

**COURSE DATA****Data Subject**

|                      |                                           |
|----------------------|-------------------------------------------|
| <b>Code</b>          | 33206                                     |
| <b>Name</b>          | Anatomy and kinesiology of human movement |
| <b>Cycle</b>         | Grade                                     |
| <b>ECTS Credits</b>  | 9.0                                       |
| <b>Academic year</b> | 2020 - 2021                               |

**Study (s)**

| <b>Degree</b>                                                     | <b>Center</b>                                    | <b>Acad. year</b> | <b>Period</b> |
|-------------------------------------------------------------------|--------------------------------------------------|-------------------|---------------|
| 1312 - Degree in Physical Activity and Sport Sciences             | Faculty of Physical Education and Sport Sciences | 1                 | Annual        |
| 1331 - Degree in Physical Activity and Sport Sciences (Ontinyent) | Faculty of Physical Education and Sport Sciences | 1                 | Annual        |

**Subject-matter**

| <b>Degree</b>                                                     | <b>Subject-matter</b> | <b>Character</b> |
|-------------------------------------------------------------------|-----------------------|------------------|
| 1312 - Degree in Physical Activity and Sport Sciences             | 7 - Human anatomy     | Basic Training   |
| 1331 - Degree in Physical Activity and Sport Sciences (Ontinyent) | 7 - Anatomía Humana   | Basic Training   |

**Coordination**

| <b>Name</b>                   | <b>Department</b>                      |
|-------------------------------|----------------------------------------|
| BLASCO AUSINA, MARIA CARMEN   | 17 - Human Anatomy and Embryology      |
| RAMON RODRIGUEZ, MARIA AMPARO | 17 - Human Anatomy and Embryology      |
| SARTI MARTINEZ, M ANGELES     | 35 - (HISTÓRICO) CIENCIAS MORFOLÓGICAS |

**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.

## OUTCOMES

### 1312 - Degree in Physical Activity and Sport Sciences

- 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.
- Conocer la acciones mecánicas de los grupos musculares agonistas y antagonistas en tareas motrices analíticas y complejas.
- Adquirir los conocimientos de los fundamentos neuromecánicos del movimiento humano.



- 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.
- 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.
- Get to know the structural levels of the human body from the embryonic stage to the formation of the human being.
- 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.
- Know the mechanical actions of agonist and antagonist muscle groups in analytical and complex motor tasks.
- Gain knowledge of the neuromechanical foundations of human movement.

## LEARNING OUTCOMES

Being able to make a "kinesiologic motion analysis " mechanical (joint) in three-dimensional space and neuromuscular (functional activity) motor, static and dynamic tasks such as basic form of guidance to the individual. This analysis includes the following phases:

Being able to conduct a joint analysis (mechanical) of body segments involved in driving, dynamic and static tasks.

Being able to locate, describe the mechanical action and the functional activity of the muscle groups in the different compartments myofascial topographical regions of the trunk and upper and lower limbs of the human body in motor, static and dynamic tasks.

Be able to propose postural habits and healthy executions and personalized movement after the kinesiological analysis based on biological age, sex and specific characteristics of individuals.

## WORKLOAD

| ACTIVITY             | Hours        | % To be attended |
|----------------------|--------------|------------------|
| Theory classes       | 60,00        | 100              |
| Laboratory practices | 30,00        | 100              |
| <b>TOTAL</b>         | <b>90,00</b> |                  |

## TEACHING METHODOLOGY

**English version is not available**



## EVALUATION

English version is not available

## REFERENCES

### Basic

- Daniels y Worthingham (2019): Técnicas de balance muscular: Técnicas de exploraciones manual y pruebas funcionales de exploración manual. Ed. Elsevier.
- Fernández de las Penas, C. y Melian Ortiz, A. (2019): Cinesiterapia: Bases fisiológicas y aplicación práctica. Ed. Elsevier.
- Kapandji, I. A. (2007): Cuadernos de Fisiología Articular. Ed. Panamericana. 6ª ed. Tomo 1, 2 y 3. Barcelona.
- Lloret-Riera, M.: Anatomía aplicada a la actividad física y el deporte. Ed. Poidotribo. Barcelona.
- Netter, F. H. (2007): Atlas de Anatomía Humana. 4ª ed. Ed. Elsevier/Masson. Barcelona.
- Palastanga, N.; Field, D.; Soanes, R.: Anatomía y Movimiento Humano (2007): Estructura y Función. Ed. Poidotribo. Barcelona.
- Prometheus (2010): Texto y atlas de Anatomía. 2ª ed. Volumen 1 y 2. Ed. Panamericana. Madrid.
- Tórtora, G., J.; Grabowski, S. R. (2002): Principios de Anatomía y Fisiología. 9ª ed. Oxford University Press. Méjico.
- Diccionari de terminologia mèdica

Aquestes són les referències bibliogràfiques bàsiques i generals. Cadascun dels professors, el primer dia de classe, podrà afegir aquelles referències que considere oportunes per l'aprenentatge de la matèria.

## ADDENDUM COVID-19

**This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council**

### **ADENDA A LA GUÍA DOCENTE MOTIVADA POR COVID 19 - 2º CUATRIMESTRE (1º y 2º CONVOCATORIA)**

#### **3. Metodología:**

Será presencial, siempre y cuando se garanticen las medidas sanitarias tanto para los estudiantes como para el profesorado. En el caso que las autoridades competentes declararan el estado de alarma o, en algún o todos los grupos no se pudiera garantizar las medidas sanitarias adecuadas, la situación cambiaría y pasaríamos a “docencia híbrida presencial” o “docencia virtual”, siendo el profesor el que elegiría el método de docencia a impartir.



#### **4. Evaluación:**

##### *Examen en aula virtual.*

- Prueba teórica objetiva: 50 preguntas tipo test, con respuestas múltiples (3) una opción es la correcta o mejor.
- Prueba objetiva práctica: 20 preguntas de identificación de estructuras anatómicas sobre imágenes.

Seguimiento de las actividades de la evaluación continuada por aula virtual y correo electrónico.

Corrección igual a la de antes del COVID 19.

- La evaluación continuada, correspondería a todas aquellas actividades que el profesor considere adecuadas para el aprendizaje de la materia (durante el período previo al estado de alarma) y a la realización de las actividades correspondientes subidas al aula virtual (durante el período de estado de alarma).

Las valoraciones son las mismas que están descritas en la guía docente publicada, éstas quedarían de la siguiente forma:

- prueba teórica con un valor del 60%.
- prueba práctica con un valor del 20%.
- evaluación continuada con un valor del 20%.

Cada una de las pruebas será excluyente, de tal manera que, para hacer la nota final será necesario obtener un mínimo de:

- Prueba teórica (3 puntos sobre 6).
- Prueba práctica (1 punto sobre 2).
- Evaluación continuada (1 punto sobre 2). La valoración de la evaluación continuada queda reflejada en la guía docente, al igual que las notas de las pruebas que NO se guardan de una convocatoria a otra.

#### **Addendum to the teaching guide for the 2nd term of the academic year 2020/2021:**



The teaching from February 2021 will start on 8 February, in online and synchronous mode, and will be maintained until the Consell de Govern de la Universitat de València reports on its completion and/or modifications.

