1. BASIC DATA

Subject	Climbing III
Titration	Bachelor's Degree in Physical Activity and Sport Sciences
School/ Faculty	Physical Activity and Sports Sciences and Physiotherapy
Course	Room
ECTS	6 ECTS
Character	Compulsory
Language/s	Spanish
Modality	Face
Semester	S7/S8
Academic year	2027/2028
Coordinating Teacher	Alberto Ochoa de Ocáriz

2. PRESENTATION

Climbing is presented as a sporting activity framed among the "risk sports". In the last two decades he has developed a high degree of specialization that has been supported by the Spanish Olympic medal at the Tokyo 2022 Olympics. This has led to a high increase in the number of practitioners at amateur and professional level. Hence, the industry multiplies around competitions, with the appearance of numerous climbing walls, new equipment brands and climbing associations. The wide growth of this adventure sport is observed not only as an activity or leisure sport, but as a model of active tourism or due to the popularity of indoor climbing as training and as a sport within urban sports.

For this reason, this subject will create the foundations to be able to practice this activity safely within the canons of respect for the natural environment. For which experiential learning will be developed on the climbing equipment, the practice of this sport and training in specific training within this sport, knowing the main injuries and their prevention.

The planning and organization of training and injury prevention acquires special relevance thanks to the scientific contribution in the field. To this end, students will be able to organise the training of specific training through games, principles, systems and organisational aspects of the dynamics of climbing and climbing development.

3. LEARNING OUTCOMES

Knowledge

CON03. It describes activities for the prevention, adaptation and improvement of physical-sports performance and health through physical condition and physical exercise.

- Describes the fundamental concepts related to specific climbing training
- Describes the fundamental concepts related to climbing injuries

- Describes the main performance limiting factors, tactics and strategy of competitive climbing and rock climbing

Skills

HAB02. Design tasks, progressions, and physical exercise strategies aimed at health and sports performance based on individual variables and environmental conditions.

- Design programs for the prevention and rehabilitation of climbing injuries
- Demonstrates an advanced level in planning, scheduling, and periodizing specific climbing training
- Carry out in-depth and synthesis work based on searches in fundamental bibliographic sources and other technological resources related to climbing

Competences

CP02. Design and apply the methodological process made up of observation, reflection, analysis, diagnosis, execution, technical-scientific evaluation and/or dissemination in different contexts and in all sectors of professional intervention in physical activity and sport.

CP07. To design and apply fluidly, naturally, consciously and continuously physical exercise and adequate, efficient, systematic, varied physical exercise and physical condition, based on scientific evidence, for the development of the processes of adaptation and improvement or readaptation of certain capacities of each person in relation to human movement and its optimisation; in order to be able to solve unstructured, increasingly complex and unpredictable problems and with emphasis on populations of special character

CP08. Articulate and deploy an advanced level of skill in the analysis, design and evaluation of tests for the assessment and control of physical condition and physical-sports performance

CP37. Strategic communication: Transmit messages (ideas, concepts, feelings, arguments), both orally and in writing, strategically aligning the interests of the different agents involved in communication in the academic and professional environment.

CP40. Teamwork: Cooperate with others in the achievement of a shared academic or professional goal, participating in an active, empathetic way and exercising active listening and respect for all members

CP41. Critical analysis. Integrate analysis with critical thinking in a process of evaluating different ideas or professional possibilities and their potential for error, based on evidence and objective data that lead to effective and valid decision-making.

4. CONTENTS

Topic 1. Climbing injuries: types, mechanisms of production, prevention and readaptation
Topic 2. Physical preparation for climbing: tractive force, thrust, propulsion and flexibility
Topic 3. Climb-specific training: maximum grip strength, RFD and finger flexor endurance
Topic 4. Competition Climbing
Topic 5. Rock climbing
Topic 6. Scheduling and periodization of climbing training

5. TEACHING-LEARNING METHODOLOGIES

The following are the types of teaching-learning methodologies that will be applied:

- Masterclass
- Case Method

- Cooperative learning
- Learning based on workshop/laboratory teachings
- Simulation environments

6. TRAINING ACTIVITIES

The types of training activities that will be carried out and the student's dedication in hours to each of them are identified below:

Face-to-face modality:

Training activity	Number of hours
Lectures	12
Practical Application Classes	18
Freelance work	56
Debates and colloquia	8
Tutorials	12
Knowledge Tests	2
Activities in workshops and laboratories	20
Preparation of reports and writings	6
Case Analysis	6
Oral presentations of papers	10
TOTAL	**150**

7. EVALUATION

The evaluation systems are listed below, as well as their weight on the total grade of the subject:

Face-to-face modality:

Evaluation system	Weight
Face-to-face assessment tests	45% (40-50%)
Oral presentations	10% (5-10%)

Problem case	15% (5-20%)
Workshop-laboratory practice notebook	20% (15-25%)
Reports and Briefs	10% (10-20%)

On the Virtual Campus, when you access the subject, you will be able to consult in detail the evaluation activities you must carry out, as well as the delivery dates and evaluation procedures for each of them.

7.1. Ordinary call

To pass the subject in the ordinary call, you must obtain a grade greater than or equal to 5.0 out of 10.0 in the final grade (weighted average) of the subject.

In any case, it will be necessary for you to obtain a grade greater than or equal to 4.0 in the final test, so that it can average with the rest of the activities.

To pass the subject in the ordinary call, you must obtain a grade greater than or equal to 5.0 out of 10.0 in the final grade (weighted average) of the subject.

- Obtain a grade equal to or greater than 5.0 in the written theoretical test.
- Attend 100% of the practical classes where assessable activities are carried out
- Attend all activities marked as mandatory

7.2. Extraordinary call

To pass the subject in the extraordinary call, you must obtain a grade greater than or equal to 5.0 out of 10.0 in the final grade (weighted average) of the subject.

The activities not passed in the ordinary call must be submitted, after having received the corresponding corrections from the teacher, or those that were not delivered.

- Obtain a grade equal to or greater than 5.0 in the written theoretical test.

8. SCHEDULE

This section indicates the schedule with delivery dates of assessable activities of the subject:

Assessable activities	Date
Case study analysis and valuation of performance factors	October-November
Developed training schedule (semi-annual)	May
Preparatory and competitive microcycle block-sport climber	January-March

Reflective and analysis notebook sessions	June
Finger injury readaptation case study (1-3 Months)	April

This schedule may be modified for logistical reasons of the activities. Any modification will be notified to the student in a timely manner.

9. BIBLIOGRAPHY

The reference work for the follow-up of the subject is:

- Cole, K. P., Uhl, R. L., & Rosenbaum, A. J. (2020). Comprehensive review of rock climbing injuries. JAAOS-Journal of the American Academy of Orthopaedic Surgeons, 28(12), e501-e509.
- Consuegra, S. (2019). *Climbing training based on scientific evidence.* Ed. Desnivel
- España-Romero, V.; Ortega, F.; García-Artero, E.; Jiménez-Pavón, D.; Gutiérrez, A.; Castillo, M.J. y Ruiz, J.R. (2009). Climbing time to exhaustion is a determinant of climbing performance in high-level sport climbers. European Journal of Applied Physiology, 107, 517-525.
- Fanchini, M., Violette, F., Impellizzeri, F. M., & Maffiuletti, N. A. (2013). Differences in climbing-specific strength between boulder and lead rock climbers. The Journal of Strength & Conditioning Research, 27(2), 310-314.
- Langer, K., Simon, C., & Wiemeyer, J. (2023). Strength training in climbing: a systematic review. The Journal of Strength & Conditioning Research, 37(3), 751-767.
- Levernier, G., & Laffaye, G. (2019). Rate of force development and maximal force: reliability and difference between non-climbers, skilled and international climbers. *Sports biomechanics*.
- Mobraten, M. & Christophersen, S. (2020). *The bible of climbing*. Ed. Desnivel
- Wright, D. M., Royle, T. J., & Marshall, T. (2001). Indoor rock climbing: who gets injured?. British journal of sports medicine, 35(3), 181-185.

10. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT

From the Educational Guidance and Diversity Unit (ODI) we offer support to our students throughout their university life to help them achieve their academic achievements. Other pillars of our action are the inclusion of students with specific educational support needs, universal accessibility on the different campuses of the university and equal opportunities.

This Unit offers students:

1. Accompaniment and follow-up through the realization of personalized counseling and plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made, that is, at the level of methodology and evaluation, in those students with specific educational support needs, thus pursuing equality of opportunities for all students.
3. We offer students different extracurricular training resources to develop various skills that will enrich them in their personal and professional development.

4. Vocational guidance through the provision of tools and advice to students with vocational doubts or who believe that they have made a mistake in the choice of the degree

Students who need educational support can write to us at:
orientacioneducativa@universidadeuropea.es

11. SATISFACTION SURVEYS

Your opinion matters!

The European University encourages you to participate in satisfaction surveys to detect strengths and areas for improvement in the teaching staff, the degree and the teaching-learning process.

The surveys will be available in the survey space of your virtual campus or through your email.

Your assessment is necessary to improve the quality of the degree.

Thank you very much for your participation.