UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Pediatrics

2324-6-H4102D039-H4102D170M

Aims

o Gain knowledge about the specificities of the physical examination of the growing child at different ages, in order to promptly detect pathological findings.
o Provide general recommendations about the management of uncomplicated clinical conditions frequently affecting children and identify disorders which prompt specialized referral for further assessment or treatment.
o Acquire knowledge and understanding about growth, cognitive development and nutrition from the newborn stage to adolescence.
o Acquire skills in collecting medical history with specific regard to perinatal period, cognitive and somatic development, exanthematic childhood diseases, immunization and pubertal attainments.
o Promote health in childhood and adolescence by encouraging precocious immunization, systematic screening programs (dried blood spot screening at birth, hearing and sight evaluations at fixed timepoints) and supporting healthy diet.

Contents

The course will provide students with basic concepts about the physiology of the growing child, from the newborn stage to adolescence. In addition, the student will be taken through the typical and atypical clinical presentations of the commonest pediatric diseases and the specificities of the diagnostic-therapeutic workflows that should guide clinicians in approaching the sick child. Finally, the course will address the foremost health-promoting programs, including immunization and newborn screenings.

Detailed program

o Principles of growth, nutrition and neurodevelopment of the healthy child

o The physiology of the newborn and the foremost diseases involving either the preterm or the term newborn
o Genetic disorders: principles of dysmorphology and diagnostic techniques in the field of human genetics
o Inborn errors of metabolism: the role of neonatal screening and the red flags for suspecting a metabolic disorder
o Infectious diseases: specificities of pediatric epidemiology, clinical presentation and treatment solutions. Specific focus on infections involving: the central nervous system, joints and bone, urinary tract, respiratory system, the lymphatic system, the gastrointestinal tract. In addition, we will discuss about exanthematic diseases and the preemptive role of immunization.
o Gastroenterology and hepatology: problem-based approach to the most frequent gastrointestinal symptoms and signs reported in childhood; epidemiology, clinical presentation and treatment specificities of hepato-gastric disorders of the child and adolescent
o Respiratory-tract disorders
o Hemato- and hemato-oncological diseases of childhood: practical approach to abnormal full blood count findings; epidemiology, clinical presentation and treatment specificities of liquid and solid tumors in childhood.
o Rheumatologic disorders of the child.
o Endocrinological diseases: problem-based approach to the most frequent auxological complaints; epidemiology, clinical presentation and treatment specificities of endocrine disorders occurring in childhood and adolescence.
o Nephrology: specificity of urinary and renal disorders of the child
o Principles for an integrated approach to the specific needs of pediatric patients with physical and/or cognitive disability
o Global medicine: providing care to the child from different social and economic background and setting
o Emergencies in pediatrics: diagnostic and therapeutic workflows

Prerequisites

Fundamentals of the physiology and pathology of fetal development
Fundamentals of fetus-to-newborn period transition: physiology and its deviations

Teaching form

Frontal lectures
Problem-based learning: one or more lessons will be entirely focused on the presentation of clinical cases. Throughout an interactive approach with the teachers, the students will be guided to inquiry those elements from anamnesis, physical examination, biochemical and radiological results that may lead clinicians to the identify the proper diagnostic-therapeutic solutions. This learning approach is based on a continuous interaction and cross-talking between teachers and students.
Simulation activities: mannequin-based simulation will be proposed, including teaching about management of emergencies in infants, toddler and older child.
Clerkship: ad described in the dedicated syllabi from each clerkship, the course includes practical bedside activity. The aims of the clerkship includes the practical identification of the specificities of the approach to the growing child, the peculiarities of the physical examination at each stage of through developmental age and the diagnosis and treatment of the clinical pictures most frequently detected in pediatrics. Students will be asked, while supervised, to gather the following skills: anamnesis (focuses on post-delivery/neonatal issues), physical examination (with focus on age-dependent specificities), formulation of diagnostic hypotheses. In addition, students will be involved in multidisciplinary staff meetings and will be asked to present the clinical pictures of admitted patients and to report about additional potentially important clinical information.
The clerkship in genetics will be held in laboratory, aiming at providing students with a practical overview of the most recently developed techniques in the field of genetics.

Textbook and teaching resource

Nelson’s Essentials of pediatrics

Semester

First semester, sixth year

Assessment method

For the "Child" section:
The final test of the “child” section will be written and will include the following sections:

- 26 multiple-choice questions (1.1 points for each correct answer)
- 2 open questions (0 to 2.2 points for each question, based on the quality, contents and accuracy)
  An overall scoring of 33/30 can be achieved by the student.
  Nevertheless, the final mark of the “Woman and child vertical track” will be the result of an integrated evaluation of the “child” and the corresponding test for the “Woman” sections.
  The test for the “child” section will provide an integrated evaluation for all the pediatric subjects of the vertical track, i.e.: all the subjects of the course “Pediatrics” plus Genetics and neuropsychiatry, and all the pediatric topics from the courses in Emergency, Pathology, Physiology and Diagnostics.

Office hours

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING