COURSE DATA

DATA SUBJECT

Code: 33206
Name: Anatomy and kinesiology of human movement
Cycle: Undergraduate Studies
ECTS Credits: 9
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1312 - Degree in Physical Activity and Sport Sciences	Facultat de Ciències de l'Activitat Física i Esports	1	Annual
1331 - Degree in Physical Activity and Sport Sciences (Ont)	Facultat de Ciències de l'Activitat Física i Esports	1	Annual

SUBJECT-MATTER

Degree	Subject-matter	Character
1312 - Degree in Physical Activity and Sport Sciences	Human anatomy	BASIC
1331 - Degree in Physical Activity and Sport Sciences (Ont)	Anatomía Humana	BASIC

COORDINATION

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SUMMARY

1st block: Functional Anatomy
This matter is about the systematic knowledge of the anatomical elements forming organs, devices or systems that together make up the human body.
This knowledge includes the description of the structure, morphology and function of individual anatomical elements; and respect of other environment where (abdomen, chest, extremities etc.) are located. The anatomical knowledge also encompasses the topographic systematization of structures encompassed in different regions of the human body
In the Degree of Sciences of Physical Activity and Sport, particular emphasis will be on the study of the musculoskeletal system, nervous and vascular system or Periferic. Stressing the topographical knowledge of the musculature and the mechanical action of muscles.
The 2nd Block: Kinesiology of Human Movement
Kinesiology, literally means movement treaty, in the present case, movement of the human body. This matter deals with the knowledge of physiological, anatomical basics of neuroscience and basic principles of mechanics applied to locomotor allow us to understand the movement of the human body. Special attention will knowledge of muscle activity in maintaining postures and during motor tasks in daily life and

in work, sports and entertainment fields; and the mechanical impact of the aforementioned tasks in the tissues of the musculoskeletal system, which make up the different anatomical elements of the locomotor system.
The study of this subject provides students of Sciences of Physical Activity and Sport, knowledge of the object of their work itself, that is \ "the human body \". Knowledge of its systems and equipment, their relationships and interactions; at rest and during physical activity, in the gravitational field of the environment in which it operates, ie, the land.The knowledge of the human body facilitates the acquisition of criteria for the design of fitness, with their different orientations and applications (education, health, leisure, everyday, work, sport) life. These criteria also allow fitness to guide the healthy activities in any area or appointed orientations, with its impact on improving the quality of life and social involvement.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

OTHER REQUIREMENTS

Not required , but A basic knowledge in Biology, Physics and Chemistry is advisable.

COMPETENCES / LEARNING OUTCOMES

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Adquirir las habilidades para ser capaz de realizar un análisis cinesiológico de posturas y movimientos de la vida cotidiana, tiempo libre, ámbito laboral y deportivo.

Adquirir los conocimientos de los fundamentos neuromecánicos del movimiento humano.

Conocer la acciones mecánicas de los grupos musculares agonistas y antagonistas en tareas motrices analíticas y complejas.

Gain knowledge of the neuromechanical foundations of human movement.

Get to know the elemental structure of the central and peripheral nervous system with special emphasis on the structures that generate movement and emotions, which are two integral aspects of physical activity and sports training.

Get to know the structural levels of the human body from the embryonic stage to the formation of the human being.

Know the anatomical terminology for the precise description of the human body, in its parts and as a whole, as a basic language for communicating knowledge in the scientific field.

Know the mechanical actions of agonist and antagonist muscle groups in analytical and complex motor tasks.

Llegar a conocer la terminología anatómica, para la descripción precisa del cuerpo humano, en su totalidad

y en sus parte, como lenguaje básico de comunicación de conocimientos en el ámbito científico.

Llegar a conocer los niveles estructurales del cuerpo humano desde la etapa embrionaria hasta la formación del ser humano.

DESCRIPTION OF CONTENTS

1. BLOCK I TYPE OF TISSUES, BONES AND JOINTS

1. Introduction to human anatomy
2. Histology: Epithelial tissue
3. Histology: Connective tissue (I)
4. Histology: Connective tissue (II)
5. Histology: Muscle and Nerve Tissue
6. Types of bones and joints
7. Introduction to kinesiology

2. BLOCK II BACK

8. Back osteology
9. Back arthrology (I)
10. Back arthrology (II)
11. Back muscles (I)
12. Back muscles (II)
13. Back muscles (III)
14. Vascularization and cutaneous innervation of the back
15. Topographic spaces of the back
16. Back kinesiology (I)
17. Back kinesiology (II)

18. Foot and ankle osteoarthrology
19. knee, hip and pelvic girdle osteoarthrology
20. Lumbosacral plexus
21. Sciatic neuromuscular system
22. Tibial neuromuscular system
23. Common peroneal neuromuscular system
24. Plantars neuromuscular systems
25. Femoral neuromuscular system
26. Obturator neuromuscular system
27. Neuromuscular system of the buttocks
28. Vascularization of the lower limb
29. Cutaneous innervation of the lower limb
30. Topographic spaces and lower limb aponeurology

3. BLOCK III LOWER LIMB

18. Foot and ankle osteoarthrology
19. knee, hip and pelvic girdle osteoarthrology
20. Lumbosacral plexus
21. Sciatic neuromuscular system
22. Tibial neuromuscular system
23. Common peroneal neuromuscular system
24. Plantars neuromuscular systems31. Lower limb kinesiology (I)
32. Lower limb kinesiology (II)
33. Lower limb kinesiology (III)

4. BLOCK IV UPPER LIMB

34. Hand and wrist osteoarthrology
35. Elbow, shoulder and shoulder girdle osteoarthrology
36. Brachial Plexus
37. Ulnar neuromuscular system
38. Middle neuromuscular system
39. Musculocutaneous and internal rotators neuromuscular systems
40. Radial neuromuscular system
41. External rotator and abductor neuromuscular systems
42. Vascularization of the upper limb
43. Cutaneous innervation of the upper limb
44. Topographic spaces and aponeurology of the upper limb
45. Upper limb kinesiology (I)
46. Upper Limb Kinesiology (II)
47. Upper limb kinesiology (III)

5. BLOCK V WALLS AND NECK

48. Chest wall osteoarthrology
49. Pelvic wall osteoarthrology
50. Musculature of the chest wall and diaphragm
51. Musculature of the abdominal wall
52. Pelvic floor muscles
53. Neck muscles
54. Kinesiology of the thoracic and abdominal walls

55. Heart and circulatory system
56. Respiratory system
57. Digestive system
58. Genitourinary system
59. Central, peripheral and autonomic nervous systems

6. BLOCK VI APPARATUS AND SYSTEMS

55. Heart and circulatory system
56. Respiratory system
57. Digestive system60. Endocrine system

7. PRACTICAL CLASSES

This block contains the practical classes of each of the theoretical sections studied, the practical classes are distributed as follows:
BLOCK I TYPE OF TISSUES, BONES AND JOINTS (prac 1-2)
BLOCK II BACK (prac 3-6)
BLOCK III LOWER MEMBER (prac 7-15)
BLOCK IV UPPER MEMBER (prac 16-23)
BLOCK V WALLS AND NECK (prac 24-25)
BLOCK VI APPARATUS AND SYSTEMS (prac 26-30)

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	60,00
Laboratory	30,00
Total hours	**90,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	0,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**0,00**

TEACHING METHODOLOGY

-Theoretical Classes: these classes will be face-to-face and will be based on the magisterial transmission method using anatomical images that allow the theoretical descriptions to be easily recognized and followed.

-Practical Classes: these classes will be face-to-face and will be based on the study of anatomical

structures on models, phantoms or any other available material. In them, the student's work may be individual and/or in a group.

EVALUATION

Assessment test of the content of the First Semester:
-Theoretical section (70%): 30 test questions. Correct questions add 1 point and incorrect questions subtract 0.33 points.
-Practical section (30%): 10 questions to identify anatomical structures.

It will be a mandatory condition to obtain a minimum score of 50% in the questions of each section (both theoretical and practical) to pass this test.
Students who pass this test may be exempted from the questions
corresponding to the First Semester of the exam of the 1st call.
Attendance at practices is mandatory. Unjustified non-attendance to more than 20% of the practices will mean the impossibility of taking the practical section of the content assessment test of the First Semester.

Exams of 1st and 2nd calls:
-Theoretical section (70%): 60 test questions: 30 corresponding to the First Semester and 30 corresponding to the Second Semester. Correct questions add 1 point and incorrect questions subtract 0.33 points.
-Practical section (30%): 20 questions to identify anatomical structures. 10
corresponding to the First Semester and 10 corresponding to the Second Semester.

It will be a mandatory condition to obtain a minimum score of 50% in the questions of each semester (both in the theoretical and practical sections) to pass the exams.
Attendance at practices is mandatory. Unjustified non-attendance to more than 20% of the practices will mean the impossibility of carrying out the practical section of the subject in the exam of the 1st call.

REFERENCES

- - DRAKE R.L.; MITCHELL A.M.W.; VOGL A.W. (2020) Gray. Anatomía para estudiantes. 4ªed. Ed. Elsevier, 1304 páginas. - Kapandji, I. A. (2007): Cuadernos de Fisiología Articular. Ed. Panamericana. 6ª ed. Tomo 1, 2 y 3. Barcelona. - NETTER F.H. (2019) Atlas de anatomía humana. 7ª ed. Ed. Elsevier Masson, 672 páginas. - SCHÜNKE M.; SCHULTE E.; SCHUMACHER U. (2022) Prometheus. Texto y Atlas de Anatomía. 3 tomos: Anatomía general y aparato locomotor + Órganos internos + Cabeza, cuello y neuroanatomía. 5ª ed. Ed Medica Panamericana, 1742 páginas. - Tórtora, G., J.; Grabowski, S. R. (2002): Principios de Anatomía y Fisiología. 9ª ed. Oxford University Press. Méjico. - FENEIS H.; DAUBER W. (2021) Nomenclatura anatómica ilustrada. 11ª edición Ed. Elsevier, 605 páginas.