



| Syllabus for academic year: 2020/2021                    |   |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
|--|---|---------------|-------------------------|-----------------------------------|-----------------------|-------------------------|---------------------------------------|--------------------------------------|---|-------------------------------|-------------------------------------|------------------------------------|---------------------------------|-----------------|
| Training cycle: Pediatrics                               |   |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Description of the course                                |   |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Module/Course  | <b>Pediatrics (2)</b>   |               |                         |                                   |                       |                         |                                       |                                      |   |                               | Group of detailed education results |                                    |                                 |                 |
|  |   |               |                         |                                   |                       |                         |                                       |                                      |   |                               | Group code<br>E                     | Group name<br>Clinical nonsurgical |                                 |                 |
| Faculty:   | Medicine, English Division  |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Major:   | medicine  |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Specialties  | N/A   |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Level of studies   | Uniform magister studies <b>X</b> *<br>I degree<br>II degree<br>III degree<br>postgraduate  |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Form of studies  | <input checked="" type="checkbox"/> full-time <input checked="" type="checkbox"/> part-time |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Year of studies  | V   |               |                         |                                   |                       | Semester                |                                       | x Winter (9)<br>x Summer (10)        |   |                               |                                     |                                    |                                 |                 |
| Type of course   | <input checked="" type="checkbox"/> obligatory<br>limited choice<br>free choice / elective  |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Course   | major <input checked="" type="checkbox"/> basic   |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Language of instruction                                  | Polish <input checked="" type="checkbox"/> English    other                                 |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| * mark    with an <b>X</b>                               |   |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Number of hours  |   |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Form of education  |   |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| Unit teaching the course                                 | Lectures (L)  | Seminars (SE) | Auditorium classes (AC) | Major Classes – not clinical (MC) | Clinical Classes (CC) | Laboratory Classes (LC) | Classes in Simulated Conditions (CSC) | Practical Classes with Patient (PCP) | Specialist Classes – magister studies (SCM) | Foreign language Course (FLC) | Physical Education obligatory (PE)  | Vocational Practice (VP)           | Self-Study (Student's own work) | E-learning (EL) |
|  | <b>Winter Semester</b>  |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |
| I Katedra i Klinika Pediatrii, Alergologii i Kardiologii |   |               |                         |                                   |                       |                         |                                       |                                      |   |                               |                                     |                                    |                                 |                 |





|  |    |  |  |            |  |  |  |  |  |  |  |    |  |
|--|----|--|--|------------|--|--|--|--|--|--|--|----|--|
| Katedra i Klinika<br>Transplantacji Szpiku,<br>Onkologii i Hematologii<br>Dziecięcej |    |  |  |            |  |  |  |  |  |  |  |    |  |
| Direct (contact) education   |    |  |  | 6          |  |  |  |  |  |  |  | 3  |  |
| Online learning<br>(synchronous)   | 4  |  |  | (up to 6)  |  |  |  |  |  |  |  |    |  |
| Distance learning<br>(asynchronous)  |    |  |  | 0          |  |  |  |  |  |  |  |    |  |
| <b>TOTAL per year:</b>   |    |  |  |            |  |  |  |  |  |  |  |    |  |
| I Katedra i Klinika Pediatrii,<br>Alergologii i Kardiologii                          |    |  |  |            |  |  |  |  |  |  |  |    |  |
| Direct (contact) education   |    |  |  | 12         |  |  |  |  |  |  |  | 6  |  |
| Online learning<br>(synchronous)   | 8  |  |  | (up to 12) |  |  |  |  |  |  |  |    |  |
| Distance learning<br>(asynchronous)  |    |  |  | 0          |  |  |  |  |  |  |  |    |  |
| Katedra i Klinika<br>Endokrynologii i<br>Diabetologii Wieku<br>Rozwojowego           |    |  |  |            |  |  |  |  |  |  |  |    |  |
| Direct (contact) education   |    |  |  | 12         |  |  |  |  |  |  |  | 6  |  |
| Online learning<br>(synchronous)   | 8  |  |  | (up to 12) |  |  |  |  |  |  |  |    |  |
| Distance learning<br>(asynchronous)  |    |  |  | 0          |  |  |  |  |  |  |  |    |  |
| Katedra i Klinika<br>Transplantacji Szpiku,<br>Onkologii i Hematologii<br>Dziecięcej |    |  |  |            |  |  |  |  |  |  |  |    |  |
| Direct (contact) education   |    |  |  | 12         |  |  |  |  |  |  |  | 6  |  |
| Online learning<br>(synchronous)   | 8  |  |  | (up to 12) |  |  |  |  |  |  |  |    |  |
| Distance learning<br>(asynchronous)  |    |  |  | 0          |  |  |  |  |  |  |  |    |  |
| TOTAL  | 24 |  |  | 36         |  |  |  |  |  |  |  | 18 |  |

\*due to the epidemic threat lectures and some classes may be held on-line

**Educational objectives** (max. 6 items)

**C1. To familiarize the student with the diagnosis of life-threatening conditions and diagnostic and therapeutic activities.**

**C2. Developing students' subjective and objective examination skills in the aspect of cardiovascular disease, endocrine system and cancer.**

**C3. Acquiring the ability to plan diagnostic procedures, interpret its results and plan therapeutic procedures.**

**C4. To familiarize students with morphological and physiological differences of particular organs and systems in developmental age.**





| Education result matrix for module/course in relation to verification methods of the intended education result and the type of class |                                  |  |   |   |
|--|----------------------------------|--|---|---|
| Number of course education result  | Number of major education result | Student who completes the module/course knows/is able to   | Methods of verification of intended education results (forming and summarising) | Form of didactic class<br><i>**enter the abbreviation</i> |
| <b>W01</b>   | <b>E.W1.</b>                     | Knows, describes, defines and explains the environmental and epidemiological conditions of the most common diseases.   | Oral, written exam  | L, CC   |
| <b>W02</b>   | <b>E.W2.</b>                     | Knows, describes, defines and explains the principles of nutrition for healthy and sick children, protective vaccinations and health care.   | Oral, written exam  | L, CC   |
| <b>W03</b>   | <b>E.W3.</b>                     | Knows, describes, defines, explains and understands the causes, symptoms, principles of diagnosis and therapeutic treatment in the case of the most common diseases of children:<br>a) rickets, tetany, convulsions, b) heart defects, myocarditis, endocarditis, cardiomyopathy, arrhythmias, heart failure, hypertension, syncope, c) acute and chronic diseases of the upper and lower respiratory tract, congenital defects of the respiratory system, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, anaphylactic shock, angioedema edema, d) anemia, haemorrhagic diathesis, bone marrow failure, childhood cancers, including solid tumors typical of childhood; e) acute and chronic abdominal pain, vomiting, diarrhea, constipation, gastrointestinal bleeding, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis and liver diseases, and other acquired and congenital gastrointestinal disorders, f) urinary tract infections, congenital malformations, nephrotic syndrome, nephrolithiasis, acute and chronic renal failure, acute and chronic kidney disease, renal system diseases, urinary disorders, vesicoureteral reflux disease, g) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders and gonadal function, h) cerebral palsy, inflammation of the brain and meningitis, epilepsy, i) the most common infectious diseases of childhood, j) genetic syndromes, k) connective tissue diseases, rheumatic fever, juvenile arthritis, systemic lupus, dermatomyositis. | oral written exam   | L, CC   |
| <b>W04</b>   | <b>E.W4.</b>                     | Knows, describes, defines and explains issues of: battered child and sexual abuse, mental retardation, behavioral disorders: psychoses, addictions, eating disorders and excretion in children.  | Oral, written exam  | L, CC   |
| <b>W05</b>   | <b>E.W6.</b>                     | Knows, describes, defines and explains the most frequently occurring life threatening conditions in children and the rules of management in these states.  | Oral, written exam  | L, CC   |
| <b>U01</b>   | <b>E.U2.</b>                     | Can conduct a medical interview with the child and his family.   | Practical/oral/written exam   | CC  |



|     |        |  |                             |    |
|-----|--------|--|-----------------------------|----|
| U02 | E.U4.  | Can carry out physical examination of a child of all ages.   | Practical/oral/written exam | CC |
| U03 | E.U12. | Is able to plan and carry out differential diagnostics of the most common diseases of children.  | Practical/oral/written exam | CC |
| U04 | E.U14. | Can recognize the states of immediate life threat.   | Practical/oral/written exam | CC |
| U05 | E.U16. | Can plan the diagnostic, therapeutic and prophylactic procedures.  | Practical/oral/written exam | CC |
| U06 | E.U24. | Is able to interpret laboratory tests and identify causes of deviations.   | Practical/oral/written exam | CC |
| U07 | E.U29. | Is able to perform basic procedures and medical procedures, including:<br>a) body temperature measurement, heart rate measurement, non-invasive blood pressure measurement,<br>b) monitoring of vital signs using a cardiomonitor, pulse oximetry,<br>c) spirometry test, oxygen treatment, assisted and replacement ventilation,<br>d) introduction of the oropharyngeal tube,<br>e) intravenous, intramuscular and subcutaneous injections, peripheral vein cannulation, peripheral venous blood collection, blood cultures collection, arterial blood sampling, arterialized capillary blood collection,<br>f) collecting swabs from the nose, throat and skin, puncture of the pleural cavity,<br>g) catheterization of the bladder in men and women, probing the stomach, gastric lavage, enema,<br>h) a standard resting electrocardiogram with interpretation, electrical cardioversion and heart defibrillation,<br>i) simple test strips and blood glucose measurement. | Practical/oral/written exam | CC |
| U08 | E.U30. | Can assist in the following procedures and medical procedures:<br>a) transfusion of blood and blood products,<br>b) drainage of the pleural cavity,<br>c) puncture of the pericardial sac,<br>d) puncturing the peritoneal cavity,<br>e) lumbar puncture,<br>f) thin-needle biopsy,<br>g) epidermal tests,<br>h) intradermal and scarification tests and interprets their results.   | Practical/oral/written exam | CC |
| K01 |        | Can establish and maintain a deep and respectful contact with the patient.   | Practical/oral/ exam        | CC |
| K02 |        | Is guided by the good of the patient, placing them in the first place.   | Practical/oral/ exam        | CC |
| K03 |        | Respects medical confidentiality and patient's rights.   | Practical/oral/ exam        | CC |
| K04 |        | Is aware of one's limitations and the ability to constantly learn.   | Practical/oral/ exam        | CC |

\*\* L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (magister studies); CSC – classes in simulated conditions; FLC – foreign language course; PCP practical classes with patient; PE – physical education (obligatory); VP – vocational practice; SS – self-study, EL – E-learning . \*\*\*\* In case of

|  |                             |
|--|-----------------------------|
| an epidemic threat, credits can take an on-line form.  |                             |
| Please mark on scale 1-5 how the above effects place your classes in the following categories:<br>communication of knowledge, skills or forming attitudes:   |                             |
| Knowledge: 5   |                             |
| Skills: 5  |                             |
| Social competences: 5  |                             |
| <b>Student's amount of work (balance of ECTS points)</b>   |                             |
| <b>Student's workload</b><br>(class participation, activity, preparation, etc.)  | <b>Student Workload (h)</b> |
| 1. Contact hours:  | 60                          |
| 2. Student's own work (self-study):  | 18                          |
| Total student's workload   | 78                          |
| <b>ECTS points for module/course</b>   | 2,5                         |
| Comments   |                             |
| <p><b>Content of classes</b> (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)</p> <p><u>Katedra i Klinika Transplantacji Szpiku, Onkologii i Hematologii Dziecięcej:</u><br/>Classes are conducted within the Clinic Departments. Students acquire theoretical and practical knowledge in the field of etiopathogenesis and symptomatology of cancer in children. Under the supervision of the lecturer, the student covers the care of one or several patients who are interviewed by the student, plans differential diagnosis, offers additional tests and treatment. In addition, it assists in performing diagnostic and therapeutic procedures. Particular emphasis during the classes is on the development of the ability to independently draw conclusions, oncology alertness and cooperation with a family doctor.</p> <p><u>Katedra i Klinika Endokrynologii i Diabetologii Wieku Rozwojowego:</u><br/>Classes are conducted within the Department of Pediatric Endocrinology, at the Outpatient Clinic and diagnostic laboratories, where students acquire knowledge and acquire practical skills in the field of:<br/>1. Contemporary methods of therapy of type 1 diabetes – insulin therapy standards – multiple daily injections and continuous subcutaneous insulin infusion. Glucose monitoring with CGM systems. Practical training: pump use, CGMS interpretation etc. Acute diabetes complications: hypoglycemia and diabetic ketoacidosis – diagnosis, treatment.<br/>2. Puberty disorders – precocious and delayed puberty. Clinical cases presentation and interpretation. Planning of diagnostic procedures and therapy. Goals of therapy.<br/>3. Short stature and gigantism – differential diagnosis, causes: idiopathic short stature, familial short stature, GHD. Practical training - planning of diagnostic procedures and therapy, treatment options. Goals of therapy, monitoring of the treatment.<br/>4. Obesity and anorexia. Practical training – case studies. Nutrition principles, weight reduction in obesity, nutrition in anorexia,</p> <p><u>I Katedra i Klinika Pediatrii, Alergologii i Kardiologii:</u><br/>Classes are conducted within the Department of Pediatric Cardiology. Students acquire theoretical and practical knowledge in the field of symptomatology of congenital heart defects, etiopathogenesis of cardiovascular disease (inflammation in the heart, hypertension, arrhythmias). Practical classes take place in the Department, at the Outpatient Clinic and diagnostic laboratories, where students acquire practical skills (ECG score, chest X-ray), get acquainted with diagnostic tests performed in the Clinic (heart ultrasound, stress test, tilt test)</p> |                             |





## Lectures (L)

### Winter semester

#### Katedra i Klinika Transplantacji Szpiku, Onkologii i Hematologii Dziecięcej:

1. Life-threatening conditions in pediatric oncology (2h).
2. Infectious complications in cancer patients (2h).

#### Katedra i Klinika Endokrynologii i Diabetologii Wieku Rozwojowego:

1. Advances in treatment of type 1 diabetes. Acute complications of diabetes. Prognosis (2h).
2. Contemporary diagnostic and treatment of growth and puberty disorders in children and adolescents (2h).

#### I Katedra i Klinika Pediatrii, Alergologii i Kardiologii:

1. New methods In pediatric cardiology part 1: interventional treatment CHD (2h).
2. New methods In pediatric cardiology part 2 : surgical treatment CHD (2h).

## Lectures (L)

### Summer semester

#### Katedra i Klinika Transplantacji Szpiku, Onkologii i Hematologii Dziecięcej:

1. Therapeutic apheresis (2h).
2. Targeted cancer therapies (2h).

#### Katedra i Klinika Endokrynologii i Diabetologii Wieku Rozwojowego:

1. Type 2 diabetes and other types of diabetes in children. Diagnosis, treatment, prognosis (2h).
2. Disorders of calcium metabolism In children (2h).

#### I Katedra i Klinika Pediatrii, Alergologii i Kardiologii:

1. Cardiomyopathies in children (2h).
2. Heart failure In children (2h).

## Clinical classes (CC)

### Winter semester

#### Katedra i Klinika Transplantacji Szpiku, Onkologii i Hematologii Dziecięcej:

1. CNS tumors (3h).
2. Solid tumors. Bone tumors (2h).

#### Katedra i Klinika Endokrynologii i Diabetologii Wieku Rozwojowego:

1. Diabetes – etiology, diagnosis and treatment (3h).
2. Thyroid disorders – etiology, diagnosis, treatment (2h).

#### I Katedra i Klinika Pediatrii, Alergologii i Kardiologii:

1. CHD with L-to-R shunt (3h).
2. Combined cyanotic CHD (2h).

## Clinical classes (CC)

### Summer semester

#### Katedra i Klinika Transplantacji Szpiku, Onkologii i Hematologii Dziecięcej:

1. Combination cancer therapy (4h).
2. Late effects of cancer treatment (3h).

#### Katedra i Klinika Endokrynologii i Diabetologii Wieku Rozwojowego:

1. Adrenal glands diseases – congenital adrenal hyperplasia, etiology, diagnosis, treatment. Other causes of adrenal insufficiency, adrenal crisis (4h).
2. Short stature. Puberty disorders. Obesity. PCOs (3h).

#### I Katedra i Klinika Pediatrii, Alergologii i Kardiologii:



|   |                          |
|---|--------------------------|
| <p>1. Arrhythmias in children (3h).<br/>2. Hypertension in children (3h).</p>   |                          |
| <p><b>Basic literature</b> (list according to importance, no more than 3 items):</p> <p>1. Illustrated Textbook of Paediatrics, 5th Edition, Editors: Tom Lissauer Will Carroll, Paperback ISBN: 9780723438717, Paperback ISBN: 9780723438724, eBook ISBN: 9780723438748, eBook ISBN: 9780723438731, Imprint: Elsevier, Published Date: 7th March 2017,</p> <p><b>Additional literature</b> (list according to importance, no more than 3 items):</p> <p>1 W.E. Nelson: Textbook of Pediatrics, the latest edition<br/>2 R.E. Behrman, R.M. Kliegman: Nelson Essentials of Pediatrics, the latest edition</p>   |                          |
| <p><b>Didactic resources requirements</b> (e.g. laboratory, multimedia projector, other...)<br/>laboratory, seminar room, overhead projector, computer, light microscope, ECG, ultrasound</p>   |                          |
| <p><b>Preliminary conditions</b> (minimum requirements to be met by the student before starting the module/course)<br/>valid student card, proper dress and footwear, stethoscope, throat examination flashlight, basic physical examination skills, medical history collection, in case of pandemic – masks, gloves, visor,</p>  |                          |
| <p><b>Conditions to receive credit for the course</b> (specify the form and conditions of receiving credit for classes included in the module/course, admission terms to final theoretical or practical examination, its form and requirements to be met by the student to pass it and criteria for specific grades)</p> <ul style="list-style-type: none"> <li>- Active participation in classes (excused 1 absence per year)</li> <li>- Obtaining credit of the test finishing the practical exercises (oral or written/test).</li> <li>- <b>Each absence must be made up, including rector's days or dean's hours as student's own work (self-study) and presented as ppt. presentation or essay.</b></li> </ul> |                          |
| <p><b>Grade:</b></p>  |                          |
| <p><b>Criteria</b> (only for courses/modules ending with an examination)</p>  |                          |
| <p>Very Good<br/>(5.0)</p>  | <p>90-100% of points</p> |
| <p>Good Plus<br/>(4.5)</p>  | <p>80-89% of points</p>  |
| <p>Good<br/>(4.0)</p>   | <p>70-79% of points</p>  |
| <p>Satisfactory Plus<br/>(3.5)</p>  | <p>60-69% of points</p>  |
| <p>Satisfactory<br/>(3.0)</p>   | <p>50-59% of points</p>  |

**Name and address of module/course teaching unit, contact: telephone and e-mail address**

Katedra i Klinika Transplantacji Szpiku, Onkologii i Hematologii Dziecięcej:  
ul. Borowska 213  
50-556 Wrocław





tel. 71 733 27 00, fax: 71-7332709  
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Katedra i Klinika Endokrynologii i Diabetologii Wieków Rozwojowego  
ul. T. Chałubińskiego 2A  
50-368 Wrocław  
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I Katedra i Klinika Pediatrii, Alergologii i Kardiologii  
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e-mail: [karolina.wyrobek@umed.wroc.pl](mailto:karolina.wyrobek@umed.wroc.pl)

**Coordinator / Person responsible for module/course, contact: telephone and e-mail address**

|                                      |   |
|--------------------------------------|---|
| <b>Name of unit teaching course:</b> | <b><u>Katedra i Klinika Transplantacji Szpiku, Onkologii i Hematologii Dziecięcej</u></b> |
| Address                              | <b>ul. Borowska 213<br/>50-556 Wrocław</b>  |
| Phone                                | <b>tel. 71 733 27 00, fax: 71-7332709</b>   |
| E-mail                               | <b>e-mail: <a href="mailto:pedhemat@umed.wroc.pl">pedhemat@umed.wroc.pl</a></b>           |

|                                       |  |
|---------------------------------------|--|
| <b>Person responsible for course:</b> | Alicja Chybicka, Prof (Head of the Department)<br>Monika Mielcarek-Siedziuk, MD PhD (teaching Assistant Professor) |
| Phone                                 | <b>tel. 71 733 27 00, fax: 71-7332709</b>  |
| E-mail                                | <b>e-mail: <a href="mailto:pedhemat@umed.wroc.pl">pedhemat@umed.wroc.pl</a></b>                                    |

**List of persons conducting specific classes: full name, degree/scientific or professional title, discipline, performed profession, form of classes.**

**Teachers list:**

|  |
|--|
| <p><b>I Katedra i Klinika Pediatrii, Alergologii i Kardiologii</b><br/>Marek Wasicionek, MD, pediatrics, pediatric cardiology, CC, L<br/>Ewa Masłowska, MD PhD, pediatrics, pediatric cardiology, CC, L<br/>Joanna Kukawczyńska-Noczyńska, MD, pediatrics, CC<br/>Anna Halarewicz -Ciasullo, MD, pediatrics, CC<br/>Magdalena Gziut, MD, pediatrics, CC</p>  |
| <p><b>Katedra i Klinika Endokrynologii i Diabetologii Wieków Rozwojowego</b><br/>Aleksander Basiak, MD PhD, pediatrics, pediatric endocrinology, CC, L<br/>Beata Wikiera, MD PhD, pediatrics, pediatric endocrinology, CC, L<br/>Teresa Żak, MD PhD, pediatrics, pediatric endocrinology, CC, L<br/>Agnieszka Zubkiewicz-Kucharska, MD PhD, pediatrics, pediatric endocrinology, CC, L<br/>Monika Seifert, MD, pediatrics, CC<br/>Agnieszka Gorlo, MD, pediatrics, CC<br/>Julita Nocoń-Bohusz, MD PhD, pediatrics, CC<br/>Joanna Chrzanowska, MD PhD, pediatrics, CC</p> |
| <p><b>Katedra i Klinika Transplantacji Szpiku, Onkologii i Hematologii Dziecięcej:</b><br/>Alicja Chybicka, Prof, pediatric, pediatric hematology and oncology, clinical transplantology, palliative care, clinical immunology, CC, L<br/>Bernarda Kazanowska, Ass Prof, pediatrics, pediatric hematology and oncology, CC, L<br/>Krzysztof Kałwak, Prof, pediatrics, pediatric hematology and oncology, clinical transplantology, clinical</p>  |



immunology, CC, L

Grażyna Wróbel, Ass Prof, pediatrics, pediatric hematology and oncology, CC, L

Marek Ussowicz, Ass Prof, pediatrics, pediatric hematology and oncology, clinical transplantology, CC, L

Wojciech Pietras, MD PhD, pediatrics, pediatric hematology and oncology, CC, L

Elżbieta Latos-Grażyńska, MD PhD, pediatrics, pediatric hematology and oncology, CC, L

Monika Mielcarek-Siedziuk, MD PhD, pediatrics, CC, L

Małgorzata Salamonowicz, MD PhD, pediatrics, pediatric hematology and oncology, CC, L

Igor Olejnik, MD PhD, pediatrics, pediatric hematology and oncology, anaesthesiology and intensive care, CC, L

Tomasz Jarmoliński, MD PhD, pediatrics, nephrology, clinical transplantology, CC, L

Jowita Frączkiewicz, MD, pediatrics, CC

Małgorzata Janeczko, MD, pediatrics, CC

**Date of Syllabus development**


28.09.2020 r.

**Syllabus developed by**

Monika Mielcarek-Siedziuk, MD PhD

**Signature of Head of teaching unit**

**Signature of Faculty Dean**

.....  
Uniwersytet Medyczny we Wrocławiu  
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TRANSPLANTACJI SZPIKU, ONKOLOGII  
I HEMATOLOGII DZIECIĘCEJ  
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prof. dr hab. Alicja Chybicka