



Information about the subject

Degree: Bachelor of Sciences of Physical Activity and Sport

Faculty: Faculty of Physical Activity and Sport Sciences

Code: 280403 **Name:** Assessment of Biological Condition

Credits: 6,00 **ECTS Year:** 4 **Semester:** 1

Module: 6-9) Professional itinerary module

Subject Matter: Sports training **Type:** Compulsory

Field of knowledge: Sports training

Department: Sports Training

Type of learning: Classroom-based learning

Languages in which it is taught: Spanish

Lecturer/-s:

IEDM Javier Zahonero Miralles (**Responsible Lecturer**) javier.zahonero@ucv.es

IEDT Javier Zahonero Miralles (**Responsible Lecturer**) javier.zahonero@ucv.es



Module organization

6-9) Professional itinerary module

Subject Matter	ECTS	Subject	ECTS	Year/semester
Education of the physical activity and the sport	12,00	Design, assessment and intervention of educational programs	6,00	4/1
		Pedagogy in Educational Values in Physical and Sports Activity	6,00	4/1
Sports training	12,00	Assessment of Biological Condition	6,00	4/1
		Planning and Methodology of Sports Training	6,00	4/1
Physical Activity and Quality of Life	12,00	Prescription and Assessment of Physical Exercise in Different Populations	6,00	4/1
		Promotion and Programs of Healthy Lifestyles	6,00	4/1
Management and sportive/sport recreation.	12,00	Sports Facilities	6,00	4/1
		Structure and Legislation in Sports Management	6,00	4/1



Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

- R1 Acquire basic knowledge.
- R2 Learning to assess the biological components of the athlete.
- R3 Learning to work in groups.
- R4 Apply knowledge ergogénesis depending on the sport.
- R5 Apply the lessons learned.
- R6 Apply variety of appliances, tools, methodologies and protocols related to the assessment of physical condition.
- R7 Learn to evaluate and assess their theoretical and practical work.



Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

GENERAL		Weighting			
		1	2	3	4
CG2	Ability to apply information technology and communication (ICT)		X		
CG3	Develop skills to solve problems through decision-making				X
CG4	Transmit any information regarding the contents of body expression both in writing and orally		X		
CG7	Be capable of critical reasoning using the knowledge gained				X
CG10	Develop skills to adapt to new situations and autonomous learning		X		
CG13	Being able to apply theoretical knowledge in practice				X
CG14	Use Internet well as communication and as a source of information		X		
CG19	Developing habits aiming at obtaining excellence and quality at work		X		
SPECIFIC		Weighting			
		1	2	3	4
CE5	Know and understand the effects of the practice of body language and its manifestations in the personal development and health improvement		X		
CE12	Plan, develop and control the theatrical process at different levels				X
CE13	Applying physiological, biomechanical, behavioural and social principles to different fields of physical activity and sports			X	
CE19	Learn to apply the techniques of information and communication within the body expression	X			



Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R4, R5	45,00%	Written/oral and/or practical tests.
R7	10,00%	Participation and self-assessment.
R1, R2, R3, R4, R5, R6	45,00%	Completion of a project.

Observations

To pass the course the student must obtain at least 50% of the grade in each of the assessment instruments.

MENTION OF DISTINCTION: The mention of Distinction will be awarded to students who have achieved a score equal to or greater than 9.0. The number of Distinctions granted will not exceed 5% of students enrolled in a subject in the corresponding academic year unless enrollment is under 20, in which case only one Distinction may be granted. (Royal Decree 1125/2003).

To pass the subject or in the 1^a enrolment be essential:

- To pass the course the student must obtain at least 50% of the total mark for each of the sections of assessment (excluding self-assessment).
- Failure to pass these criteria will be his second official evaluation in conserving call other scores for the competencies exceeded.
- Students who do not meet the requirements to pass the course but the overall rating is equal to or greater than 5 pts. will be rated at 4.5 pts.



Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

- M1 Exhibition of contents by the teacher.
- M2 Dynamics and group activities.
- M3 Resolution of problems and cases.
- M4 Laboratory practices.
- M5 Discussion in small groups.
- M6 Practical lesson.



IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
<p>PRACTICAL /SEMINAR CLASS: Dynamics and group activities. Resolution of problems and cases. Laboratory practices. Data search in a computer room, library... Meaningful construction of knowledge through the interaction and activity of the student</p> <p>M2, M3, M5, M6</p>	R1, R2, R3, R4, R5, R6	29,00	1,16
<p>TUTORY: Learning supervision, evolution. Discussion in small groups. Resolution of problems and cases. Presentation of results before the teacher. Presentation of schemes and indexes of the proposed works.</p> <p>M5</p>	R1, R4, R5	2,00	0,08
<p>EVALUATION: Set of oral and / or written tests used in the evaluation of the student, including the oral presentation of the final project.</p> <p>M2, M3</p>	R1, R4, R5, R6, R7	4,00	0,16
<p>THEORETICAL CLASS: Presentation of content by the teacher. Competency analysis. Demonstration of skills, abilities and knowledge in the classroom.</p> <p>M1, M2, M5</p>	R1, R2	25,00	1,00
TOTAL		60,00	2,40



LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
GROUP WORK: Problem solving. Preparation of exercises, works, memories, to exhibit or deliver in classes and / or in tutoring. M2, M3	R2, R3, R4, R5	35,00	1,40
AUTONOMOUS WORK: Study, Individual preparation of exercises, works, memories, to exhibit or deliver in classes and / or in tutoring. Platform activities or other virtual spaces. M3	R2, R3, R4, R5	55,00	2,20
TOTAL		90,00	3,60



Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
Block. 1. - Functional assessment.	<p>Item 1. Functional assessment: objectives and methodological bases.</p> <p>Item 2. Functional assessment of aerobic metabolism.</p> <ul style="list-style-type: none">·I stress tests: Laboratory tests.<ul style="list-style-type: none">·direct and indirect methods of estimating the maximum aerobic power.·direct and indirect methods of estimation of the transition zone anaerobic and aerobic·Stress tests II: field trials.<ul style="list-style-type: none">·direct and indirect methods of estimating the maximum aerobic power.·direct and indirect methods of estimation of the transition zone anaerobic and aerobic <p>Item 3. Functional assessment of anaerobic metabolism: anaerobic power and endurance.</p> <p>Item 4. Functional assessment of flexibility.</p> <p>Item 5. Functional assessment of muscle strength.</p> <p>Item 6. Functional assessment of physical abilities.</p>
Block 2. - Adaptations of the organism to physical exercise.	<p>Item 7. Cardiovascular adaptations to exercise:</p> <ul style="list-style-type: none">·changes in the electrocardiogram and the cardiac cycle.·changes in heart rate, stroke volume and cardiac output.·variations of blood pressure and blood flow. <p>Item 8. Respiratory adaptations to exercise.</p> <p>Item 9. Hematologic adaptations to exercise.</p>



Block 3. practices

Item 10. Rating and functional tests:

- Electrocardiogram.
- spirometry.
- Monitoring of heart rate and heart rate variability
- Estimation of maximal aerobic power by submaximal tests.
- Estimation of maximal aerobic power by maximal tests.
- Test estimation transition zone aerobic and anaerobic.
- Test estimation of anaerobic power.

Temporary organization of learning:

Block of content	Number of sessions	Hours
Block. 1. - Functional assessment.	12,00	24,00
Block 2. - Adaptations of the organism to physical exercise.	8,00	16,00
Block 3. practices	10,00	20,00



References

BASIC BIBLIOGRAPHY:

Astrand, P.O., y Rodahl, K. (1993). Fisiología del trabajo físico. Panamericana. Barcelona.

Barbany, J.R. (1990). Fundamentos de fisiología del ejercicio y del entrenamiento. Barcanova. Barcelona.

Bowers, R.W., y Fox, E.L. (1995). Fisiología del deporte. Panamericana. Barcelona.

George, J.D., Fisher, A.G., y Vehrs, P.R. (1996). Test y pruebas físicas. Paidotribo. Barcelona.

González, J. (1992). Fisiología de la actividad física y del deporte. McGraw-Hill. Interamericana. Madrid.

Guyton, A.C., y Hall, J.E. (1996). Tratado de Fisiología médica. McGraw-Hill. Interamericana. Madrid.

Legido, J.C., Segovia, J.C., y Ballesteros, J.M. (1996). Valoración de la condición física por medio de test. Ediciones Pedagógicas, Colección Educación Física y Deporte. Madrid.

Legido Arce, J. C., Silvarrey Varela, F. L., & Segovia Martinez, J. C. (1996). Manual de valoración funcional. Madrid; Spain: Eurobook.

López Chicharro, J. Aznar Laín, S. Fernández Vaquero, A. López Mojares, L.M. Lucía Mulas, A. Pérez Ruiz, M. (2004). Transición aeróbica-anaeróbica. Concepto, metodología de determinación y aplicaciones. Ed. Master Line & Prodigio S.L. Madrid.

López-Chicharro J., y Fernández-Vaquero A. (1995). Fisiología del ejercicio. Panamericana. Barcelona.

López-Chicharro, J. y Legido, J.C. (1991). Umbral anaeróbico. Bases fisiológicas y aplicación. McGraw-Hill. Interamericana. Madrid.

McArdle, W., Katch, F.I., y Katch, V.L. (1991). Fisiología del ejercicio. Energía, nutrición y rendimiento humano. Alianza Deporte. Madrid.

Robertson, G. E.. (2004). Research methods in Biomechanics. Human Kinetics. Champaign,IL

Thomas, J.R, Nelson, J.K. (2007). Métodos de investigación en actividad física. Paidotribo.



Barcelona.





Addendum to the Course Guide of the Subject

Due to the exceptional situation caused by the health crisis of the COVID-19 and taking into account the security measures related to the development of the educational activity in the Higher Education Institution teaching area, the following changes have been made in the guide of the subject to ensure that Students achieve their learning outcomes of the Subject.

Situation 1: Teaching without limited capacity (when the number of enrolled students is lower than the allowed capacity in classroom, according to the security measures taken).

In this case, no changes are made in the guide of the subject.

Situation 2: Teaching with limited capacity (when the number of enrolled students is higher than the allowed capacity in classroom, according to the security measures taken).

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject will be made through a simultaneous teaching method combining onsite teaching in the classroom and synchronous online teaching. Students will be able to attend classes onsite or to attend them online through the telematic tools provided by the university (videoconferences). In any case, students who attend classes onsite and who attend them by videoconference will rotate periodically.

In the particular case of this subject, these videoconferences will be made through:

Microsoft Teams

Kaltura



Situation 3: Confinement due to a new State of Alarm.

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject, as well as the group and personalized tutoring, will be done with the telematic tools provided by the University, through:

Microsoft Teams

Kaltura

Explanation about the practical sessions:



2. System for Assessing the Acquisition of the competences and Assessment System

ONSITE WORK

Regarding the Assessment Tools:

The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus.

The following changes will be made to adapt the subject's assessment to the online teaching.

Course guide		Adaptation	
Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

Comments to the Assessment System: