DESCRIPTION OF COURSE UNIT FOR DOCTORAL STUDIES AT VILNIUS UNIVERSITY

Scientific Area/eas, Field/ds of Science	Medical and Health Sciences (M 000): Medicine (M 001)			
Faculty, Institute, Department/Clinic	Faculty of Medicine, Institute of Clinical Medicine, Clinic of Gastroenterology, Nephrourology and Surgery			
Course unit title (ECTS credits, hours)	**Pediatric Surgery** 9 credits (239 hours)			
Study method	**Lectures**	**Seminars**	**Consultations**	**Self-study**
Number of ECTS credits	-	-	2	7
Method of the assessment (in 10 point system)	Presentation and evaluation of the report: the report is presented on a target topic, which is coordinated with the consulting lecturers (the doctoral student must analyse, review and present the latest scientific publications related to the target topic). Criteria for evaluating the report (minimum qualifying score - 5): (a) relevance, novelty and accordance to the chosen topic (2 points); (b) general structure and scope of the report, clear presentation of the knowledge, reasoning, conciseness and concreteness (2 points); c) Summary, presentation and justification of conclusions (1 point) d) raising problematic issues, presenting the application of the reviewed knowledge in the dissertation (3 points); e) organization of visual aids, ability to participate in a discussion, management of questions, oratory skills (2 points).			

PURPOSE OF THE COURSE UNIT

Studying peculiarities and differences of pediatric surgery and its subspecialties (pediatric orthopaedics traumatology, pediatric urology, neonatal surgery) comparing to adult surgery. Learning about rare congenital anomalies, differential diagnosis, methods of surgical treatment, optimal operation time centered on long term quality of life. Acquiring advanced and updated knowledge in the field of pediatric oncology, pediatric trauma and orthopaedics, perioperative support and long term outcomes would help doctoral students to better structure their pediatric research projects.

THE MAIN TOPICS OF COURSE UNIT

Acute surgical diseases in children. Appendicitis, peritonitis, intestinal obstruction: diagnosis, possibility of conservative management, preoperative preparation influenced by the child's physiology, time of operations, choice of method. Peculiarities of bacterial infection in children and acute hematogenous osteomyelitis. Peculiarities of thoracic and abdominal organ trauma, treatment algorithms. Diagnosis and treatment of acute diseases of genital organs.
Peculiarities of neonatal surgery: esophageal atresia, duodenal atresia, piliorostenosis, meconial intestinal obstruction, necrotizing enterocolitis, omphalocele, hepatic and biliary ductal disorders, diaphragmatic hernia, posterior urethra. Prenatal diagnosis, extracorporeal oxygenation, parenteral nutrition, transplantation options, foetal surgery and long term outcomes.
Congenital respiratory, digestive and urogenital diseases and abnormalities. Balance between conservative and surgical treatment: choice of

optimal treatment method and recommended age. Pulmonary emphysema, sequestration, pulmonary cyst and polycystosis, bronchiectasis, gastoesophageal reflux disease, anal and rectal abnormalities, Hirschsprung's disease. Pediatric hydronephrosis and urinary tract obstruction,vesicoureteral reflux, congenital anomalies of genital organs (phymosis, hydrocele, cryptorchidism, varicocele, hypospadia, epispadias/exstrophy). Diagnosis and treatment of disorders of sexual development).

Pediatric traumatology and orthopedics: peculiarities of pediatric trauma, the most common bone fractures and dislocations in children, the nature and peculiarities of pediatric neurotraumas, degrees of burn and choice of treatment. Congenital defects of the extremities, polydactylia, syndactylia, flatfoot, congenital hip dysplasia and dislocation, torticolis. Scoliosis and other spinal deformities. Osteochondropathies. Systemic orthopaedic diseases.

Peculiarities of pediatric oncology: principles of coordination of different treatment methods, treatment protocols and decisions of international societies in the treatment of neuroblastoma, nephroblastoma, rhabdomiosarcoma, germ cell tumors. Complexity of treatment of bone tumors in children to preserve function. Principles of palliative and radical surgery.

Neurogenic and non-neurogenic urinary/faecal incontinence in children: functional and radiological examination, principles of biofeedback training, urotherapy. Methods of regular catheterization and regular enema. Indications and the choice of surgical treatment.

RECOMMENDED LITERATURE SOURCES

1. Newborn surgery. 4th ed. P. Puri. 2017 by Arnold, Hodder Headline Group, London
2. Lowell and Winters Pediatric Orthopaedics. 8th ed. S.Weinstein, J.Flynn. 2020 Wolters Kluwer
3. Rockwood and Wilkins Fracture in Children. 8th ed. Beaty, J.Kasser. 2019 Lippincott Williams /Wilkins
4. The Kelalis--King--Belman Textbook of Clinical Pediatric Urology. 6th ed. Steven G. Docimo, Douglas Canning,Antoine Khoury, Joao Luiz Pippi Salle. 2018 by CRC Press
5. Operative Pediatric Surgery. 2nd ed. Moritz Ziegler, Richard Azizkhan , Daniel von Allmen, Thomas Weber. 2014 McGraw Hill / Medical
6. Vaikų onkologija. Reng. J. Rascon. 2020 Vilniaus universiteto leidykla
7. Websurg, the Online University of IRCAD- https://websurg.com/en/
8. The European Board of Paediatric Surgery (EBPS) and European Pediatric Surgical Association (EUPSA) created EPSITE- https://www.paediatricsurgeryexam.org/index.php/training-courses
9. Global Initiative for Children's Surgery- https://www.globalchildrenssurgery.org/
10. https://uroweb.org/guidelines/paediatric-urology/chapter/the-guideline

CONSULTING LECTURERS

1. Coordinating lecturer: Gilvydas Verkauskas (Prof. Dr.).
2. Arūnas Strumila (Assist. Prof. Dr.).
3. Giedrius Bernotavičius (Assist. Prof. Dr.).

APPROVED:

By Council of Doctoral School of Medicine and Health Sciences at Vilnius University: 29th of September 2022

Chairperson of the Board: Prof. Janina Tutkuvienė