



## COURSE DATA

### DATA SUBJECT

**Code:** 33219

**Name:** Prevention and first aid for injuries due to physical activities

**Cycle:** Undergraduate Studies

**ECTS Credits:** 6

**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	4	First quarter
1331 - Degree in Physical Activity and Sport Sciences (Ont)	Facultat de Ciències de l'Activitat Física i Esports	4	First quarter

### SUBJECT-MATTER

Degree	Subject-matter	Character
1312 - Degree in Physical Activity and Sport Sciences	Prevention and first aid for physical activity-related injuries	COMPULSORY
1331 - Degree in Physical Activity and Sport Sciences (Ont)	Prevención y primeros auxilios de lesiones en la actividad física	COMPULSORY

### COORDINATION

GARCIA LUCERGA CONSOLACION

## SUMMARY

The Prevention and First Aid course of injury in physical activity is within the common compulsory subjects, with 6 ECTS, with a temporary organization for the quarterly grade 4 Science in Sports and Physical Activity.

The proposal and the teaching of this subject are done by the Department of Physical Therapy.

The main objectives of the subject of Prevention and first aid for injuries in physical activity is to provide future professionals in Physical Activity and Sports Sciences with precise and exhaustive knowledge of:

- 1.- General aspects of preventive measures in physical-sports activity.
- 2.- Injuries of the musculoskeletal system to children, adults, the elderly and women.



3.- Alterations produced in other systems and devices of the human body.

4.- Immediate treatment techniques for a physical-sports injury.

5.- Proposal of programs to prevent acute and chronic injuries and alterations.

All of this represents a problem in the development of quality of life in any social area, such as, for example, indaily life in which sports and/or physical exercise or the area of high performance or in school is incorporated.

## PREVIOUS KNOWLEDGE

### RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

Obligation to have previously passed the subject(s)

#### 1331 - Degree in Physical Activity and Sport Sciences (Ont)

Obligation to have previously passed the subject(s)

### OTHER REQUIREMENTS

No other requirements.

## COMPETENCES / LEARNING OUTCOMES

-

Apply the principles of hazard prevention to the different fields of physical activity and sport.

Identify health risks derived from inappropriate physical and sporting activities and propose alternatives.

Identify the health risks of practising inadequate activities for the populations that practise physical activity to improve their quality of life.

Know and to know how to act in situations that require immediate action due to any physical-sports practice.

Know and understand the human body's mechanisms for causing and responding to trauma.

Know and understand the physiological and biomechanical factors that determine the practice of physical activity and sport.

Know and understand the specific and common injuries caused by the practice of physical activity for different ages and genders.



Plan, implement and evaluate physical activity and sports programmes and propose alternatives when these prove inadequate.

Understand the scientific literature in the field of hazard prevention and first aid for physical activity and sport, in English and in other languages with significant presence in science.

## DESCRIPTION OF CONTENTS

### 1. Module 1: BASIC CONCEPTS.

From topic 1 to topic 6, the general principles and basic concepts are studied to lay the foundations for injuries and their prevention:

1.General principles of sports injuries; 2.Sports bone injuries; 3.Sports joint injuries; 4. Sports muscle injuries; 5. Sports tendon injuries; 6.General preventive measures in sports practice.

### 2. Module 2: FIRST AID.

From topic 7 to topic 16, the general principles and basic concepts are studied to lay the foundations for injuries and their prevention:

7. Initial evaluation of the injured person; 8. Basic Life Support (BLS); 9. Respiratory obstruction; 10. Alterations in sports consciousness; 11. Sports mechanical aggression injuries; 12.Sports cardio-circulatory alterations; 13. Sports chemical aggression injuries; 14. Sports thermal aggression injuries; 15. First aid bandages; 16. The first aid kit.

### 3. Module 3: SPORT ALTERATIONS AND INJURIES

From topic 17 to topic 27, the alterations and injuries according to the different anatomical parts, organs and systems of the body are known in depth:

17. Traumatic and overuse injuries to the upper extremity: shoulder, elbow, arm, wrist, hand and fingers; 18. Traumatic and overuse injuries to the chest and abdomen; 19.Traumatic and overuse injuries to the head and face: bone, joint, muscle, tendon, and nerve; 20. Traumatic and overuse injuries to the neck and spine: bone, joint, muscle, tendon and nerve injuries; 21.Traumatic and overuse injuries to the hip, pelvis and inguinal region: bone, joint, muscle, tendon and nerve injuries; 22. Traumatic and overuse injuries to the lower limbs: thigh, knee, leg, ankle and foot; 23. Sports cardiological disorders and injuries; 24. Sports ophthalmological disorders and injuries; 25.Sports dermatological alterations and injuries; 26. Sports otorhinolaryngological disorders and injuries; 27. Sports gastroenterological disorders and injuries.

From topic 28 to 38, an attempt will be made to give a general overview according to the vision of injuries in sports specialties in generic models classified from the point of view of the historical evolution of human movement. Sports:



#### 4. Module 4: SPECIFIC SPORTS INJURIES.

From topic 28 to 38, an attempt will be made to give a general overview according to the vision of injuries in sports specialties in generic models classified from the point of view of the historical evolution of human movement. Sports:28. Individuals; 29. Combat; 30. Of equipment: 31. With instruments; 32. Aquatics; 33. With slip; 34. Equestrian; 35. Air; 36. Engine; 37. Traditional sports and games; 38. Injuries in Physical Education classes.

#### 5. Module 5: PRACTICAL PROGRAM

7 practices will be taught:

- 1.- Handling and transportation of an injured person;
- 2.- Simulation Basic life support in adults, children and infants. semi-automatic defibrillation;
- 3.- Action in airway obstructions;
- 4.- Sports injury prevention techniques I: Lumbopelvic stability. Core. Functional or maximum strength;
- 5.- Sports injury prevention techniques II: Neuromuscular coordination and proprioception;
- 6.- Sports injury prevention techniques III: Muscle chains. Muscle stretching and flexibility;
- 7.- Bandages in first aid.

### WORKLOAD

#### PRESENCIAL ACTIVITIES

Activity	Hours
Theory	45,00
Laboratory	15,00
<b>Total hours</b>	<b>60,00</b>

#### NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	10,00
Independent study and work	5,00
Preparation of lessons	55,00
Preparation for assessment activities	20,00
Resolution of case studies	0,00
<b>Total hours</b>	<b>90,00</b>

### TEACHING METHODOLOGY

Interactive teacher-student classes. Planned for continuous evaluation. The subject will be developed incoordination.

From the first day, students will have a document "**Annex to the teaching guide**" that complements everything that may remain in doubt in this teaching guide.



The **theoretical content** of the topics presented will be presented alternating with seminars; following one or two basic reference textbooks, and using audiovisual media, so that it serves to establish knowledge linked to the planned competencies. Each topic of the subject will have a script that the student can download from the virtual classroom.

The knowledge presented in the theoretical classes and seminars will be completed in the **practical laboratory classes**.

From these theoretical classes, seminars and practices, the teaching staff will propose work groups and topics to be developed = **group work**, in which they will be supported with group and personalized tutorials, the work developed in groups will be presented in power-point format in class = oral presentation of the work group.

From all the knowledge acquired, the student will have to carry out **individual work - a learning portfolio** that will consist of: first developing the activities suggested by the teaching staff, and second, providing solutions to practical cases presented by the teaching staff to the student, from the first day of the academic year.

## EVALUATION

Passing a subject cannot be determined by a single grade obtained with a single test. It must be the subject of a **CONTINUOUS EVALUATION**, it will consist of different 5 blocks, with a requirement to attend at least 80% of these sessions to average the grade obtained in each of the blocks, described below.

It is mandatory to complete each of the 5 blocks in order to obtain a final grade.

In the case of a **FINAL EVALUATION**, the student will have to complete, just as his classmates have worked-presented throughout the academic year, the blocks described below.

From the first day, students will have a document "**Annex to the teaching guide**" that complements everything that may remain in doubt in this teaching guide.

- **1st Block: Written test on the contents of modules 1,2,3 and 5.** It will consist of 30 multiple choice questions, with 4 answers, of which the most correct must be chosen. Each correct answer will add 1 point; each incorrect answer will subtract 0.33 ( $= -(1/n-1)$ ; where  $n$ =the number of answers for each ask); Unanswered questions neither add nor subtract points. It will be necessary to obtain at least 15 points (= 50% of the exam) to average the final grade for the subject. The maximum grade for this exam will be 2.0 points, which corresponds to 20% of the final grade.

- **2nd Block: Carrying out team work:** The teacher will distribute the students into teams, assigning them a topic to develop corresponding to module 3. The topic will be presented as a team, presenting it in power-point format, on the assigned day. The maximum grade will be 1.5 points, which corresponds to 15% of the final grade.



- **3rd Block: Learning folder:** The learning folder are the documents that collect all the activities carried out by the autonomous student during the academic year. Each of the proposed activities must be delivered to the teacher in a digitalized version in the virtual classroom, in PDF format, on the scheduled days. The maximum grade will be 3.0 points, which corresponds to 30% of the final grade.

- **4th Block: Practical module:** It consists of two parts: the first will be attendance at practices, which is mandatory. If this is not done, the student must take an oral exam of the content of the practices carried out; Secondly, the proposed practical cases will have to be reviewed and presented individually. The maximum grade for this module is 3.0 points, which corresponds to 30% of the final grade ((= 1.8 (60%) for attending practices + 1.2 (40%) for solving the cases practical)).

- **5th Block: Active participation in the subject:** Participation in class, attendance, maturation achieved or respect for the deadlines set for the delivery of proposed work will be assessed globally. The maximum grade will be 0.5 points, which corresponds to 5% of the final grade.

## REFERENCES

- Bahr, R. y Mæhlum, S. (2007). Lesiones deportivas. Diagnóstico, tratamiento y rehabilitación. Panamericana.
- Caufriez, M., Esparza, S y Caufriez, S. (2016). El método hipopresivo del Dr. Marcel Caufriez. Tomo I, Génesis y programa estático de base de la GAH. MC Éditions.
- Calais-Germain, y Fischbach Sabel, U. (2010). Abdominales sin riesgo. La Liebre de Marzo.
- Consejo Español de Resucitación Cardiopulmonar. Guías y Manuales. <https://www.cercp.org/guias-y-manuales/>
- Cruz Roja. (2010). La formación en el área de socorros y emergencias de cruz roja española Aenor. [http://www.cruzroja.es/cre/2006\\_7\\_FR/pdf/catforppaa.pdf](http://www.cruzroja.es/cre/2006_7_FR/pdf/catforppaa.pdf)
- European Resuscitation Council Guidelines 2021. Resumen ejecutivo. [https://www.cercp.org/wp-content/uploads/2021/12/ERC-Guidelines-2021\\_Executive-Summary\\_Spanish-translation.pdf](https://www.cercp.org/wp-content/uploads/2021/12/ERC-Guidelines-2021_Executive-Summary_Spanish-translation.pdf).
- Metzl, JD. (2020). Cómo prevenir y tratar las lesiones deportivas. Guía práctica para deportistas. Paidotribo.
- Pfeiffer RP y Mangus BC. (2007). Las lesiones deportivas. (2a ed.). Paidotribo.



- Rodríguez Rodríguez, LP. y Gusi Fuertes, N. (2010). Manual de prevención y rehabilitación de lesiones deportivas. Síntesis.
- Arnheim, DD. (1994). Fisioterapia y entrenamiento atlético. Mosby/Doyma.
- Balius Matas, R. y Pedret Carballido, C. (2013). Lesiones musculares en el deporte. Panamericana.
- Brad Walker. (2010). La anatomía de las lesiones deportivas. Paidotribo.
- Brukner, P. y Khan K. 1995. Clinical Sports Medicine. Sydney: McGraw-Hill Book Company.
- Brunet-Guedj, E., Moyon, B y Genéty, J. (1997). Medicina del deporte. (3a ed.). Masson.
- Calais-Germain, R. (2016). Abdominales sin riesgo. (2a ed.). La Liebre de Marzo.
- Calais-Germain, B. Anatomía para el movimiento. Tomo 1, Introducción al análisis de las técnicas corporales. (2a ed.). La Liebre de Marzo.
- Campignon, P. (2001). Cadenas musculares y articulares G.D.S. Tomo 1, Nociones de base. Lencina Verdu.
- Campignon, P. (2001). Cadenas musculares y articulares G.D.S. Tomo 2, Cadenas del eje vertical. Lencina Verdu.
- Campignon, P. (2001). Cadenas musculares y articulares G.D.S. Tomo 3, Cadenas postero-laterales. Lencina Verdu.
- Creff, A.F y Bérard, L. (1995). Deporte y alimentación. Guía dietética par el deportista. Hispano Europea.
- Daza Lesmes, J. (1996). Test de movilidad articular y examen muscular de las extremidades. Panamericana.
- Dirix, A, Knuttgen H.G y Tittel, K. (1990). Libro olímpico de la medicina deportiva. Doyma.
- Danowski, R y Chanussot, J.C. (1992). Manual de traumatología del deporte. Masson.



- Freiwald, J. (1994). Prevención y rehabilitación en el deporte. Planes y ejercicios para la recuperación de lesiones. Hispano Europea.
- Gomaríz, J.R. (2016). Estiramientos de cadenas musculares. (7ª ed.). La liebre de marzo. Gotlin RS. (2009). Guía ilustrada de las lesiones deportivas. Diagnóstico, tratamiento y recuperación de más de 130 lesiones. Tutor, S.A. Guerrero Morilla, R. y Pérez Moreno, B.A. (2002). Prevención y tratamiento de lesiones en la práctica deportiva. (2a ed.). Formación Alcalá. Romero Rodríguez, D. y Tous Fajardo, J. (2010). Prevención de lesiones en el deporte. Claves para un rendimiento deportivo óptimo. Panamericana.