

**COURSE DATA****DATA SUBJECT**

Code: 33016
Name: Kinesitherapy
Cycle: Undergraduate Studies
ECTS Credits: 9
Academic year: 2026-27

STUDY (S)

| Degree | Center | Acad. year | Period |
|--------------------------------|--------------------------|------------|--------|
| 1202 - Degree in Physiotherapy | Facultat de Fisioteràpia | 2 | Annual |

SUBJECT-MATTER

| Degree | Subject-matter | Character |
|--------------------------------|----------------|------------|
| 1202 - Degree in Physiotherapy | Kinesitherapy | COMPULSORY |

COORDINATION

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SUMMARY

Fundamentals of Kinesitherapy and its importance within the General Physiotherapy.

Theoretical basis of therapy through kinetic physical agents.

The movement as a physical agent.

Kinesitherapy methods and techniques applicable to patients/users.

Theoretical basis and fundamentals.

Principles of the different Kinesitherapy techniques

PREVIOUS KNOWLEDGE**RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE**



There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

There are no specified enrollment restrictions with other subjects of the curriculum.

COMPETENCES / LEARNING OUTCOMES

1202 - Degree in Physiotherapy

Acquire knowledge related to the information and communication technologies.

Acquire sensitivity to environmental issues.

Apply, direct and coordinate the physiotherapy intervention plan using the own therapeutic tools and considering the patient's individuality.

Encourage the participation of the /patient user in the recovering process.

Have the ability to organise and plan work.

Know and understand the physiotherapy methods, procedures and interventions applied in clinical settings for both, functional recovering or re-education and in activities aimed at health promotion and maintenance

Know how to analyse, programme and apply movement as a therapeutic measure.

Know how to apply kinesiotherapy techniques.

Know the diverse agents based on movement.

Know the ergonomic and anthropometric principles.

Know the fundamentals of Kinesiotherapy and its importance within Physiotherapy.

Know the theoretical bases and the applying principles of the different kinesiotherapy techniques.

Respect fundamental rights and equality between men and women.

Students must be able to apply their knowledge to their work or vocation in a professional manner and have acquired the competences required for the preparation and defence of arguments and for problem solving in their field of study.

Students must be able to communicate information, ideas, problems and solutions to both expert and lay audiences.

Students must have acquired knowledge and understanding in a specific field of study, on the basis of general secondary education and at a level that includes mainly knowledge drawn from advanced textbooks, but also some cutting-edge knowledge in their field of study.



Students must have developed the learning skills needed to undertake further study with a high degree of autonomy.

Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.

Work in teams.

DESCRIPTION OF CONTENTS

1. INTRODUCTION

Topic 1. Concept. Importance. Kinetic physical agents and the kinesitherapy room. Topic 2. General classification. Effects on the body. General indications

2. IMMOBILIZATION

Topic 3. Total immobilization. Bedridden.

Topic 4. Partial immobilization. Orthoses and splints.

Topic 5. Functional taping I.

Topic 6: Functional taping II.

Topic 7: Functional taping III

3. PASSIVE EXERCISE THERAPY

Topic 8. Passive Kinesitherapy. Basic principles. Classification

Topic 9. Passive joint mobilization. Principles of application

Topic 10. Manual Therapy. Basis and applications. Basic principles of manipulations.

Topic 11. Manual Therapy. Methods and techniques.



Topic 12. Joint tractions and osteoarticular postures.

Topic 13. Postural changes. Transfers.

4. ACTIVE EXERCISE THERAPY

Topic 14. Fundamentals of human movement

Topic 15. Active Kinesitherapy. Basic principles. Classification

Topic 16. Manual and mechanical assisted active mobilization.

Topic 17. Mechanotherapy (suspensions and pulleys).

Topic 18. Posture, anthropometry and ergonomics

Topic 19. Stretching I.

Topic 20. Stretching II.

Topic 21. Proprioceptive Retraining

Topic 22. Coordination. Gait.

Topic 23. Balance.

5. EXERCISE THERAPY AGAINST RESISTENCE

Topic 24. Mobilization against resistance. General principles and application.

Topic 25. Differentiated work and types of strength

Topic 26. Strengthening techniques I. Topic 27. Strengthening techniques II

6. SPECIAL KINESITHERAPIA



Topic 28. Kinesitherapy in special populations I.

Topic 29. Kinesitherapy in special populations II.

7. THERAPEUTIC EXERCISE

Topic 30. Therapeutic exercise. Fundamentals

Topic 31. Therapeutic exercise. Upper Limb

Topic 32. Therapeutic exercise. Lower Limb

Topic 33. Therapeutic exercise. Application in muscle pathologies

Topic 34. Therapeutic exercise. Application in joint pathologies

Topic 35. Therapeutic exercise. Group kinesitherapy

8. CASES STUDY

CASE STUDIES I

CASE STUDIES II

CASE STUDIES III

CASE STUDIES IV

CASE STUDIES V

9. PRACTICAL PROGRAM:IMMOBILIZATIONS

Practical 1. Postural changes. Transfers. Technical aids and orthopedic material Practical 2. Functional Taping. Lower limb applications.

Practical 3. Functional Taping. Upper limb applications.

10. PRACTICAL PROGRAM: PASSIVE KINESITHERAPY



Practical 4. Passive joint mobilization. Upper limb.

Practical 5. Passive joint mobilization. Lower limb.

Practical 6. Passive joint mobilization. Spine.

11. PRACTIC PROGRAM: ACTIVE KINESITHERAPY

Practical 7. Active and passive stretching. Upper limb

Practical 8. Active and passive stretching. Lower limb

Practical 9. Proprioceptive retraining. Balance.

12. PRACTICAL PROGRAM: KINESITHERAPY AGAINST RESISTANCE

Practical 10. Manual counter-resistance mobilization.

Practical 11. Mechanical counter-resistance mobilization.

13. PRACTICAL PROGRAM: THERAPEUTIC EXERCISE

Practical 12. Therapeutic exercise with a focus on muscle pathologies. (work on types of force and application and systematic protocols)

Practical 13. Therapeutic exercise with a focus on joint pathologies. (Mobility and stability improvement techniques and application protocols)

Practical 14. Therapeutic Exercises with group work system.

14. PRACTICAL PROGRAM: CLINICAL APPLICATIONS

Practical 15. Clinical applications I

Practical 16. Clinical applications II

Practical 17. Clinical applications III

WORKLOAD

**PRESENCIAL ACTIVITIES**

| Activity | Hours |
|--------------------|--------------|
| Theory | 40,00 |
| Laboratory | 50,00 |
| Total hours | 90,00 |

NON PRESENCIAL ACTIVITIES

| Activity | Hours |
|---------------------------------------|---------------|
| Attendance at other activities | 0,00 |
| Individual or group project | 60,00 |
| Independent study and work | 13,00 |
| Preparation of lessons | 20,00 |
| Preparation for assessment activities | 42,00 |
| Resolution of case studies | 0,00 |
| Total hours | 135,00 |

TEACHING METHODOLOGY

The course consists of a theoretical and practical. During the theoretical sessions will use a teaching-learning methodology based on participatory lecture. Also will be various group activities. In all practical classes are conducted simulation exercises. To encourage self-learning, in the first practice will be proposed to a clinical guideline to be treated with exercise therapy (individually) and the analysis of the analytic movement, global or functional (group).

The teaching program may be modified during the development of the course if the teacher under teacher quality criteria and assimilation of knowledge by the student, it deems appropriate

EVALUATION**6.1. Theoretical program (50% of the final)**

Test-type exam with 40 multiple choice questions, being correct one of the four possible answer Note = $[\text{successes} - (\text{mistakes}/\text{options} - 1)] \times (\text{highest score}/\text{number of questions})$ **(50%)**

Case studies. 2 multiple choice questions, several options could be correct. Grade= each correct answer scores 0.5 points, being able to obtain a total of 3.0 points **(30%)**

6.2. Practical program (50% of the final)

Practical exam as a clinical case study. Resolution must be practical. 2 questions about the practical content of the course.



Grade= each question scores a maximum of 5 points

The student must overcome both parts to make average being the minimum of each part to approve of a 5 out of 10.

REFERENCES

Basic:

- Barnard, Kieran, Dionne Ryder, and Nicola J Petty. *Petty's Principles of Musculoskeletal Treatment and Management: A Handbook for Therapists*. Fourth Edition. Scotland: Elsevier; 2024.
- Biel A. *Guía del cuerpo humano en movimiento*. 2a ed. Editorial Medica Panamericana; 2021.
- Brody LT, Hall CM. *Therapeutic Exercise: Moving toward Function*. 4th edition. Wolters Kluwer; 2018.
- Cano de la Cuerda R, Martínez Piédrola R, Miangolarra Page J. *Control y aprendizaje motor: fundamentos, desarrollo y reeducación del movimiento humano*. 1a edición. Editorial Médica Panamericana, S.A.; 2019.
- Fernández de las Peñas C, Melián Ortiz A. *Cinesiterapia: bases fisiológicas y aplicación práctica*. 3a edición. Elsevier; 2024.
- Haff G, Triplett NT, eds. *Principios del entrenamiento de la fuerza y del acondicionamiento físico*. Primera edición. Editorial Paidotribo; 2018.
- Jovanovi M. *Manual de Entrenamiento de La Fuerza: El Enfoque de Periodizacion Ágil*; 2021.
- Kisner C, Colby LA. *Ejercicio terapéutico: fundamentos y técnicas*. 5a. edición. Editorial Médica Panamericana; 2010.
- Liguori G, Feito Y, Fountaine CJ, Roy B, eds. *ACSMs Guidelines for Exercise Testing and Prescription*. Eleventh edition. Wolters Kluwer; 2022.
- Neumann DA. *Cinesiología del sistema musculoesquelético: fundamentos para la rehabilitación*. Tercera edición. Editorial Medica Panamericana; 2022.
- Potteiger J. *ACSMs Introduction to Exercise Science*. Wolters Kluwer; 2023.
- Ratamess N. *ACSMs Foundations of Strength Training and Conditioning*. Second edition. Wolters Kluwer; 2022.



-Tarantino F. Entrenamiento propioceptivo: principios en el diseño de ejercicios y guías prácticas. Editorial Médica Panamericana; 2020.

-Thompson WR, Ozemek C, eds. ACSMs Clinical Exercise Physiology. Second edition. Wolters Kluwer; 2024.

-Trew M. Fundamentos Del Movimiento Humano. Masson; 2006.

Additional

-Kirkby Shaw K, Alvarez L, Foster SA, Tomlinson JE, Shaw AJ, Pozzi A. Fundamental principles of rehabilitation and musculoskeletal tissue healing. Vet Surg. 2020;49(1):22-32. doi:10.1111/vsu.132

-San Agustín R, Martín R, Escriche Escuder A. Fisioterapia activa en las lesiones del corredor. Universitat de València: Publicacions de la Universitat de València; 2024

In addition, each subject will specify the books, scientific articles and readings of interest recommended for the preparation of the contents addressed.