

Paediatric Infectious and immune System Diseases

Code: 103654
ECTS Credits: 3

Degree	Type	Year	Semester
2502442 Medicine	OT	6	0

Contact

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Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: No
Some groups entirely in Spanish: No

Teachers

María Jesús Méndez Hernández

Prerequisites

It is advisable that the student has reached the competences developed during the previous courses.

Sufficient knowledge about the physiological basis of health and disease states is desirable, as well as an adequate level of knowledge in interpersonal communication.

The student will acquire the commitment of preserving the confidentiality and professional secrecy of the data to which he / she may have access because of the learning in the assistance services. Also to maintain an attitude of professional ethics in all its actions.

Objectives and Contextualisation

This is an optional subject that is studied in the sixth year and whose general objective is that the student deepens knowledge and becomes familiar with the professional practice in real context of infectious diseases and immunodeficiencies that affect the pediatric age.

Competences

- Demonstrate an understanding of the fundamentals of action, indications, efficacy and benefit-risk ratio of therapeutic interventions based on the available scientific evidence.
- Demonstrate understanding of the mechanisms of alterations to the structure and function of the systems of the organism in illness.
- Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
- Establish a diagnostic approach and a well thought-out strategy for action, taking account of the results of the anamnesis and the physical examination, and the results of the appropriate complementary tests carried out subsequently.
- Formulate hypotheses and compile and critically assess information for problem-solving, using the scientific method.

- Indicate the basic diagnosis techniques and procedures and analyse and interpret the results so as to better pinpoint the nature of the problems.
- Maintain and sharpen one's professional competence, in particular by independently learning new material and techniques and by focusing on quality.
- Recognize one's role in multi-professional teams, assuming leadership where appropriate, both for healthcare provision and for promoting health.
- Use information and communication technologies in professional practice.

Learning Outcomes

1. Assess the efficiency of the main therapeutic interventions.
2. Assess the need, indications, contraindications, chronology, risk, benefits and costs of each examination.
3. Assess the relationship between efficacy and risk in the main therapeutic interventions.
4. Compare one's own opinions with those of colleagues and other healthcare professionals as a basis for teamwork.
5. Critically assess the results of complementary examinations, taking their limitations into account.
6. Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
7. Differentiate between situations that require hospitalisation and those that require intensive care.
8. Establish a method for complementary examinations, in accordance with the standard process and the diagnostic expectations.
9. Establish a therapeutic action plan considering the needs of patients and their family and social environment, and involving all members of the healthcare team.
10. Explain the mechanisms by which illness affects the different systems of the human body at different stages in life and in both sexes.
11. Formulate hypotheses and compile and critically assess information for problem-solving, using the scientific method.
12. Indicate and interpret the basic techniques and procedures for laboratory diagnosis, diagnostic imaging and others.
13. Indicate suitable therapeutic interventions for the main maternal and infant health problems.
14. Maintain and sharpen one's professional competence, in particular by independently learning new material and techniques and by focusing on quality.
15. Order signs and symptoms to perform a differential syndromic diagnosis.
16. Use information and communication technologies in professional practice.

Content

Theory (15 hours)

1. Etiology of pediatric infectious diseases
2. Methods and techniques of microbiological diagnosis
3. Use of antimicrobials in pediatrics. The PROA programs
4. Respiratory infections and their complications. COVID-19 in Pediatrics
5. Digestive infections: gastrointestinal and liver
6. Osteoarticular infections. Toxic infections
7. International health and sexually transmitted diseases
8. Sepsis and septic shock.
9. Infections by unusual microorganisms.
10. Classification and diagnosis of primary immunodeficiencies
11. Treatment of primary immunodeficiencies
12. Infections according to immunodeficiency and immunodeficiency according to infections.
13. Autoinflammatory syndromes
14. Infections in patients undergoing immunosuppressive treatment
15. Systematic and elective immunoprophylaxis

Methodology

WORK PREPARATION / PERSONAL STUDY / READING OF ARTICLES / REPORTS OF INTEREST

This Guide describes the framework, contents, methodology and general rules of the subject, in accordance with the current study plan. The final organization of the subject with respect to the number and size of groups, distribution in the calendar and dates of examinations, specific evaluation criteria and exam review, will be specified in each of the Hospital Teaching Units (UDH), which will make it explicit Through their web pages and on the first day of class for each subject, through the professors responsible for the subject at the UDH.

For this course, the professors designated by the Departments as responsible for the subject at the Faculty and UDH level are:

- Head of Faculty: Carlos Rodrigo Gonzalo de Liria
- Responsible for the UDH:

UDGTiP

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In certain exceptional circumstances, at the discretion of the teachers and also depending on the resources available and the public health situation, some of the theoretical classes, practicals and seminars organized by the Teaching Units may be taught either in person or virtually.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Type. directed	15	0.6	
Type: Supervised			
Type: supervised	16	0.64	
Type: Autonomous			
Type: autonomous	40.25	1.61	

Assessment

Continuous evaluation, discussion of cases: evaluation of the qualitative participation of the student and delivery of resolutions of cases worked in the seminar.

Evaluation of the works: each student will have to elaborate and present a work based on a clinical case lived during the practices of the subject.

When it is considered that the student has not been able to provide enough evidence of evaluation in the minutes, this subject will be recorded as non-evaluable. The teaching guide has to establish the criteria to assign a non-evaluable one.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Delivery of reports / written works	50%	1.75	0.07	4, 6, 7, 9, 8, 11, 10, 12, 13, 14, 15, 16, 5, 1, 2, 3
Practical evaluation	50%	2	0.08	4, 6, 7, 9, 8, 11, 10, 12, 13, 14, 15, 16, 5, 1, 2, 3

Bibliography

A. Pediatric Infectious Diseases

- Feigin & Cherry's Textbook of Pediatrics Infectious Diseases, 8th ed. Feigin RD, Cherry bJD, Demmler-Harrison GJ, Kaplan SL, eds. Saunders Elsevier 2019.
- Nuevas técnicas de diagnóstico microbiológico: métodos moleculares y métodos proteómicos. Rodrigo Gonzalo de Liria C, González Abad MJ. En: Urgencias y tratamiento del niño grave. Síntomas guía, técnicas y cuidados intensivos, 3ª ed. Casado Flores j, Serrano González A, eds. Ergon 2015; 681-685.
- Principles and Practice of Pediatric Infectious Diseases, 5th ed. Long SS, Pickering LK, Prober CG, eds. Elsevier Saunders 2018.
- Red Book: Report of the Committee on Infectious Diseases, 32sr ed. . Kimberlin DW, Brady MT, Jackson MA, Long SS. American Academy of Pediatrics 2021.
- Resistencia a antimicrobianos. Giménez Pérez M, Rodrigo Gonzalo de Liria C. En: Infectología pediátrica avanzada: abordaje práctico. Sociedad Española de Infectología Pediátrica. Médica Panamericana 2014.
- Unitat de Patologia Infecciosa i Immunodeficiències de Pediatria, Hospital Universitari Vall d'Hebron.
<http://www.upiip.com/docencia.aspx>

B. Immunology: pediatric immunodeficiencies

- Immunology, 8 th ed. [Jenni Punt](#), [Sharon A Stranford](#), [Patricia P Jones](#), [Judith A Owen](#), [Janis Kuby](#), eds. New York: Macmillan education. 2019.
- International Union of Immunological Societies: 2017 Primary Immunodeficiency Diseases Committee Report on Inborn Errors of Immunity. Picard C, Gaspar HB, Al-Herz W, Bousfiha A, Casanova J-L, Chatila T, et al. J Clin Immunol. 2018. 38:96-128
- Primary immunodeficiency diseases in lung disease: warning signs, diagnosis and management. Pere Soler-Palacín, Javier de Gracia, Luis Ignacio González-Granado, Carlos Martín, Carlos Rodríguez-Gallego, Silvia Sánchez-Ramón, Lung ID-Signal Group. Respir Res. 2018; 19: 219
- Primary and secondary immunodeficiency diseases in oncohaematology: warning signs, diagnosis, and management. Silvia Sánchez-Ramón, Arancha Bermúdez, Luis Ignacio González-Granado, Carlos Rodríguez-Gallego, Ana Sastre, Pere Soler-Palacín, the ID-Signal Onco-Haematology GroupFront Immunol. 2019; 10: 586.

- The 2017 IUIS Phenotypic Classification for Primary Immunodeficiencies. Bousfiha A, Jeddane L, Picard C, Ailal F, Gaspar HB, Al-Herz W, et al. J Clin Immunol. 2018. 38:129-143
- Unitat de Patologia Infecciosa i Immunodeficiències de Pediatria, Hospital Universitari Vall d'Hebron.
<http://www.upiip.com/docencia.aspx>

Software

No requiered