

Study Plan

School: School of Health and Human Development

Degree: Bachelor

Course: Sports Sciences (cód. 470)

1st Year - 1st Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Systematic Sports and Expressive Activities I	Human Kinetics	12	Year	312
DES10645L					
	Human Functional Anatomy	Biological Scien-	6	Semester	156
DES10646L		ces			
	Initiation to Equitation	Human Kinetics	3	Semester	78
DES10647L					
	Fundementals of Biochemistry	Biochemistry	6	Semester	156
QUI07211L					
	Elements of Sociology of Sport	Sociology	3	Semester	78
SOC10648L					
	Introduction to the Sciences of Human Physical Activity	Human Kinetics	3	Semester	78
DES00383L					
	Organization of Sport	Human Kinetics	3	Semester	78
DES10649L					

1st Year - 2nd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Physiological Basis of Physical Activity	*** TRANSLATE	3	Semester	78
DES10650L		ME: Exercício e			
		Saúde ***			
	Kinesiology	Human Kinetics	3	Semester	78
DES10651L					
	General Didactics of Physical Activity	Education Scien-	6	Semester	156
PED10652L		ces			
	Statistics Applied to Physical Activity	Mathematics	6	Semester	156
MAT00917L					
	Psychology of Development	Psychology	6	Semester	156
PSI10653L					

2nd Year - 3rd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Systematic Sports and Expressive Activities II	Human Kinetics	9	Year	234
DES10654L					
	Kinanthropometry	Human Kinetics	6	Semester	156
DES10655L					
	Motor Development	Human Kinetics	3	Semester	78
DES10656L					
	Sports Facilities	Human Kinetics	3	Semester	78
DES10657L					
	Introduction to Neuroscience	Human Kinetics	3	Semester	78
DES10658L					
	Nutrition and Sportive Dietetics	*** TRANSLATE	3	Semester	78
DES10659L		ME: Exercício e			
		Saúde ***			
	General Theory of Sports Training	Human Kinetics	3	Semester	78
DES00404L					



2nd Year - 3rd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
DES10660L	Traumatology and Means of Intervention	*** TRANSLATE ME: Exercício e Saúde ***	3	Semester	78

2nd Year - 4th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Motor Control and Learning	Human Kinetics	6	Semester	156
DES10661L					
	Didactics of Sports and Expressive Activities I	Education Scien-	3	Semester	78
PED10662L		ces			
	Effort Physiology	*** TRANSLATE	6	Semester	156
DES10663L		ME: Exercício e			
		Saúde ***			
	Theory and Method of Specific Sport Training I	Human Kinetics	6	Semester	156
DES10664L					

Group of Options

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
DES10676L	Field Activities	Human Kinetics	3	Semester	78
DES10677L	Mountain Activities	Human Kinetics	3	Semester	78
DES10678L	Sea Activities	Human Kinetics	3	Semester	78
DES10679L	Assessment and Control of Sports Performance	Human Kinetics	3	Semester	31
DES10680L	Sports Development	Human Kinetics	3	Semester	78
DES10681L	Regional Development and Sports	Human Kinetics	3	Semester	78
DES10682L	Sport Events	Human Kinetics	3	Semester	156
FIL10683L	Philosophy of Sport	Philosophy	3	Semester	78
HIS10684L	History of Physical Activity and Sport	History	3	Semester	78
DES10685L	Olympism and Paralympism	Human Kinetics	3	Semester	78
DES10686L	Postural Re-education Techniques	Human Kinetics	3	Semester	78

Group of Options

Technical English Foreign Languages 3 Semester 78	Component code	Name	Scientific Area Field	ECTS	Duration	Hours
LLT10687L		Technical English	Foreign Languages	3	Semester	78
	LLT10687L					

Group of Free Options

3rd Year - 5th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Theory and Method of Specific Sport Training II	Human Kinetics	12	Year	312
DES10665L					
	Nature Exploration Activities I	Human Kinetics	3	Semester	78
DES10666L					
	Didactics of Sports and Expressive Activities II	Education Scien-	3	Semester	78
DES10667L		ces			



3rd Year - 5th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Introduction to Research Methods in Human Kinetics	Human Kinetics	3	Semester	78
DES10668L					
	Psychology of Physical Activity	Psychology	3	Semester	78
PSI01405L					
	Health and Physical Condition	*** TRANSLATE	6	Semester	156
DES10669L		ME: Exercício e			
		Saúde ***			
	* Practices of Physical Activity in Basic Education	Human Kinetics	3	Semester	78
DES10674L					
	* Practices in Exercise and Health	*** TRANSLATE	3	Semester	78
DES10675L		ME: Exercício e			
		Saúde ***			

Group of Options

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Field Activities	Human Kinetics	3	Semester	78
DES10676L					_
	Mountain Activities	Human Kinetics	3	Semester	78
DES10677L					
	Sea Activities	Human Kinetics	3	Semester	78
DES10678L					
	Assessment and Control of Sports Performance	Human Kinetics	3	Semester	31
DES10679L					
	Sports Development	Human Kinetics	3	Semester	78
DES10680L					
	Regional Development and Sports	Human Kinetics	3	Semester	78
DES10681L					
	Sport Events	Human Kinetics	3	Semester	156
DES10682L					
	Philosophy of Sport	Philosophy	3	Semester	78
FIL10683L	i imissipily si spesi				
	History of Physical Activity and Sport	History	3	Semester	78
HIS10684L		1555. 7		2565161	
	Olympism and Paralympism	Human Kinetics	3	Semester	78
DES10685L	Orympism and raidympism	Traman ranctics		Jemester	
DE310003E	Postural Re-education Techniques	Human Kinetics	3	Semester	78
DES10686L	rostural ive-education recliniques	Tiuman Killetics	3	Semester	10
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Group of Options

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Technical English	Foreign Languages	3	Semester	78
LLT10687L					

Group of Free Options

3rd Year - 6th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Movement-Biomechanical Analysis	Human Kinetics	6	Semester	156
DES10670L					
	Adapted Physical Activity	*** TRANSLATE	3	Semester	78
DES10671L		ME: Exercício e			
		Saúde ***			
	Nature Exploration Activities II	Human Kinetics	3	Semester	78
DES10672L					
	Equitation Didactics	Human Kinetics	3	Semester	78
DES10673L					



3rd Year - 6th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Practices of Physical Activity in Basic Education	Human Kinetics	3	Semester	78
DES10674L					
	Practices in Exercise and Health	*** TRANSLATE	3	Semester	78
DES10675L		ME: Exercício e			
		Saúde ***			

Group of Options

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Field Activities	Human Kinetics	3	Semester	78
DES10676L					
	Mountain Activities	Human Kinetics	3	Semester	78
DES10677L					
	Sea Activities	Human Kinetics	3	Semester	78
DES10678L					
	Assessment and Control of Sports Performance	Human Kinetics	3	Semester	31
DES10679L					
	Sports Development	Human Kinetics	3	Semester	78
DES10680L				_	
	Regional Development and Sports	Human Kinetics	3	Semester	78
DES10681L					
DECLARACI	Sport Events	Human Kinetics	3	Semester	156
DES10682L			_		
EU 100001	Philosophy of Sport	Philosophy	3	Semester	78
FIL10683L					
1110100041	History of Physical Activity and Sport	History	3	Semester	78
HIS10684L					70
DEC10COEL	Olympism and Paralympism	Human Kinetics	3	Semester	78
DES10685L					70
DEC10000L	Postural Re-education Techniques	Human Kinetics	3	Semester	78
DES10686L					

Group of Options

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Technical English	Foreign Languages	3	Semester	78
LLT10687L					

Group of Free Options



Conditions for obtaining the Degree:

*** TRANSLATE ME: Ciências do Desporto

Para obtenção do grau de licenciado em Ciências do Desporto é necessário obter aprovação a 165 ECTS em unidades curriculares obrigatórias e 15 ECTS em unidades curriculares optativas, distribuídas da seguinte forma:

1º Ano

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1 UC Obrigatória Anual num total de 12 ECTS. Esta disciplina anual terá a carga equitativamente dividida pelos dois semestres do primeiro ano.

6 UC Obrigatórias num total de 24 ECTS

20 Semestre

5 UC Obrigatórias num total de 24 ECTS

2º Ano

30 Semestre:

1 UC Obrigatória Anual num total de 9 ECTS. Esta disciplina anual terá a sua carga com 6 ECTS no 3.º semestre e 3 no 4.º semestre.

7 UC Obrigatórias num total de 24 ECTS

40 Semestre:

4 UC Obrigatórias num total de 21 ECTS

1 UC Optativa num total de 6 ECTS

3^o Ano

5^o Semestre:

1 UC Obrigatória Anual num total de 12 ECTS. Esta disciplina anual terá a sua carga equitativamente dividida pelos dois semestres do 3º ano.

5 UC Obrigatórias num total de 18 ECTS

1 UC Optativa num total de 6 ECTS

6^o Semestre:

6 UC Obrigatórias num total de 21 ECTS

1 UC Optativa num total de 3 ECTS

Program Contents

Back

Systematic Sports and Expressive Activities I (DES10645L)



Human Functional Anatomy (DES10646L)

- 1. Human Anatomy and Anatomical Terminology
- 2. The Human Body
- a. Body Proportions and Regions
- b. Location and Direction Terms
- c. Anatomical Positions and Plans
- d. Rotation and Motion Axes
- 3. Basic Histology
- a. Body Tissues
- b. Connective Tissue
- 4. Bones and Joints
- a. Bone Structures and the Human Skeleton
- b. Classification and Joint Mechanics
- 5. The Muscles
- a. The Skeletal Muscle: its Morphology and Function
- b. Muscle Terminology and Muscle Assist Mechanisms
- 6. The Axial Skeleton
- a. Osteology, Arthrology and Myology
- b. The Neurovascular System
- c. Surface or Topographic Anatomy
- 7. Appendicular Skeleton: Scapular Waist and Upper Limb
- a. Osteology, Arthrology and Myology
- b. The Neurovascular System
- c. Surface or Topographic Anatomy
- 8. Appendicular Skeleton: Pelvic Girdle and Lower Limb
- a. Osteology, Arthrology and Myology
- b. The Neurovascular System
- c. Surface or Topographic Anatomy

Back

Initiation to Equitation (DES10647L)

Back

Fundementals of Biochemistry (QUI07211L)

Back

Elements of Sociology of Sport (SOC10648L)

Back

Introduction to the Sciences of Human Physical Activity (DES00383L)

Back

Organization of Sport (DES10649L)



Physiological Basis of Physical Activity (DES10650L)

Back

Kinesiology (DES10651L)

Back

General Didactics of Physical Activity (PED10652L)

Back

Statistics Applied to Physical Activity (MAT00917L)

Back

Psychology of Development (PSI10653L)

- 1 Concept of Development:
- 2. From birth to school entry in: Development in infancy
- 3. Entry into the School to Adolescence: The developing child
- 4. Development and adolescence
- 5. Development and adulthood
- 6. Development and aging

Back

Systematic Sports and Expressive Activities II (DES10654L)

Back

Kinanthropometry (DES10655L)

- I Growth and Proportionality
- II Sexual dimorphism
- III Body composition
- IV Morphology Typology
- V Secular trends
- VI Maturation
- VII Body composition densitometry
- VIII Somatotype



Motor Development (DES10656L)

- Fundamental concepts: growth, maturation, learning, adaptation and development
- Theoretical perspectives: Maturational, normative-descriptive, informational and ecological/dynamic perspectives
- Development of body systems

Muscular, skeletal, adipose and nervous systems

• Development of motor skills

Reflex and spontaneous movements

Rudimentary and fundamental motor skills

• Socio-cultural constraints in MD

Significant people and social contexts

Playing

• Relationships between physical activity, motor skills and health

Tracking of variables through development

- Relationship between motor and cognitive development
- MD and aging

Functional physical fitness

Balance and mobility

Physical activity and cognitive functioning

- Developmental programs in the field of MD in different contexts and ages
- MD assessment

Norm- and criterion-referenced

Validity and reliability

Graphical representation (growth curves)

Study designs and types

Test of gross motor development

KTK Test

Back

Sports Facilities (DES10657L)

- 1. The types and classification of spaces and sports facilities.
- 2. Indicators for ordering of artificial sports facilities.
- 3. Planning methodologies for sports facilities.
- 4. Planning stages of sports facilities.
- 5. Main parameters for management of sports facilities.
- 6. Upkeep and maintenance of sports facilities.
- 7. Management of sporting equipping.



Introduction to Neuroscience (DES10658L)

Anatomical and functional organization of the nervous system (micro and macro)

Organizational principles that govern the structure and functioning of the nervous system (micro and macro).

Morphology and physiological processes of functioning of nerve cells

The nerve stimulus

Reception, transduction, transmission and processing of stimulus.

Process and transmission of information for performance (motor or otherwise)

Anatomy, organization and morphology of the different constituents of the central nervous system to perform their specific functions

Specific sensory reception

Structuring, planning and motor control

Emotion, cognition and motor action

Cognition and emotion in motor activities

Embodied cognition

Higher cortical functions, language and motor skills

Back

Nutrition and Sportive Dietetics (DES10659L)

Back

General Theory of Sports Training (DES00404L)

Back

Traumatology and Means of Intervention (DES10660L)

- I. Traumatology in physical activity and sports
- The competitive nature of the athlete;
- The pathophysiological process of sports injuries;
- Early return to the sporting activity;
- Injury prevention as the key issue;
- Injuries in different physical activities and sports
- The first aid
- The importance of inflammation control (PRICE)
- II. Functional training as a methods of regeneration
- Assessment in functional training
- Anatomy and functional movement
- Movement analysis
- Functional movement systems and patterns
- Movement correction strategies
- Implementation of movement correction strategies
- Development of functional training programs
- III. Equipment Resources in Functional Training
- Equipment choice in functional training
- Adaptation of equipment to meet the needs of the exercises
- Equipment and evaluation
- IV. Exercise progression and equipment



Motor Control and Learning (DES10661L)

Back

Didactics of Sports and Expressive Activities I (PED10662L)

Back

Effort Physiology (DES10663L)

Back

Theory and Method of Specific Sport Training I (DES10664L)

Back

Field Activities (DES10676L)

- 1 Group Dynamics games
- 2 Sight Orientation (urban and rural)
- 3 Mapped Orientation (urban and rural)
- 4 Mountain Biking mapped orientation
- 5 The mountain bike components
- 6 The safety in rope maneuvers
- 7 Ropes, the fittings and unions
- 8 The anchorages and moorings
- 9 The assembly techniques, monitoring ascents, descents and crossings in natural and artificial obstacles
- 10 Kayak and canoe: safety, navigation and rescue in dams and small rivers
- 11 Sailing Ships: the typology, navigation and rescue dams and bays
- 12 The concepts of project planning
- 13 Projections of project development
- 14 The forecasting techniques applied to planning
- 15 Hierarchy of planning
- 16 Techniques of planning and scheduling a project
- 17 Permits and licenses
- 18 Conceptualization of the project
- 19 Support and Sponsorship
- 20 Management of resources (human and material)
- 21 Communication and event publicity

Back

Mountain Activities (DES10677L)

Mountain Activities

- Ski.
- Snowboard.



Sea Activities (DES10678L)

Back

Assessment and Control of Sports Performance (DES10679L)

Back

Sports Development (DES10680L)

Basic sports development
The Portuguese Sports System
The role of Local Authorities
The aspect of the sport hall
Public Policy Municipal Sports
The responsibilities of Municipal Agencies
Intervention models of Departments of Sport

Municipal services, sports

Back

Regional Development and Sports (DES10681L)

- 1. Sports in Municipalities
- 1.1. The Portuguese sports system
- 1.2. The role of local authorities
- 1.3. Public policies municipal sports
- 1.4. The missions of the municipal
- 1.5. Social functions of municipalities
- 2. Legal Responsibilities of Municipalities
- 2.1. Regime powers and duties of municipalities
- 2.2. Legislation applied to the sport in the counties
- 3. Responsibilities Intervention Models of Sport
- 3.1. Areas of intervention in sport
- 3.2. Municipal services to sport
- 3.3. Municipal enterprises and sport
- 3.4. Success stories
- 4. Municipal Management of Sport
- 4.1. The instruments of municipal action
- 4.2. Sports Development Strategic Plans
- 4.3. Atlas Sports Halls
- 4.4. Networking Municipal Sports Equipment, Artificial
- 4.5. Municipal Programs Association Support Sport
- 5. Future Prospects and International
- 5.1. The European reality
- 5.2. The administrative regionalization of sport in Portugal



Sport Events (DES10682L)

- 1. Classification of Events
- 1.1. The characteristics of the event
- 1.2. The types of sport events
- 2. Structure and Organization of Sport Events
- 2.1. Phases of sporting events
- 2.2. Organization models of sport events
- 2.3. Organization areas and work
- 3. Funding and Impact of Sport Events
- 3.1. The socio-economic and socio-political sporting events
- 3.2. The repercussion on the image of cities
- 3.3. The impact on tourism
- 3.4. The state system support of to international events
- 3.5. The sponsorship of sporting events
- 4. Case study
- 4.1. Presentation of case studies relating to the organization of international sports competitions such as the European and World Championships and Olympic Games, among others.

Back

Philosophy of Sport (FIL10683L)

- 1. Introduction.
- 2. Sport as competition.
- 3. Body, physical activity and sport in the western tradition.
- 4. Modern sport and the Olympics (Pierre Coubertin).
- 5. Sport and education.
- 6. Problems with modern sport.

Back

History of Physical Activity and Sport (HIS10684L)

Back

Olympism and Paralympism (DES10685L)

- 1. Olympic and Paralympic Evolution
- 1.1. Olympic and paralympic background
- 1.2. Olympic and paralympic values
- 2. Olympism and Paralímpic Organization
- 2.1. Olympic and paralympic movement
- 2.2. Institutional structure of olympic and paralimpic
- 2.3. Olympic and paralimpic in Portugal
- 3. Olympic and Paralympic Events
- 3.1. Olympic and paralympic applications
- 3.2. Olympic and paralympic competitions
- 3.3. Olympic and paralympic missions
- 3.4. Olympic and paralympic legacy



Postural Re-education Techniques (DES10686L)

- I. Basic Anatomy of Posture
- 1. Osteology and Myology
- 1.1. Spine and upper and lower limbs
- 1.2. Joint movements
- 1.3. Types of muscle contraction
- 1.4. Role of agonists, antagonists and synergists
- 1.5. Muscular balance
- 1.6. Work on strength and flexibility
- 1.7. Pelvic and scapular stability
- 2. Postural alignment and postural assessment
- 2.1. Ideal posture
- 2.2. Methods of assessing posture
- II. Pathologies and prescription in Postural Reeducation
- 1. Pathologies of postural alignment
- 1.1. Pathologies of the spine
- 1.2. Pathologies of the lower limbs
- 2. Prescription of exercise for postural disorders
- 2.1. Theoretical study of postural reeducation techniques
- 2.2. Planning and teaching sessions
- 3. Experience of postural reeducation techniques

Back

Technical English (LLT10687L)

Reading comprehension in English

- 1. Reading for general orientation
- 2. Reading for information and argument
- 2.1. for gist
- 2.2. for specific information
- 2.3. for detailed information
- 2.4. for implications
- 3. Reading and following instructions

Back

Theory and Method of Specific Sport Training II (DES10665L)

Given that the U.C. is taught by several teachers, where students are integrated into technical teams from several institutions, the program contents are specific to each of the different options.

Thus, I refer to the programs of each option to query their contents.

Back

Nature Exploration Activities I (DES10666L)

- 1.1 animation techniques and group dynamics
- 1.2 Guidance and Mapping
- 1.3 Mountaineering and Climbing
- 1.4 Canoeing and Sailing
- 1.5 Mountain bike



Didactics of Sports and Expressive Activities II (DES10667L)

A. Contents cutting across all sports

1 - Aspects related to the teaching-learning process

Purpose of teaching objectives and teaching-learning process

Functions and powers of the teacher

Planning and evaluation

2 - General conditions of planning factors

space available

material conditions

Characteristics of the group

Characterization of individual students

3 - Specific factors that condition the planning lessons

Thematic unit plan

Structure of the swimming lesson

contents

specific objectives

educational functions

Organization of class

Number of tasks to be performed

Degree of difficulty of the tasks

Length of session and exercise

Intensity of effort

Relationship between the content

Lesson Plan

- The teacher in class

Levels at which the teacher

discipline

climate

management

instruction

feedback

Specificity of the teacher / student relationship

Procedures facilitating and encouraging the good teacher / student relationship

- Assessment of teacher performance
- Use of checklists
- B. The sports to address:
- 1. In Curricular Enrichment Activities
- 1.1. Physical Activities

Exploration of Nature

Displacements and equilibrium

Rhythmic and expressive

Games

Handling activities

Opposition and struggle

2. In more advanced levels of education

1.2. Individual sports activities

athletics

gymnastics

swimming

2.1 - Athletics:

Racing

Releases

jumps

2.2 - Swimming:

Adaptation to aquatic

Teaching swimming techniques

Teaching techniques starting Teaching techniques for turning

Rhythmic Gymnastics sports

2.3 - Gymnastics:

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Introduction to Research Methods in Human Kinetics (DES10668L)

- 1. Introduction to Human Motricity research.
- 2. Ethical issues in research and academic work.
- 3. Development of the study problem.
- 4. Research project.
- 5. Formulation of the method.
- 6. Writing and presentation of research work.
- 7. Introduction to statistical concepts.
- 8. Introduction to the Statistical Package for the Social Sciences (SPSS).

Back

Psychology of Physical Activity (PSI01405L)

Back

Health and Physical Condition (DES10669L)

- 1 Diabetes Mellitus
- 2 Dyslipidemia
- 3 Hypertension
- 4 Obese
- 5 Metabolic Syndrome
- 6 Osteoporosis
- 7 Arthritis
- 8 Fibromyalgia
- 9 The elderly
- 10 Children

Back

Practices of Physical Activity in Basic Education (DES10674L)

Back

Practices in Exercise and Health (DES10675L)

- 1 Practical Application Protocols assess cardiorespiratory
- 2 Practical Application Protocols muscle strength evaluation
- 3 Practical Application Protocols flexibility assessment
- 4 Practical Application of the Exercise Prescription
- 4.1 Exercise type, intensity, duration, frequency
- 4.2 Types of exercise programs
- 5 Practical Preparation of Group Classes



Movement-Biomechanical Analysis (DES10670L)

Kinematic analysis using video.

- Linear and Angular Kinematics
- Coordinate System
- Position, Velocity and acceleration
- analytical method and numerical calculation
- direct measurement techniques (accelerometry, goniometry).
- Instrumentation and Methodology used in the analysis Kinematics through video.
- Procurement procedures.
- Estimation of error data processing.
- Accuracy, consistency, validity and noise.
- Two-dimensional and three-dimensional analysis.
- Procedures for calculation.
- Analysis two-dimensional and three-dimensional analysis.
- Instrumentation, software and calculation procedures for kinematic analysis.

Analysis of Musculoskeletal loading.

- Linear and Angular Kinetics
- Newton's Laws
- Impulse, Work and Power
- Moment of Inertia, and Angular Moment and Torque
- Mechanical Work, Energy and Muscle Power
- Methods and instrumentation for kinetic analysis.
- Direct measurement of forces (Dinamografia Platform Forces, Isokinetic).
- Application of the platform in motion analysis.
- Analysis and interpretation of data obtained.
- Synchronization between kinematic and kinetic data.
- Differences between Centre of mass (CoM) and Centre of pressure (CoP).
- Methods of calculating the load on the Musculoskeletal System.
- Muscle forces in inverse dynamics.
- Mechanical Work, energy and power.
- Causes of Muscular inefficiency.
- Calculation of internal work and external work.
- Instrumentation, software and calculation procedures for kinematic analysis.

Biomechanics and Motor Control.

- Posture.
- Posture Control.
- Methods and Cinematic and Kinetic analysis of posture.
- Centre of Pressure (CoP)
- Importance of the analysis of CoP sway to the study postural control.
- Variability and movement.
- Analysis of the variability in a time series.
- Non linear parameters used in the analysis of the movement.
- Mathematical models of sporting movements.
- Simulation, optimization and sensitivity analysis.
- Instrumentation, software and calculation procedures for the analysis of time series.
- Use of nonlinear methods to study time series collected.

Muscle Mechanics.

- Mechanical properties of skeletal muscle.
- Characteristics of the relationship between muscle length and strength, force speed.
- Muscular Efficiency.
- Fundamentals of Mechanics of materials.
- Injury and Biomechanics.
- Surface Electromyography (EMG) and Biomechanics.
- Procurement procedures.
- Processing and analysis of data obtained.
- Processing time domain and frequency domain.
- *** ldsinv**grŒMG to estimate muscle strength.
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Adapted Physical Activity (DES10671L)

- 1. WHO Concepts
- 2. Placement of the AFA
- 3. Special Educational Needs (SEN)
- 4. Disability specific legislation
- 5. Paralympics Games
- 6. Deficiencies and diseases / chronic conditions
- 7. Physical Education

Back

Nature Exploration Activities II (DES10672L)

- 1.1 animation techniques and group dynamics
- 1.2 Guidance and Mapping
- 1.3 Mountaineering and Climbing
- 1.4 Canoeing and Sailing
- 1.5 Mountain bike
- 1.6 Alternative Sports

Back

Equitation Didactics (DES10673L)

Vaulting with saddle and vaulting without saddle (without stirrups)

Vaulting in Saddle (with stirrups)

Horseback on Gymnastics

Horse Ridding

Horse Ridding outside

Guidance for a Training Session

The "Dressage"

Show Jumping

Profiles of Horse Riding Teachers

The Introduction to Horse Riding Teaching and pedagogy.

Horse Base Gymnastics

The Teaching of the Horse

The Theory of Training in Horse Riding