

Physiotherapy in Paediatrics

Code: 102976
ECTS Credits: 6

Degree	Type	Year	Semester
2500892 Physiotherapy	OT	3	2

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

Contact

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Use of Languages

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

Teachers

Saida Garces Aguilar

Prerequisites

There are no prerequisites.

Objectives and Contextualisation

The subject is optional and is taught in the third year of Degree in Physiotherapy. This subject goes directed to know the world of Pediatrics from the focus of Physiotherapy. Have basic notions of development of the healthy child, to be able to understand the pathology and, to deepen in the treatment of physiotherapy proper.

The objectives of the subject are:

1. Know the development of the healthy child, to treat the different pathologies that the child can present throughout of all its development until reaching adulthood.
2. Recognize the risk factors that can affect the development of the child from birth and what may compromise their further development.
3. Know how to observe and recognize the social, family and psychological factors that influence the child's environment and what They will have an impact on the health and / or illness of the child.
4. Be able to carry out the functional assessment of the child, taking into account age and motor development which corresponds to it, using the appropriate assessments for the age and functional status of the child.
5. Plan the goals and the treatment of physiotherapy with the coordination of the other health professionals they cater to the child and his family.
6. Know the deficiencies and the disabilities that can appear due to the pathology and understand the needs basic you may need.
7. Know how to apply the different physiotherapy techniques in paediatrics.
8. Evaluate, adapt and follow the evolution of the child, carrying out new treatment proposals in case it is necessary.
9. Work in different clinical cases to plan the appropriate physiotherapy treatment in each case.

Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Apply quality-assurance mechanisms in physiotherapy practice, in accordance with the recognised and validated criteria.
- Constantly renew one's professional knowledge, competences and skills.
- Design the physiotherapy intervention plan in accordance with the criteria of appropriateness, validity and efficiency.
- Display a strategic and flexible attitude to learning.
- Display interpersonal skills.
- Display knowledge of the physiotherapy methods, procedures and interventions in clinical therapeutics.
- Evaluate the functional state of the patient, considering the physical, psychological and social aspects.
- Integrate, through clinical experience, the ethical and professional values, knowledge, skills and attitudes of physiotherapy, in order to resolve specific clinical cases in the hospital and non-hospital environments, and primary and community care.
- Participate in drawing up physiotherapy protocols on the basis of scientific evidence, and promote professional activities that facilitate physiotherapy research.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
- Work in teams.

Learning Outcomes

1. Apply physiotherapy methods, procedures and interventions to conditions in gynaecology, obstetrics and paediatrics.
2. Apply the evaluation procedures required in physiotherapy, in order to determine the degree of damage to the urogenital apparatus and its possible functional repercussions.
3. Apply the evaluation procedures required in physiotherapy to paediatrics, in order to determine the degree of damage and its possible functional repercussions.
4. Describe and analyse evidence-based physiotherapy protocols for gynaecological, obstetric and paediatric conditions.
5. Describe and analyse the quality-assurance mechanisms of physiotherapy in gynaecology, obstetrics and paediatrics.
6. Describe the injuries and diseases in obstetrics, gynaecology and paediatrics, identifying the symptoms that appear during the process, their etiology and the associated medical, surgical and rehabilitation treatments.
7. Describe the physiotherapy techniques in therapy for gynaecological, obstetric and paediatric conditions and display up-to-date knowledge of their effectiveness.
8. Describe the principles behind evaluation in paediatrics.
9. Describe the principles behind the evaluation of the urogenital apparatus.
10. Design therapeutic exercises and activities for obstetric, gynaecological and paediatric diseases and injuries.
11. Display a strategic and flexible attitude to learning.
12. Display interpersonal skills.
13. Explain the explicit or implicit code of practice of one's own area of knowledge.
14. Identify the principal forms of sex- or gender-based inequality present in society.
15. Identify the social, economic and environmental implications of academic and professional activities within one's own area of knowledge.
16. Use physiotherapy to treat clinical cases involving gynaecological, obstetric and paediatric conditions.
17. Work in teams.

Content

UNIT 1: INTRODUCTION TO THE SUBJECT (Teacher: Laura García)

- 1.1 Basic concepts of the subject.
- 1.2 Presentation of the program.
- 1.3 Seminars and self-employment learning
- 1.4 Type of evaluation.

UNIT 2: INTRODUCTION TO THE PEDIATRIC PHYSIOTHERAPY (Teacher: Laura García)

- 2.1 Healthy child development.
- 2.2 Dysfunctions, developmental disorders or risk of suffering them (Pathologies).
- 2.3 Repercussions on their functional skills (psychomotor, neurological, orthopedic conditions, etc.
- 2.4 Prevention and early detection of childhood pathologies through CRIBLETS.

UNIT 3: PHYSIOTHERAPIST'S ROLE (Teacher: : Laura García)

- 3.1 Relationship, involvement and attitude of the physiotherapist towards the child, the family and the environment. Family-centered practices.
- 3.2 Therapeutic intervention and importance of the relationship with the family.
- 3.3 Different areas of treatment (CDIAP, EAP, Private, EEE, Hospitals)

UNIT 4: NEWBORN EXPLORATION (Teacher: Laura García)

- 4.1 Prenatal and postnatal development.
- 4.2 Apgar Test.
- 4.3 Archaic reflections. Advances in neuroscience applied to neurodevelopment and motor learning.
- 4.4 Muscular tone.
- 4.5 Acquisition of postural control and balance.

UNIT 5: PREMATURE NEWBORN (Teacher: Laura García)

- 5.1 Characteristics of premature baby.
- 5.2 Causes and disorders that can be found.
- 5.3 Physiotherapy treatment in the incubator.

UNIT 6: PSYCHOMOTOR DEVELOPMENT (Teacher: Laura García)

- 6.1 Progression of Psychomotor Development in the different stages of the healthy child.
- 6.2 Alterations or dysfunctions in psychomotor development.
- 6.3 Warning signs.

UNIT 7: THE GAME (Teacher: Laura García)

- 7.1 Differentiating elements of the adult treatment.

7.2 The game as a tool to carry out the treatment of Physiotherapy. (The game and the toys, the functional game, different stages of the game).

UNIT 8: CLINICAL HISTORY (Teacher: Laura García)

8.1 Evaluation and observation.

8.2 Exploration.

8.3 Assessments according to the impact of the baby / child.

8.4 Clinical history. Examples.

UNIT 9: SITTING (Teacher: Saida Garcés)

9.1 Characteristics of the Sitting.

9.2 Corrections in sitting. Key point.

9.3. Assessment of sitting.

9.4 Support products.

9.5 Alterations.

UNIT 10: STANDING (Teacher: Saida Garcés)

10.1 Characteristics of standing.

10.2 Corrections in standing. Key points.

10.3. Valuation of standing.

10.4 Support products.

10.5 Alterations.

UNIT 11: MOVING

11.1 What is moving?

11.2 Forms of moving. Characteristics.

11.3. Pace pattern.

11.4 Corrections in the pace.

11.5 Assessment of pace

11.6 Support products

UNIT 12: CONGENITAL TORTICOLLIS (Teacher: Laura García)

12.1 Definition and classification.

12.2 Exploration and differential diagnosis.

12.3 Aims of physiotherapy treatment.

12.4 Conservative treatment of physiotherapy.

12.5 Post-surgical physiotherapy treatment.

UNIT 13: OBSTETRIC BRACHIAL PLEXUS PARALYSIS (Teacher: Laura García)

- 13.1 Definition, classification, and prognosis.
- 13.2 Associated lesions.
- 13.3 Exploration and evaluation.
- 13.4 Aims of physiotherapy treatment.
- 13.5 Conservative treatment of physiotherapy.
- 13.6 Residual deformities and regression period.
- 13.7 Early and delayed post-surgical physiotherapy treatment.

UNIT 14: CONGENITAL HIP DISLOCATION (Teacher: Saida Garcés)

- 14.1 Definition, aetiology, and classification.
- 14.2 Evaluation.
- 14.3 Exploration of normal and pathological baby.
- 14.4 Conservative treatment. Orthosis.
- 14.5 Post-surgical physiotherapy treatment.

UNIT 15: FOOT DISORDER (Teacher: Saida Garcés)

- 15.1 Definition, classification.
- 15.2 Talipes equinovarus. Aetiology.
- 15.3 Exploration.
- 15.4 Conservative treatment. Physiotherapy. Orthosis. Plaster.
- 15.5 Complications.
- 15.6 Post-surgical physiotherapy treatment in the baby and child.

UNIT 16: ALTERATIONS OF THE SPINE (Teacher: Saida Garcés)

- 16.1 Definition. Classification.
- 16.2 Exploration.
- 16.3 Child, youth and teenage idiopathic scoliosis.
- 16.4 Evaluation.
- 16.5 Objectives of physiotherapy treatment.
- 16.6 Physiotherapy treatment.

UNIT 17: CEREBRAL PALSY IN CHILDREN (Teacher: Saida Garcés)

- 17.1 Definition. Classification.
- 17.2 Alterations of psychomotor development.

17.3 Topographical distribution of the injury.

17.4 Tone alterations.

17.5 Orthopaedic disorders.

17.6 Aims of physiotherapy treatment.

17.7 CIF

17.8 Physiotherapy treatment.

UNIT 18: AUTISM SPECTRUM DISORDER (TEA) (Teacher: Saida Garcés)

18.1 Definition and nomenclature.

18.2 Characteristics.

18.3 Associated symptoms.

18.4 Levels of TEA.

18.5 Communication Resources.

18.6 Accessibility and TIC.

UNIT 19: PHYSIOTHERAPY IN MULTIDISABILITIES (Teacher: Saida Garcés)

19.1 Definition of multidisabilities.

19.2 Perception from multidisabilities.

19.3 The movement.

19.4 Communication.

19.5 Inclusion.

19.6 Low cost.

UNIT 20: THE DIET IN CHILDREN WITH GRAVE DISABILITIES (Teacher: Saida Garcés)

20.1 Definition of diet.

20.2 Different types of diet.

20.3 Alterations in swallowing.

20.4 Guideline treatment and relation with physiotherapy.

20.5 Adaptation of the environment.

UNIT 21: PEDIATRIC ONCOLOGY (Teacher: Laura García)

21.1 Natural history of cancer.

21.2 Classification.

21.3 Exploration.

21.4 Physiotherapy treatment and others.

UNIT 22: ACONDROPLASIA (Teacher: Saida Garcés)

22.1 Definition.

22.2 Characteristics.

22.3 Children exploration.

22.4 Physiotherapy treatment.

22.5 Other treatments.

UNIT 23: NEUROMUSCULAR DISEASES (Teacher: Saida Garcés)

23.1 Definition.

23.2 Neuromuscular disease characteristics.

23.3 Classification.

23.4 Evaluation.

23.5 Physiotherapy treatment.

UNIT 24: RESPIRATORY PATHOLOGY AND PHYSIOTHERAPIST TREATMENT (Teacher: Laura García)

24.1 Anatomy and physiology of the children respiratory system vs adult.

24.2 Common pathology.

24.3 Exploration and detection of the respiratory pathology.

24.4 Techniques of respiratory physiotherapy.

Methodology

In reference to the theory, they will be carried out in a mixed way, in presencially and virtual presencially at 50%,

- **LABORATORY PRACTICES:**

Place to put into practice the different ways of performing physiotherapy treatment with own characteristics of children, depending on age and other relevant aspects of the infant. Depending on the evolution of the pandemic, we will carry out all the practices virtually. If possible, we will make the pelvic moulding seat of plaster in person.

Segons l'evolució de la pandèmia, realitzarem la totalitat de les pràctiques de forma virtual. En cas de ser possible, realitzarem presencialment l'elaboració del seient de guix.

*Units that will be put into practice:

- Stimulation of Psychomotor development.
- Practice the daily life activities with some disability.
- Practice on Cerebral Palsy: Make a pelvic moulding seat of plaster.
- Practice on the multidisability "Putting yourself in the skin of the multidisability".

- **WRITTEN WORK:**

Teachers will give you some guide to do the written work when the subject start.

The groups will be formed by 4-5 students (it depends on the total students).

The topics to work will be proposed by the teachers.

- **READING ARTICLES / INTEREST REPORTS**

The teachers can suggest some interesting article with the objective of study or read it.

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			
LABORATORY PRACTICES (PLAB)	6	0.24	16, 1, 3, 2, 7, 5, 4, 8, 6, 10, 12, 11, 17
THEORY (TE)	46	1.84	1, 3, 2, 8, 6
Type: Autonomous			
PREPARATION OF WRITTEN WORKS	23	0.92	16, 1, 3, 2, 7, 4, 9, 8, 6, 10, 11
READING ARTICLES /REPORTS OF INTEREST	20	0.8	1, 6
SELF-STUDY	55	2.2	16, 1, 3, 8, 6, 11

Assessment

The final scoring will be the amount of: Written evaluation through objective tests with selection of items on alternate answer (50%), Attendance and active participation in class and seminars (15%), theoretical evaluation of written work (25%), oral defence of written work (10%). It is necessary a final scoring greater or equal as 5 to pass the subject. Students who miss exams or who do not do the final written work, they have a NO EVALUATE on the subject.

- Attendance and active participation in class and seminars 15%:

The verify assistance in class and seminars must be greater or equal as 80%: the student who assist a minimum of 80% to the classes, will obtain directly 1,5 points/10 in the final scoring.

Those students who have a justified reason to miss more than 80% and the teacher consider it, will offer to do a complementary work to be able to obtain 15% in the final scoring.

- Written evaluation through objective tests with selection of items on alternate answer 50%:

- There will be 2 mid-term exams with the objective of eliminatory of lessons: each one of them has account 25% (partial I 25%, partial II 25%). Each mid-term exam will consist on 30 questions of true (V) or false (F). Each incorrect question remains a correct question. Unanswered questions will not subtract points. The first mid-term exam will be on mid-semester (first part of subjects) and the second mid-term exam will be when de subjects finished (at the end of the course). Each exam takes 60 minutes.

- In order to pass the course, one must pass the both mid-term exams with a minimum of 5. The other marks make average with the exams score.

- Students who don't pass the first mid-term exam, will not be admitted to the second mid-term exam and they must to do the final exam with all the subjects (date of the exam according to schedule). Students who don't pass the second mid-term exam it will be the same process (They must to do the final exam).

- In the case of do not pass some mid-term exam, the final exam will consist on 50 questions of true (V) or false (F). Each incorrect question remains a correct question. That exam has account 50%. It takes 90 minutes.

- In the case of do not pass the final exam, it will be a 'recovery examination', that consist on 50 questions of true (V) or false (F). Each incorrect question remains a correct question. It takes 90 minutes (date of the exam according to schedule).

- If some student makes an application for revision of some exam, it will be on the agreed schedule with the teacher.

- Theoretical evaluation of written work (25%):

The written work will be awarded at the end of the course (date according to schedule). The delivery of the written work will be in paper and digital form (email). Written works submitted late will mean NO EVALUATE.

There will be a document on virtual campus with all the instructions to make the written work.

- Oral defence of written work (10%):

The dates of the oral defence will be according at the beginning of the subject. These will be always after the delivery of the written works.

The oral defence will take 30 minutes: 20 minutes to expose and 10 minutes to questions and assessment.

It is essential that every people of the group expose and defence the work this day.

The mark obtained will be the same to everyone.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Attendance and active participation in class and seminars.	15%	0	0	9, 13, 15, 14, 12, 11, 17
Oral defense	10%	0	0	1, 3, 2, 10, 12, 11, 17
Theory-written evaluation	25%	0	0	16, 1, 3, 7, 5, 4, 8, 6, 10, 12, 11, 17
Written evaluation through objective tests of alternate answer.	50%	0	0	3, 8, 12, 11, 17

Bibliography

Specific Bibliography:

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CRUZ, M., BOSCH, J. *Atlas de síndromes pediátricos*. Barcelona: Espax, 1998

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LEVITT, S. *Tratamiento de la P.C. y del retraso motor*. Madrid: Panamericana, 2001

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PONCES J. *Paràlisi cerebral infantil*. Barcelona: Generalitat de Catalunya. Departament de Benestar Social, 1991

SOYEZ-PAPIERNIK, E. *Comprendre la rééducation des anomalies du développement*. Paris: Masson; 2005

Internet resources:

Ortopedia en niños <http://www.patient.co.uk/doctor/Orthopaedic-Problems-in-Childhood.htm>

Tortícolis congénita

http://journals.lww.com/jcraniofacialsurgery/Fulltext/2005/03000/Treatment_of_Recalcitrant_Idiopathic_Muscular

<http://www.pediatriceducation.org/2008/12/15/file:///C:/pubmed/12101935>

<http://www.pediatriceducation.org/2008/12/15/>

Parálisis cerebral http://sinu.unisinu.edu.co/investigacion/revistas_en_pdf/medicina/puntaje_de_apgar.pdf

Software

Programary isn't necessary.