

DEGREE IN PHYSICAL ACTIVITY AND SPORT SCIENCES

SECOND YEAR

Campus CEADE, Isla de la Cartuja. Sevilla.

DEGREE IN PHYSICAL ACTIVITY AND SPORT SCIENCES

Year	2 nd
------	-----------------

Motor learning, development and control	First Semester
Biomechanics	First Semester
Anthropology and Sociology of Physical Activity and sports	First Semester
Sports Basis II (Football, Fight sports and Handball)	First Semester
Physical Activity and Sports Biochemistry	Second Semester
Applied Statistics	Second Semester
Physical Activity Physiology	Second Semester
Sport Basis IV (Basketball, Rugby and Athletics II)	Second Semester
	Second Semester

MOTOR LEARNING, DEVELOPMENT AND CONTROL

1. SUBJECT DESCRIPTION

Degree	Physical Activity and Sport Sciences
Subject	Motor learning, development and control
Module	Human motor skills scientific basis
Department	Social and Health Sciences
Term	First
Total credits	6
Year	2º
Type	Compulsory
Language	Spanish

2. SKILLS

2.1. Basic and General Skills

CG1 - Having and understanding a basic, general and advanced knowledge in the field of Sports Science and Physical Education.

CG2 - Acquiring basic scientific training applied to physical education and sports in its different manifestations.

CG3 - Having a knowledge and an understanding of the physiological and biomechanical factors which have an impact on practicing a physical activity or a sport.

CG4 - Having a knowledge and an understanding of the behavioural and social factors which have an impact on practicing a physical activity or a sport.

CG5 - Having a knowledge and an understanding of the effects that physical exercise has on the human body's structure and its functioning.

CB1 - Students should be able to prove their knowledge in certain areas of study which have their basis in general secondary education, and although these are supported in advanced textbooks, it also includes knowledge which comes from

the forefront area of its field.

CB2 – Students should be able to apply their knowledge to their work or vocation in a professional manner and they must have the skills which can be seen in the elaboration and defence of argumentations and the resolution of problems within their study area.

CB3 – Students should have the skill to gather and interpret relevant data (normally within their study field) so that they can have an informed opinion including a reflection about relevant social, scientific or ethical subjects.

CB4 – Students should be able to transmit information, ideas, problems and solutions both to specialized and unspecialized audiences.

CB5 – Students should have developed the learning skills which are necessary to carry on with their subsequent studies with a high degree of autonomy.

2.2. Cross Skills

CT1 - Understanding the scientific literature regarding the field of physical education and sports in English and in other languages with a significant presence in the scientific field.

2.3. Specific Skills

No data

3. CONTENT

Factors, theories and principles of human development. Explicative models for motor control. Neurophysical basis of movement. Perception, memory and attention. Types and phases of motor learning. Psychological strategies applied to the improvement of motor learning. Transference processes and practice control.

BIOMECHANICS

2. SUBJECT DESCRIPTION

Degree	Physical Activity and Sport Sciences
Subject	Biomechanics
Module	Human motor skills scientific basis
Department	Social and Health Sciences
Term	First
Total credits	6
Year	2º
Type	Compulsory
Language	Spanish

2. SKILLS

2.4. Basic and General Skills

CG1 - Having and understanding a basic, general and advanced knowledge in the field of Sports Science and Physical Education.

CG2 - Acquiring basic scientific training applied to physical education and sports in its different manifestations.

CG3 - Having a knowledge and an understanding of the physiological and biomechanical factors which have an impact on practicing a physical activity or a sport.

CG4 - Having a knowledge and an understanding of the behavioural and social factors which have an impact on practicing a physical activity or a sport.

CG5 - Having a knowledge and an understanding of the effects that physical exercise has on the human body's structure and its functioning.

CB1 - Students should be able to prove their knowledge in certain areas of study which have their basis in general secondary education, and although these are supported in advanced textbooks, it also includes knowledge which comes from the forefront area of its field.

CB2 – Students should be able to apply their knowledge to their work or vocation in a professional manner and they must have the skills which can be seen in the elaboration and defence of argumentations and the resolution of problems within their study area.

CB3 – Students should have the skill to gather and interpret relevant data (normally within their study field) so that they can have an informed opinion including a reflection about relevant social, scientific or ethical subjects.

CB4 – Students should be able to transmit information, ideas, problems and solutions both to specialized and unspecialized audiences.

CB5 – Students should have developed the learning skills which are necessary to carry on with their subsequent studies with a high degree of autonomy.

2.5. Cross Skills

CT1 - Understanding the scientific literature regarding the field of physical education and sports in English and in other languages with a significant presence in the scientific field.

2.6. Specific Skills

No data

4. CONTENT

Physics applied to sports. Magnitudes, vectors, kinematics and kinetics. Physical mathematical principles. History of general biomechanics and the locomotor system. Levers. Gravitation Law. Kinetic chains. Muscular and articular biomechanics: upper limbs, lower limbs and rachis. Analysis of kinematics and kinetics direct and indirect techniques.

ANTHROPOLOGY AND SOCIOLOGY OF PHYSICAL ACTIVITY AND SPORTS

3. SUBJECT DESCRIPTION

Degree	Physical Activity and Sport Sciences
Subject	Anthropology and Sociology of Physical Activity and sports
Module	Human motor skills basis and manifestations
Department	Social and Health Sciences
Term	First
Total credits	6
Year	2º
Type	Compulsory
Language	Spanish

2. SKILLS

2.7. Basic and General Skills

CG1 - Having and understanding a basic, general and advanced knowledge in the field of Sports Science and Physical Education.

CG7 - Having a knowledge and an understanding of the basis, structure and function of the skills and patterns of human motor skills.

CG8 - Having a knowledge and an understanding of the structure and function of the different aspects of human motor skills.

CG9 - Having a knowledge and an understanding of the basis of sport.

CG10 - Having a knowledge of and being in condition to use the current legislation regarding basic equality rights between men and women, and universal access principles for people with disabilities (adapted sport), as well as the principles which belong to peace culture and democratic values.

5. CONTENT

Social sciences paradigm. Sociology, Values and sport. Social structure of sport practice and agents which can have an impact on it. Sports in the face of social problems such as genre question, violence and doping. Social organization of sport. Sport as entertainment .social intervention.

SPORT BASIS III (RACKET SPORTS AND SWIMMING)

4. SUBJECT DESCRIPTION

Degree	Physical Activity and Sport Sciences
Subject	Sports Basis II (Football, Fight sports and Handball)
Module	Human motor skills basis and manifestations
Department	Social and Health Sciences
Term	First
Total credits	12
Year	2º
Type	Compulsory
Language	Spanish

2. SKILLS

2.8. Basic and General Skills

CG1 - Having and understanding a basic, general and advanced knowledge in the field of Sports Science and Physical Education.

CG7 - Having a knowledge and an understanding of the basis, structure and function of the skills and patterns of human motor skills.

CG8 - Having a knowledge and an understanding of the structure and function of the different aspects of human motor skills.

CG9 - Having a knowledge and an understanding of the basis of sport.

CG10 - Having a knowledge of and being in condition to use the current legislation regarding basic equality rights between men and women, and universal access principles for people with disabilities (adapted sport), as well as the principles which belong to peace culture and democratic values.

6. CONTENT

Racket sports: History and classification. Technical and tactical analysis, rules and methodology of paddle tennis, tennis and badminton.

Swimming: History. Biomechanics basis of swimming. Learning phases of aquatic skills. Swimming styles: front crawl, backstroke, breaststroke and butterfly stroke. Analysis and evaluation of the technique. Water polo, synchronized swimming and jumps.

PHYSICAL ACTIVITY AND SPORTS BIOCHEMISTRY

5. SUBJECT DESCRIPTION

Degree	Physical Activity and Sport Sciences
Subject	Physical Activity and Sports Biochemistry
Module	Human motor skills scientific basis
Department	Social and Health Sciences
Term	Second
Total credits	6
Year	2º
Type	Compulsory
Language	Spanish

2. SKILLS

2.9. Basic and General Skills

CG1 - Having and understanding a basic, general and advanced knowledge in the field of Sports Science and Physical Education.

CG2 - Acquiring basic scientific training applied to physical education and sports in its different manifestations.

CG3 - Having a knowledge and an understanding of the physiological and biomechanical factors which have an impact on practicing a physical activity or a sport.

CG4 - Having a knowledge and an understanding of the behavioural and social factors which have an impact on practicing a physical activity or a sport.

CG5 - Having a knowledge and an understanding of the effects that physical exercise has on the human body's structure and its functioning.

CB1 - Students should be able to prove their knowledge in certain areas of study which have their basis in general secondary education, and although these are supported in advanced textbooks, it also includes knowledge which comes from

the forefront area of its field.

CB2 – Students should be able to apply their knowledge to their work or vocation in a professional manner and they must have the skills which can be seen in the elaboration and defence of argumentations and the resolution of problems within their study area

CB 3 – Students should have the skill to gather and interpret relevant data (normally within their study field) so that they can have an informed opinion including a reflection about relevant social, scientific or ethical subjects.

CB 4 – Students should be able to transmit information, ideas, problems and solutions both to specialized and unspecialized audiences.

CB 5 – Students should have developed the learning skills which are necessary to carry on with their subsequent studies with a high degree of autonomy.

2.10. Cross Skills

CT1 - Understanding the scientific literature regarding the field of physical education and sports in English and in other languages with a significant presence in the scientific field.

2.11. Specific Skills

No data

7. CONTENT

Biochemistry basic techniques. Biomolecules. Introduction to Metabolism and Bioenergetics. Enzymes. Oxygen transport. ATP in the muscle. Metabolism of carbohydrates, fats and aminoacids. Aerobic breathing. Krebs cycle.

APPLIED STATISTICS

6. SUBJECT DESCRIPTION

Degree	Physical Activity and Sport Sciences
Subject	Applied Statistics
Module	Human motor skills scientific basis
Department	Social and Health Sciences
Term	Second
Total credits	6
Year	2º
Type	Compulsory
Language	Spanish

2. SKILLS

2.12. Basic and General Skills

CG1 - Having and understanding a basic, general and advanced knowledge in the field of Sports Science and Physical Education.

CG2 - Acquiring basic scientific training applied to physical education and sports in its different manifestations.

CG3 - Having a knowledge and an understanding of the physiological and biomechanical factors which have an impact on practicing a physical activity or a sport.

CG4 - Having a knowledge and an understanding of the behavioural and social factors which have an impact on practicing a physical activity or a sport.

CG5 - Having a knowledge and an understanding of the effects that physical exercise has on the human body's structure and its functioning.

CB1 - Students should be able to prove their knowledge in certain areas of study which have their basis in general secondary education, and although these are supported in advanced textbooks, it also includes knowledge which comes from the forefront area of its field.

CB2 – Students should be able to apply their knowledge to their work or vocation in a professional manner and they must have the skills which can be seen in the elaboration and defence of argumentations and the resolution of problems within their study area.

CB 3 – Students should have the skill to gather and interpret relevant data (normally within their study field) so that they can have an informed opinion including a reflection about relevant social, scientific or ethical subjects.

CB 4 – Students should be able to transmit information, ideas, problems and solutions both to specialized and unspecialized audiences.

CB 5 – Students should have developed the learning skills which are necessary to carry on with their subsequent studies with a high degree of autonomy.

2.13. Cross Skills

CT1 - Understanding the scientific literature regarding the field of physical education and sports in English and in other languages with a significant presence in the scientific field.

2.14. Specific Skills

No data

8. CONTENT

Descriptive Statistics: univariate and bivariate. Regression and correlation. Probability theory. Random variable. Probability distributions. Inferential statistics. Sample Theory. Point and interval estimation. Hypothesis contrast statistics. Application of statistics to physical education / activity and sport.

PHYSICAL ACTIVITY PHYSIOLOGY

7. SUBJECT DESCRIPTION

Degree	Physical Activity and Sport Sciences
Subject	Physical Activity Physiology
Module	Human motor skills basis and manifestations
Department	Social and Health Sciences
Term	Second
Total credits	6
Year	2º
Type	Compulsory
Language	Spanish

2. SKILLS

2.15. Basic and General Skills

CG1 - Having and understanding a basic, general and advanced knowledge in the field of Sports Science and Physical Education.

CG7 - Having a knowledge and an understanding of the basis, structure and function of the skills and patterns of human motor skills.

CG8 - Having a knowledge and an understanding of the structure and function of the different aspects of human motor skills.

CG9 - Having a knowledge and an understanding of the basis of sport.

CG10 - Having a knowledge of and being in condition to use the current legislation regarding basic equality rights between men and women, and universal access principles for people with disabilities (adapted sport), as well as the principles which belong to peace culture and democratic values.

2.16. Cross Skills

No data

2.17. Specific Skills

No data

9. CONTENT

Macronutrients. Energy transfer during exercise. Phosphagen system, anaerobic glycolysis, oxidative system. Muscular/ muscle physiology. Neuro motor system. Heart physiology at rest and during exercise. Circulation. Haematological response and adaptation to exercise. Breathing and ventilation. Lung circulation. Gas diffusion and transport. Acid- base balance. Maximum oxygen consumption, aerobic- anaerobic transition. Hormonal regulation.

SPORT BASIS IV (BASKETBALL, RUGBY AND ATHLETICS II)

8. SUBJECT DESCRIPTION

Degree	Physical Activity and Sport Sciences
Subject	Sport Basis IV (Basketball, Rugby and Athletics II)
Module	Human motor skills basis and manifestations
Department	Social and Health Sciences
Term	Second
Total credits	6
Year	2º
Type	Compulsory
Language	Spanish

2. SKILLS

2.18. Basic and General Skills

CG1 - Having and understanding a basic, general and advanced knowledge in the field of Sports Science and Physical Education.

CG7 - Having a knowledge and an understanding of the basis, structure and function of the skills and patterns of human motor skills.

CG8 - Having a knowledge and an understanding of the structure and function of the different aspects of human motor skills.

CG9 - Having a knowledge and an understanding of the basis of sport.

CG10 - Having a knowledge of and being in condition to use the current legislation regarding basic equality rights between men and women, and universal access principles for people with disabilities (adapted sport), as well as the principles which belong to peace culture and democratic values.

2.19. Cross Skills

No data

2.20. Specific Skills

No data

10. CONTENT

Basketball: History. Rules. Individual technical- tactical basis for attack and defence. Training methodology and planning. School basketball and mini basketball.

Rugby: History. Rules. Technical- tactical basis: basic and specific skills. Attack and defence. Types of rugby. Rugby teaching methodology and planning.

Athletics II: Races and race walking: speed races, middle distance races, long distance races, hurdle races and race walking. Vertical and horizontal jumps. Light and heavy throws. Teaching- learning process. Training plan.