests, PEF. Recommendation for flexiblebronchoscopy 21. Urticaria/angioedema. Allergy testing: Skin pricktests, intradermal tests, patch tests, blood tests –recommendation and interpretation. 22. Gastroesophageal reflux disease. Infant regurgitation.Stomach ulces and H. pylori infection. 23. Inflammatory bowel diseases. 24. Additional tests in pediatric gastroenterology(hydrogen breath test, manometry). Endoscopicexaminations 25. Acute infections of GI tract. 26. Urgent conditions in pediatric gastroenterology. 27. Approach to neonatal and childhood jandice. 28. Nephrotic syndrome 29. Urinary tract infections 30. Arterial hypertension 31. Acute kidney injury. Dialysis techniques 32. Urinary tract malformations (Urology) 33. Chronic kidney diseases	W10, W11, W5, W7, W8, W9, U11, U12, U18, U2	classes

3.	IV year Seminars/case presentations 1. Infectious diseases in neonates 2. Cyanotic and non cyanotic cardiac defects 3. Cardiomyopathies 4. Ductus depended cardiac defects in neonates 5. Shock in neonates 6. Congestive heart failure in infants-diagnostics andtreatment. 7. Congenital heart defects with functionally singleventricle. 8. JRA/ Lupus erythromatosus 9. Congenital anomalies of urinary tract in children 10. Prematurity 11. Perinatal asphyxia/birth trauma 12. Randomized clinical trials in pediatrics 13. Decission making in pediatrics Practical exercises 1. Additional tests in cardiologic diagnostics. 2. Major and minor signs of congenital heart defects. 3. Hemodynamic consequences of congenital heartdefects. Interventions in pediatric cardiology. 4. Echocardiography in heart structure and functionassessment. 5. Congenital heart defects 6. Pediatric rheumathology - JRA/SLE 7. Vasculitis. Kawasaki disease. Henoch-Schonleinpurpura 8. Fetal and neonatal circulation. Transition period. 9. Prematurity. 10. Perinatal trauma. 11. Hemolytic disease of the newborn. 12. Respiratory failure in neonates. 13. Infections in neonatal period. 14. Newborn small for the gestational age. 15. Child with chronic disorder in pediatric department. 16. Congenital errors of metabolism	W16, W5, W7, W8, U11, U12, U17, U18, U19, U2, U9	classes, seminar

4.	V year Seminars/case presentations 1. Pediatric diabetology 2. Disorders of puberty. Disorders of sexualdevelopment 3. Emergencies in diabetology 4. Disorders of parathyroid. Fluid and electrolytedisorders 5. Signs and symptoms in the most common severendocrine dieases 6. Solid tumors in pediatrics 7. Hemostatic disorders. 8. Anemia. 9. Emergencies in hematology and oncology 10. Oncology – case presentation 11. Solid tumors in neonates 12. Epileptic and non epileptic spells in children 13. Neurodegenerative disorders 14. Headache and migraine 15. Mental and developmental deficits. Cerebral palsy 16. Neuroimaging and electrophysiological techniques ofCSN 17. Pathology 18. Pathology Practical exercises 11 x 3 hours 1. Growth disorders 2. Puberty disorders 3. Thyroid disorders 4. Diabetes melitus 5. Leukemias in pediatrics 6. Lymphomas in children 7. Neuroblastoma 8. Sarcomas of soft tissue, bone tumors, tumors of liverand kidneys. 9. Epilepsy – differential diagnosis. Clinical approach.Treatment. 10. Neuromuscular disorders in children. Acute flaccidparesis 11. Emergencies in neurology	W10, W11, W3, W5, W7, W8, W9, U11, U12, U15, U18, U2	classes, seminar
5.	Microbiology in pediatrics	W12, W13, W14, W15, U25	classes, seminar

6.	Medical simulations: Acute stridor Asthma exacerbation Shock in neoante Dehydration in neonate. Febrile seizures. Coarctation of the aorta. Supraventricular tachycardia Neonatal fever. Sepsis Non-traumatic coma. Diabetic coma. Nephrotic syndrome. Chronic kidney diseases Lymphodenopathy	U18, U19, U20, U21	simulations
7.	VI Practical occupational learning - 120 hours (114 clinicalclasses, 6 simulations) Students are assigned to one hospital ward for 4 weeks.Student's duties are: participation in preparation beforechildren's examination, participation in keeping therecords - recording the findings in patient's statuspraesens, recording tests' results in hospital records,participation in examination, participation in consulting atinfirmary and different hospital wards and carrying out medical procedures according to the list and principleswritten in the book called "The List of Medicine Graduate'sSkills"	W4, W8, U11, U12, U13, U14, U15, U16, U18, U19, U20, U21, U22, U23, U24, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7	clinical classes, simulations

Course advanced

Semester 5, Semester 6

Teaching methods:

clinical classes, seminar

Activities	Examination methods	Credit conditions
seminar	classroom observation, multiple choice test	active participation in classes, 100% attendance,multiple choice test (40 items), passing score 60%
classes	classroom observation, multiple choice test	active participation in classes, 100% attendance,multiple choice test (40 items), passing score 60%

Semester 7, Semester 8

Teaching methods:

clinical classes, seminar

Activities	Examination methods	Credit conditions
seminar	classroom observation	active participation in classes , 100% attendance
classes	booklet of professional skills, classroom observation	active participation in classes , 100% attendance

Semester 9, Semester 10

Teaching methods:

clinical classes, seminar, simulation

Activities	Examination methods	Credit conditions
classes	booklet of professional skills, classroom observation, multiple choice test	active participation in classes, 100% attendance, multiple choice test(40 items, the examination material scope from IV-V year), passing score 60%
seminar	classroom observation, multiple choice test	active participation in classes, 100% attendance, multiple choice test(40 items, the examination material scope from IV-V year), passing score 60%
simulations	classroom observation, multiple choice test	active participation in classes, 100% attendance, multiple choice test(40 items, the examination material scope from IV-V year), passing score 60%

Semester 11, Semester 12

Teaching methods:

clinical classes, simulation

Activities	Examination methods	Credit conditions
clinical classes	booklet of professional skills, practical examination, classroom observation, multiple choice test	active participation in classes, 100% attendance, multiple choice test (60 items, the examination material scope from III year - VI year)
simulations	booklet of professional skills, classroom observation	100 % attendance

Entry requirements

Completion of subjects: Clinical biochemistry with elements of chemistry, Pathology

Literature

Obligatory

1. Nelson Essentials of Pediatrics –Karen J. Marcdante, Robert M. Kliegman; Elsevier; 8 edition (April 12, 2013)
2. 5-Minute Pediatric Consult - Michael D. Cabana; Wolters Kluwer 2014; 8th ed. Edition

Optional

1. Pediatric Clinical Skills. R.B Goldbloom. Elsevier, 2011

Standard effects

Code	Content
C.U10	interpret the results of microbiological tests
C.W6	genetic determinants of human blood groups and serological conflict in the Rh system
C.W12	micro-organisms, including pathogenic and present in the physiological flora
C.W18	symptoms of iatrogenic infections, their pathways and pathogens causing changes in individual organs
C.W19	basics of microbiological and parasitological diagnostics basics of disinfection, sterilization and aseptic management
C.W20	basic principles of disinfection, sterilization and aseptic management
C.W27	basic mechanisms of cell and tissue damage
C.W31	issues related to detailed pathology of organs, macro- and microscopic images and clinical course of pathomorphological changes in particular organs
C.W34	clinical forms of the most frequent diseases of particular systems and organs, metabolic diseases and disorders of water-electrolyte, hormonal and acid-base metabolism
E.U2	carry out a medical interview with the child and his or her family
E.U4	carry out a physical examination of a child of all ages
E.U8	assess the condition of the newborn on the Apgar scale and its maturity, and examine neonatal reflexes
E.U9	compile anthropometric and blood pressure measurements with data on centile grids
E.U10	assess the degree of advancement of puberty
E.U11	conduct routine health checks
E.U12	perform differential diagnosis of the most common diseases of adults and children
E.U16	plan diagnostic, therapeutic and prophylactic procedures
E.U24	interpret the results of laboratory tests and identify the causes of abnormalities
E.U25	apply nutritional treatment, including enteral and parenteral nutrition
E.U27	qualify the patient for vaccination
E.U29	perform basic procedures and medical procedures including: 1) body temperature measurement, heart rate measurement, non-invasive blood pressure measurement, 2) monitoring of vital signs by means of a patient monitor, pulse oximetry, 3) spirometric examination, oxygen therapy, assisted ventilation and replacement ventilation, 4) introduction of the oropharyngeal tube, 5) intravenous, intramuscular and subcutaneous injections, cannulation of peripheral veins, collection of peripheral venous blood, collection of blood for culture, collection of arterialized capillary blood, collection of arterialized capillary blood, 6) taking nasal, throat and skin swabs, puncturing of the pleural cavity, 7) bladder catheterization in women and men, gastric tube, gastric lavage, gastric lavage, enema, 8) standard resting electrocardiogram with interpretation, electrical cardioversion and cardiac defibrillation, 9) simple strip tests and blood glucose measurements
E.U30	assist in the performance of the following procedures and medical procedures: 1) transfusion of blood and blood-derived products, 2) drainage of the pleural cavity, 3) puncture of the pericardial sac, 4) puncture of the peritoneal cavity, 5) lumbar puncture, 6) fine-needle biopsy, 7) epidermal tests, 8) intradermal and scarification tests and interpret their results
E.U32	plan specialist consultations
E.U38	maintain patient's medical records
E.U39	assist in the performance of the following procedures and medical procedures: (i) bone marrow aspiration biopsy
E.U40	select appropriate physical activity in the developmental period of children and adolescents and propose health training in adulthood, both in health and disease

Code	Content
E.W1	environmental and epidemiological determinants of the most frequent diseases
E.W2	the principles of nutrition of healthy and sick children, including breastfeeding, preventive vaccination and child health monitoring
E.W3	the causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases of children: (1) rickets, tetanus, convulsions, (2) heart defects, myocarditis, endocarditis, pericarditis, cardiomyopathy, arrhythmia, heart failure, hypertension, syncope, (3) acute and chronic diseases of the upper and lower airways, congenital defects of the respiratory system, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, anaphylactic shock, angioedema, (4) anemia, hemorrhagic diatheses, conditions of bone marrow failure, pediatric neoplastic diseases, including solid tumors typical of childhood, (5) acute and chronic abdominal pain, vomiting, diarrhea, constipation, gastrointestinal bleeding, peptic ulcer disease, non-specific intestinal diseases, pancreatic diseases, cholestasis and liver diseases, and other acquired diseases and congenital defects of the digestive tract, (6) urinary tract infections, congenital anomalies of the urinary system, nephrotic syndrome, renal stones, acute and chronic renal failure, acute and chronic nephritis, systemic kidney diseases, urinary tract disorders, vesicoureteral reflux disease, (7) growing disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, disorders of puberty and gonadal functions, (8) cerebral palsy, encephalomyelitis, meningitis, epilepsy, (9) the most common infectious diseases of childhood, (10) genetic syndromes, (11) diseases of connective tissue, rheumatic fever, juvenile arthritis, systemic lupus, dermatomyositis
E.W4	issues of abused child and sexual abuse, mental retardation and behavioral disorders – psychoses, addictions, eating disorders and excretion in children
E.W6	the most common life-threatening conditions in children and the rules of conduct in these conditions
O.K1	to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures
O.K2	to be guided by the well-being of a patient
O.K3	respect medical confidentiality and patients' rights
O.K4	take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease
O.K6	promote health-promoting behaviors
O.K7	use objective sources of information
O.K8	formulate conclusions from own measurements or observations
O.U1	identify medical problems and prioritize medical management
O.U2	identify life-threatening conditions that require immediate medical intervention
O.U3	plan the diagnostic procedure and interpret its results
O.U4	implement appropriate and safe therapeutic treatment and predict its effects
O.U7	communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient
O.U8	communicate and share knowledge with colleagues in a team
O.U9	critically evaluate the results of scientific research and adequately justify the position
O.W1	development, structure and functions of the human body in normal and pathological conditions
O.W2	symptoms and course of diseases
O.W3	methods of diagnostic and therapeutic procedures appropriate for specific disease states