



# Escuela Universitaria Real Madrid

Universidad Europea



Only official master in Spain specializing in sports training and nutrition

The **Master's Degree in Sports Training and Nutrition** is designed to provide students with specialized knowledge of the most state-of-the-art training methods, the latest trends in sports nutrition, and natural ergogenic aids for improving sports performance.

The program is based on an eminently practical work methodology. In order to achieve an optimal assimilation of knowledge we combine teamwork, attendance at seminars, and individual work at the campus's facilities which are equipped with cutting edge technology, including physiological laboratories with equipment for carrying out functional assessment tests and training tests, and a training lab equipped for strength measurement.

Everything that is learned is also reinforced by internships at some of the most important sports enterprises and clubs.

The aim of this course is for students to receive a comprehensive training which will prepare them for:

- Programming short, medium and long term training plans in various contexts.
- Handling devices for analyzing human movements and monitoring training.
- Preparing natural nutritional and supplemental diets, combined with timing intake.
- Carry out performance and body composition assessments.
- Carrying out scientific research and development.



- It is the only university master's degree specialized in sports training and nutrition leading to an official qualification.
- The master prepares students for their doctorate.
- The teaching staff comprises some of the most prestigious professionals in the country in the field of sports training and nutrition.
- The program of professional practice sessions takes place in leading clubs and enterprises of the sector which demand the very best from the students.



#### **AIMED AT:**

The Master's Degree in Sports Training and Nutrition is aimed at graduates or postgraduates in Physical Activity Sciences, diplomates in nutrition, diplomates in Physical Education Teaching, graduates in Medicine, and diplomates in Physiotherapy or Nursing. Other university graduates with (accredited) experience in the subject may also enroll if they pass the selection process.

# **QUALIFICATION:**

At the end of the course students will receive a **Master's Degree in Sports Training and Nutrition**, awarded by **Universidad Europea de Madrid.** 

# **DURATION:**

60 ECTS Credits. From October to September.

### **MODALITY:**

The master has a mandatory campus-based component consisting of 24 weekends from October to June in which specific subjects with a high theoretical, practical and applied content will be delivered. Professional internships will be included as one of the degree requirements. These will be held in a center related to the student's area of interest or knowledge between December and September of the following year.

#### TIMETABLE:

Fridays and Saturdays from 9.00 to 14.00 h. and from 15.00 to 20.00 h. The period from 15.00 to 16.00 h. is set aside for exams and additional activities.

#### **FACILITIES**

The master is delivered both in theoretical classroom sessions for the content of the modules and in laboratories for training, physiology and biomechanics.

#### **METHODOLOGY:**

The classes are theoretical-practical with a great many programs and plans for diets and exercises from the best experts in the country in these fields.

# **CAMPUS:**

Villaviciosa de Odón (Madrid).



The University reserves the right to make any appropriate changes to the proposed teaching staff, the syllabus, or the venue where the postgrad course is to take place. The University also reserves the right to delay the start of the course or to cancel it if the minimum number of students is not reached.



# MODULE I. BIOCHEMISTRY AND PHYSIOLOGY APPLIED TO TRAINING

# **MODULE II. NUTRITION AND ERGOGENIC AIDS**

- Fundamentals of human nutrition, with special reference to physical activity and sport.
- Digestive system and metabolism of macro- and micro-nutrients.
- Nutrition and effects on the neuroendocrinal system.
- Analysis of foods and food technology.
- Nutrition, immunological response and physical performance.
- Organization of diet.
- Nutritional ergogenic aids.
- Nutraceuticals: definition and integration in a functional diet.
- Description and classification of natural supplements.
- Description, use and application of the most commonly used supplements in sport health and performance.
- Use of carbohydrates to improve health and performance. Sports drinks
- Stimulants, buffers, ergogenic aids for special situations (heat, humidity, height).

#### **MODULE III. BIOMECHANICS APPLIED TO SPORTS**

- Physical principles of movement.
- Kinematic analysis of movement in sport.
- Mechanical and functional structures of movement in sport.
- Technology applied to the analysis of sports technique.
- Kinanthropometry of the human body.

# **MODULE IV. SPORTS TRAINING**

- Strength and flexibility training.
- Resistance training.
- Speed training and sports technique.
- Methodological bases of the programming and periodization of sports training.
- Control of competition in team sports.
- Training in combat sports and games with racquets or other equipment.
- Training at early ages (sport talent detection).
- Training in special conditions (height, heat, cold, etc.).

# MODULE V. PSYCHOLOGY AND SOCIOLOGY OF SPORT AND COMPETITION

- Management of sports groups.
- Motivation in competitive sport. Motivation theories.
- Emotional and social intelligence in sport.
- Leadership in competitive sport. Leadership theories.

# **MODULE VI. BIOMECHANICS OF SPORTS INJURIES**

- Biomechanical factors of injuries.
- Kinetic chain in sports injuries.
- Joint sports injuries.
- Muscular sports injuries.
- Bone sports injuries.
- Work on prevention, proprioception and recovery from sports injuries.
- Ergogenic and nutritional aids in the recovery from sports injuries.

#### **MODULE VII. SPECIAL SEMINARS**

- Psychophysical exhaustion, determinant factors (prevention and recovery).
- Use of vibration training to improve sports performance.
- Optimization of learning in individual sports: structural analysis and methodology of adaptation.
- New applied technologies in the analysis of training and competition in different sports.
- Monitoring of the neurophysiological response to different workloads and in recovery using Omegawave devices.
- Latest advances in anti-doping techniques in sport.
- Round tables with experts and prominent people from the world of sport.

# MODULE VIII. INTERNSHIPS AND PARTICIPATION IN RESEARCH WORK

The master's syllabus includes a mandatory internship in the field of nutrition or training, and the tutored preparation of an End of Master Project, in which students may use the technology available at Universidad Europea. The students will have at their disposal state-of-the-art equipment and a sports center (weight room, cardio room, functional training room), athletics track and football pitch, where they can carry out all the required tasks and acquire the experience necessary to be able to pursue their profession with the benefit of a higher level of training.

For the provision of professional internships the master has agreements signed with:

- Real Madrid C.F.
- Rafa Nadal Academy
- JC Ferrero Equelite Sport Academy
- Centro de Alto Rendimiento Deportivo, del Consejo Superior de Deportes
- Club Estudiantes de Baloncesto
- Athletic Club de Bilbao
- Real Valladolid C.F.
- Sevilla C.F.
- Rayo Vallecano C.F.
- Getafe C.F.
- Club de Fútbol Majadahonda
- Club de Fútbol Sanse
- Club Voley-Playa Madrid
- Real Federación Española de Voleibol
- Federación de Tenis de Madrid
- Chava Boxeo, S.L.
- SPESALUD-Explotaciones Deportivas Majadahonda
- Nutrición Center
- Nutrivive
- Medicadiet
- Clínica del Dr. Durantez
- Club de Remo Cangas (Oviedo)
- Allinyourmind (triatlón y natación)
- Gimnasio Palestra
- Centros de Excelencia de la Escuela de Doctorado e Investigación, de la Universidad Europea
- Center of Sports Sciences of Human Performance Greenwich University
- Método Thinking. Centro integral de salud y ejercicio
- C. Natación Moscardó



#### **PROGRAM DIRECTOR**

# Dr. Sergio Jiménez Sáiz

Associate professor. ANECA, (Spanish National Agency for Quality Assurance and Accreditation certified). Expert in high performance sports and group management, Universidad Europea de Madrid. Professional trainer

#### Jaime Abascal Castañón

Real Madrid Medical Services. Academy doctor of Real Madrid's Sanitas medical services

#### **TEACHING STAFF**

#### Prof. Dr. Asker Jeukendrup

Full professor. World leader in the study of sports physiology and carbohydrates. Gatorade Institute. mysportscience. Loughborough University

## Dr. Alejandro Lucía Mulas

Full professor. World authority on the study of genetics and health in different populations, including sportspersons. Universidad Europea

#### Xesco Espar

Professor of the National Institute of Physical Education of Catalonia, Handball European champion. Expert in personal development and high performance sports

# Dr. Iñigo Mujika

World authority on sports training. Member of the group of trainers off the Spanish swimming and triathlon federations

### Dr. Juan M. García Manso

Associate professor. International leader and expert in sports training. Universidad de Las Palmas de Gran Canaria

# Dr. Nicolás Terrados Cepeda

Doctor of Sports Medicine. Head Doctor at Barcelona 92'. Director of the Regional Sports Medicine Unit of Asturias at Avilés

# Dr. David de Lorenzo

Director of the Centre of Studies in Genomics and Nutrition, and coordinator of the Rare Genomics Institute in Spain. He is a specialist in interactions between the human genome and nutrients (nutrigenomics)

#### Dr. Luis Serratosa

Real Madrid CF doctor. Expert in epidemiology and nutrition in top level athletes. Hospital Quirón de Madrid

### Dr. Joaquín Más

Real Madrid CF doctor. On-field doctor for Real Madrid CF's first team

## Dra. Margarita Pérez Ruiz

Associate university professor. Expert in exercise physiology. Universidad Europea

# Dr. Carlos Balsalobre

Expert in training control and sports applications. Universidad Europea de Madrid

# Dr. Jaime Sampaio

University full professor. Expert in notational analysis. Universidade de Tras os Montes e Alto Douro (Portugal)

# Dr. Mikel Izquierdo

University full professor. Expert in strength and health training. Universidad Pública de Navarra

#### Dr. Juan J. González Badillo

University full professor. Professor of theoretical and practical sports training and expert in strength training. Universidad Pablo de Olavide

#### Dr. Carlos Lago Peñas

Associate professor. Expert in competition analysis and football. Universidad de Vigo

### Dr. Jean Côté

University full professor. International expert in development and psychosocial factors affecting sport and the performance of physical activities and sports. Queen's University (Canada)

### Dr. Juan J. Molina Martín

Associate professor. Volleyball sports expert and director of the Team Sports Analyses research line, Universidad Europea

# Dámaso Rodríguez Serrano

Sports nutritionist and nurse of the Real Madrid CF medical services – Sanitas

# Dr. Alfredo Santalla Hernández

Associate professor. Expert in the physiology of exercise. Universidad Pablo de Olavide de Sevilla

# Dr. Alberto Lorenzo Calvo

Associate professor. Top level basketball trainer. International renowned expert in the development and management of sports talent. Universidad Politécnica de Madrid

# Dr. Miguel A. Gómez Ruano

Associate professor. Expert in Sports Methodology and Research. Universidad Politécnica de Madrid

# Dr. Joaquín Figueroa Alchapar

Expert in endocrinology and sports nutrition. Professor at Universidad Alfonso X El Sabio

# Dr. Manuel Rodríguez Alonso

Sports doctor. International expert in ergogenic aids and supplements in top level athletes. Professor at Universidad de Oviedo

# Dr. Fernando Naclerio

Associate professor. Expert in sports training and dietary planning for athletes. Greenwich University (UK)

#### Dr. Julio Calleja

Associate professor. Expert in exercise physiology and sport training for team sports. Universidad del País Vasco

#### Dr. David Rodríguez Ruiz

Associate professor. Expert in strength and jump performance training. Universidad de Las Palmas de Gran Canaria

#### Dr. Alberto García Bataller

Associate professor. Expert in cyclical sports training. Olympic athlete trainer. Universidad Politécnica de Madrid

# Dr. Jordi Álvaro Alcalde

Expert in the technology and statistical monitoring of team sports. Spanish national handball team. Professor of Universidad Europea

#### Dr. Juan Del Coso

Professor of sports training theory. Expert in doping and hydration of top level athletes. Universidad Camilo José Cela

# Dra. Noelia Bonfanti

Expert in sports nutrition. High level sports nutritionist. Club Estudiantes

# Juan Carlos Álvarez

Athletics trainers for Olympic long jump athletes. Professor of Athletics. Universidad Europea

# Juan Trapero

Physical trainer of Real Madrid C.F's first basketball team. Ex-Olympic athlete and Spanish sprint champion. Real Madrid C.F.

# Dr. Juan Del Campo Vecino

Associate professor. Expert in sports training of top level athletes. CAR Madrid. Universidad Autónoma de Madrid

## Dr. Jesús Rivilla

Expert in personal physical preparation. Training BodyCore. Universidad Politécnica de Madrid

#### Iván Gonzalo

Expert in personal physical preparation. Training elements. Universidad Politécnica de Madrid

## Carlos Sosa Marín

Professor at Universidad Europea de Madrid. Head of physical preparation services for Real Madrid C.F. Basketball

# THE REAL MADRID GRADUATE SCHOOL - UNIVERSIDAD FUROPFA



The Real Madrid Graduate School - Universidad Europea is the first higher education center specializing in sports. The School offers graduate degree programs that have a direct connection to the practice of sports, athletes' health, sports communication and the management of institutions and companies related to sports. All of the programs are organized in 3 main areas: management & law, marketing & communication and sports & health.

The school combines the management experience of the **world's leading sports club** in terms of revenue, results and solvency with the teaching experience and **innovation of the Universidad Europea**.

Thanks to this union, **Real Madrid's Santiago Bernabéu Stadium and Ciudad Deportiva** have become a university campus where part of the work sessions take place, and whose professors are the Club's executives and other professionals who use their daily activity as case studies.

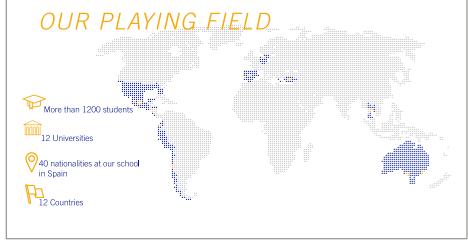
This practical, multi-disciplinary training is one of the main characteristics of the graduate programs taught at the school. Additionally, all of the programs are linked to the professional reality that students will face when they finish their studies.

One of the school's basic pillars is to promote the students' **international focus**. The school has campuses in 12 countries in Latin America, Europe, Asia, and Oceania and the students have the opportunity to study abroad or carry out professional internships there.

The focus of all our activities and programs is to train highly specialized professionals who have leadership skills in any of the disciplines related to sports.

We are proud to once again be pioneers and to share with society such an exciting project as a university program dedicated to training professionals who are experts with specific knowledge and skills in areas such as health, management, communication, and physical activity, all of which are linked to sports.

Emilio Butragueño General Manager of the Real Madrid – Universidad Europea International School



# GRADUATE SCHOOL UNIVERSIDAD EUROPEA

Today, specialized postgraduate training is essential to increasing professional success and finding a satisfactory job, whether that be creating a job for yourself or improving the one you have. The constant updating of knowledge, strengthening knowledge through contact with the best professionals in each sector, performing internships, and international experience constitute essential elements in a quality post- graduate education. And it is just this type of education that the Real Madrid -Universidad Europea International School offers to its students. The first private university in Spain and the best soccer club of the 20th century join forces in an innovative project that promotes professionalism in a growing sector that has many options for global development.

The Universidad Europea, the largest private university in Spain, unifies all of its graduate studies under one single brand: the Universidad Europea Graduate School.

This school consists of over **140 degree programs** which are organized in **18 departments** which include Business, Legal, Art, Communication, Sports, Education, Health, Engineering, Architecture, and Building.

These degree programs include Doctor's Degrees and Master's Degrees, degrees which authorize you to practice a profession and specialized degrees, which will allow you to obtain an accredited degree that is valid in the entire European Higher Education Area. It is also possible to study Expert Master's Degrees and Programs, private degrees from the Universidad Europea which are adapted to the specific needs of the workforce.

True to its **innovative nature**, and with the aim of strengthening our students' abilities and guaranteeing their employability, the School promotes an international educational model, which is **career-oriented** and of **high academic quality**.

The Universidad Europea Graduate School, as part of the Universidad Europea, also belongs to the **Laureate International Universities network**, a leader in the higher education market, which operates in Europe, North America, Latin America, Asia, Africa, and the Middle East.

Thanks to this network, students may **study abroad** and teach in other prestigious educational centers all over the world. In fact, 20% of the School's students are international, which enormously enriches the exchange of experiences and the possibilities for networking with people from around the world.



# LAUREATE INTERNATIONAL UNIVERSITIES

# With a strong international outlook:

Universidad Europea belongs to the Laureate International Universities network, a leader in the higher education market with students in 80 different institutions in 28 countries.



# UNIVERSIDAD EUROPEA

- Legal status: private
- Year founded: 1995
- Students: more than 16,000
- International students: over 20%,
- 3,000 international students
- Professors: more than 1,100
- Professor/student ratio: 1/16

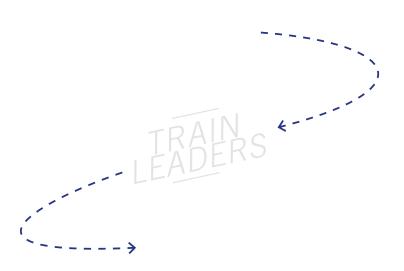
# ACADEMIC OFFER

- 40 Degree Programs
- 39 Dual Degrees
- 1 Triple Degree
- 140 Graduate Degrees
- 4 Bachelor's Degree Schools
- 4 Graduate Schools and 1 School of Doctoral
- Studies and Research
- 5 Centers of Excellence for Applied Research
- N.º of internship and collaboration agreements with companies: over 6,000
- Campus: Madrid, Valencia and the Canary Islands

# LAUREATE INTERNATIONAL UNIVERSITIES

- N.º of member institutions: 70
- Students: 1,000,000
- N.º of countries where the Network is present: 25

Europe | Latin America | North America | Asia Pacific | Middle East | North Africa



# THE EUROPEAN HIGHER EDUCATION AREA (EHEA)

The creation of the European Higher Education Area (EHEA) means that from 2010 onwards university qualifications from all European countries guarantee equivalent academic programs, which means an **immediate recognition of qualifications anywhere in Europe**, mobility between countries and continuity in learning.

**Official degree programs** are structured into **Bachelor's Degrees** and **Graduate Degrees**, with official graduate degrees divided into 2<sup>nd</sup> and 3<sup>rd</sup> stage studies. Specifically, Master's Degrees are taken in the 2<sup>nd</sup> stage and **Doctor's Degrees** in the 3<sup>rd</sup> stage.

This new Higher Education structure at last enables Bachelor's degree graduates, engineers and Bachelor's degree in architecture graduates to be admitted into PhD courses (3<sup>rd</sup> stage) through a Master's Degree.

#### Why study a Master's Degree at the Universidad Europea?

**Master's Degrees** let you continue your education and specialize in the subjects currently in demand from companies, obtaining an accredited degree that is valid in any European country and can be validated in any other country.

Universidad Europea degrees offer this official aspect because they are issued by a university, while adding an **international outlook** and a **close link to professions** and reputable companies, unique characteristics which will open doors for students in the future.







# ALUMNI

Our commitment to our students does not end when they graduate. Through Alumni, former Universidad Europea students can keep up to date with everything Universidad Europea continues to offer them as a professional partner: job offers, special training, conferences, networking events, etc.

**Networking** is a determining factor for successfully entering into the job market. Through Alumni, students can stay in contact with their professors and classmates in order to keep sharing good ideas and experiences, which reinforce the training acquired in their graduate studies.

We invite students to go to alumniuem.es and see what the Universidad Europea can continue to offer them after graduation.



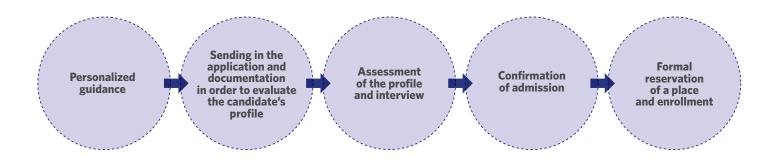
# ADMISSIONS PROCESS .....

The admissions process for **Real Madrid Graduate School - Universidad Europea** programs runs throughout the whole year, although enrollment in all graduate programs depends on the availability of places.

For personalized guidance, you can go to either of our university campuses (Alcobendas or Villaviciosa de Odón), or contact us via phone: (+34) 91 112 88 50 or e-mail: escuelauniversitariarealmadrid@universidadeuropea.es to receive advice from the Graduate Degree Admissions staff.

Once candidates have received guidance and have provided the necessary documentation, the Graduate Degree Admissions staff will send them a date for taking the **entrance exams** for the program they are interested in, and for a **personal interview** with the Master's Program Director or a member of the Admissions Committee.

The admissions process does not involve any costs or commitment for candidates, until their place is formally reserved.







# UNIVERSIDAD EUROPEA DE MADRID

CAMPUS VILLAVICIOSA DE ODÓN C/ Tajo, s/n 28670 Villaviciosa de Odón Madrid

# UNIVERSIDAD EUROPEA DE MADRID

CAMPUS ALCOBENDAS Avda. Fernando Alonso, 8 28108 Alcobendas Madrid

# UNIVERSIDAD EUROPEA DE VALENCIA

Avda. Aragón, 30 46021 Valencia Valencia

# UNIVERSIDAD EUROPEA DE CANARIAS

C/ Inocencio García, 1 38300 La Orotava Tenerife





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Reconocimientos de calidad











