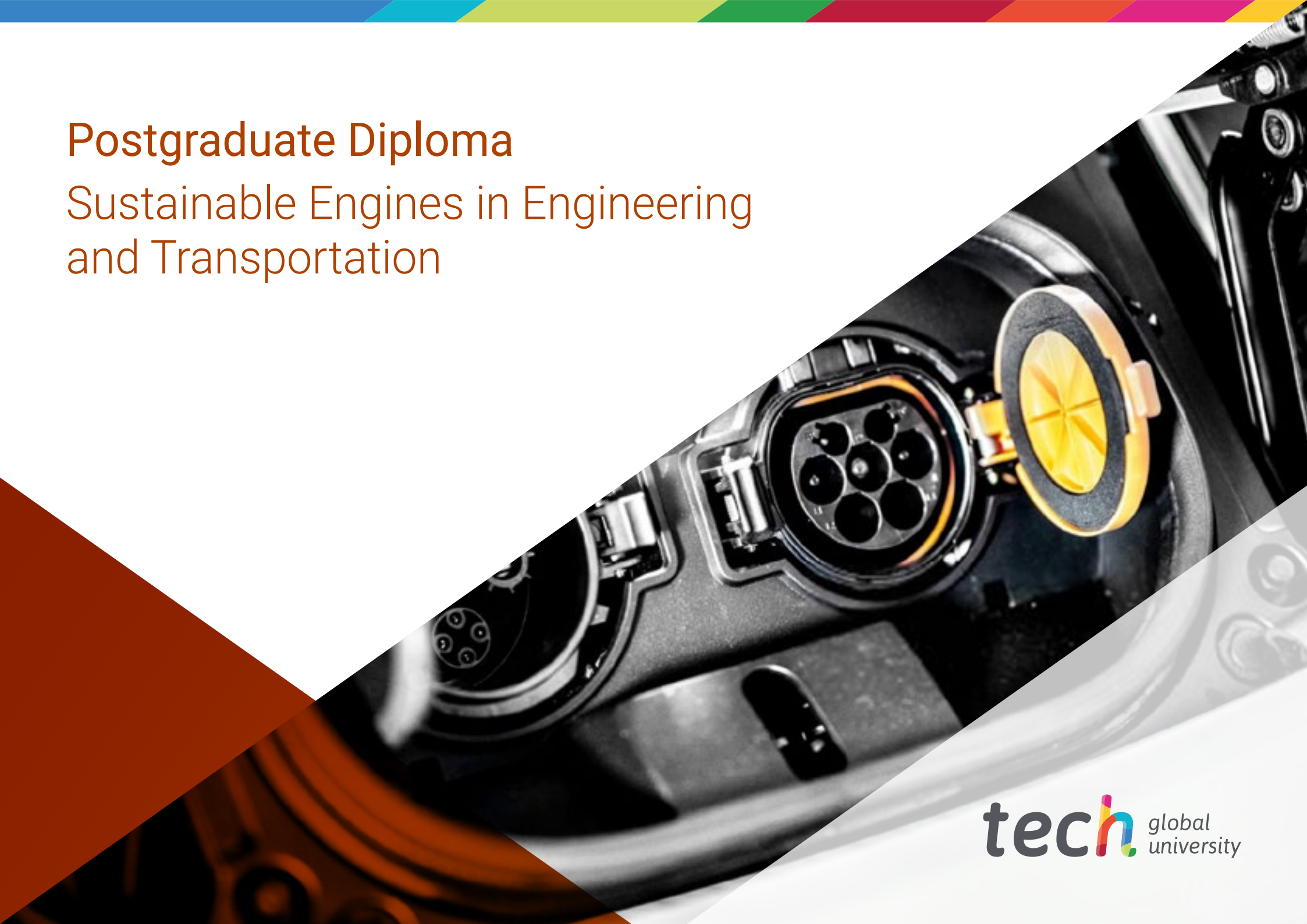
Postgraduate Diploma

Sustainable Engines in Engineering and Transportation



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Postgraduate Diploma
Sustainable Engines in Engineering and Transportation

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/pk/engineering/postgraduate-diploma/postgraduate-diploma-sustainable-engines-engineering-transportation**

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01

Introduction

One of the premises of the UN's 2030 agenda is to reduce the harmful impact of transportation on the environment. To complete this task, the implementation of solutions such as the use of clean fuels and hybrid variants is essential. Experts who are up-to-date on innovations and research needs in the field are indispensable for the development of a more sustainable future. For this reason, this study program includes all the advances in the sector, including non-polluting fuels such as hydrogen and natural gas. With a duration of 6 months, this 100% online syllabus guarantees an optimal program on the latest trends and technologies in the field of alternative internal combustion engines.

TECH provides a comprehensive program on engine design without strict schedules and with access to content 24 hours a day"

Political-economic organizations such as the European Union seek to standardize the insertion of electric transport into the mobility networks of most countries. This initiative is a major challenge that encompasses the incorporation of complementary technologies, such as charging points for alternative cars on the urban route, continued research into non-polluting fuels and the inclusion of hybrid engines. In addition, there is a demand for professionals who promote innovative engineering solutions and advance in the search for energy efficiency, emissions reduction, noise pollution and energy regeneration.

In this context, TECH provides a comprehensive program composed of 4 academic modules. The Postgraduate Diploma distinguishes itself by analyzing the main biofuels and other fuels of synthetic origin or based on natural gas, hydrogen, among others. It also addresses international regulations and the economic impact of these sustainable variants. At the same time, the syllabus examines heat and mechanical losses, measurement systems, as well as the main resources for the optimization of thermal and volumetric performance.

Also, the program delves into hybrid engines, including system architectures, vehicle design and development, system control and management, assessment and validation. It also examines its impact on society and the need to generate charging infrastructures. Finally, the lines that require greater research effort to continue generating advanced technologies and, at the same time, to control their impact on society are described. All these subjects guarantee graduates the necessary preparation to lead projects and give a definitive boost to their professional careers.

To do so, engineers will rely on a disruptive 100% online methodology, gaining access to its contents 24 hours a day. In addition, they will not be restricted by inconvenient schedules nor will they have to complete continuous assessment processes. On the contrary, they will be able to self-manage their progress according to their needs and obligations. They will also receive guidance from internationally renowned faculty.

This **Postgraduate Diploma in Sustainable Engines in Engineering and Transportation** contains the most complete and up-to-date program on the market. The most important features include:

- The development of practical cases presented by experts in Aeronautical Engineering
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where the self-assessment process can be carried out to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection

Join an area of Engineering whose fundamental claim is experts with holistic competencies"

You will analyze, in this syllabus, how electronic management systems caused a revolution in the optimization of alternative engines"

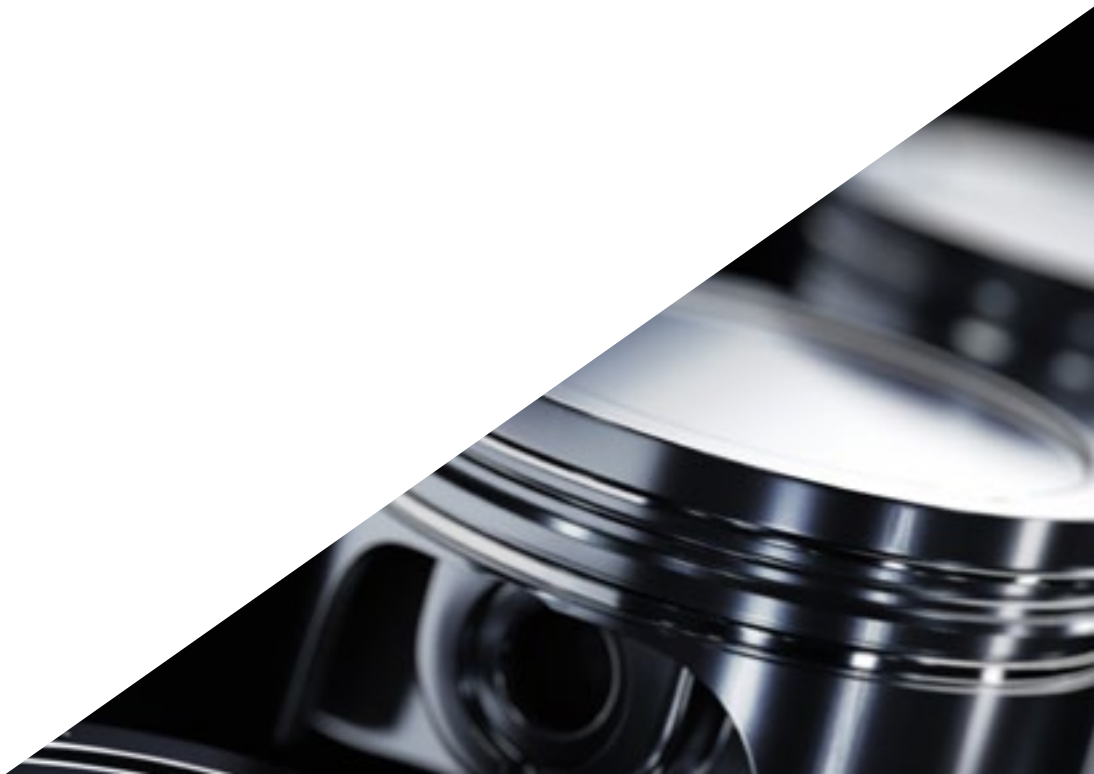
You will have at your disposal the most disruptive 100% online methodology to expand your knowledge on the creation of hybrid engines.

Join TECH now, the best digital university in the world according to Forbes.

The program includes in its teaching staff professionals from the sector who bring to this training the experience of their work, as well as recognized specialists from leading companies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the educational year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.



02

Objectives

This program provides an essential program in the latest trends and technologies related to Sustainable and Alternative Engines. This is possible thanks to its intensive academic modules that include theoretical advances and specific applications derived from the most innovative tools. In addition, the Relearning methodology guarantees a mastery of the most up-to-date concepts based on repetition and facilitates the incorporation of the competencies necessary to develop a professional practice of excellence.

To complete your educational objectives efficiently, TECH relies on the innovative Relearning methodology"

General Objectives

- Analyze the state of the art of Alternative Internal Combustion Engines (AICE)
- Identify conventional Alternative Internal Combustion Engines, (AICEs)
- Examine the different aspects to be taken into account in the life cycle of AICEas
- Compile the fundamental principles of design, manufacture and simulation of reciprocating internal combustion engines
- Fundamentals of engine testing and validation techniques, including data interpretation and iteration between design and empirical results
- Determine the theoretical and practical aspects of engine design and manufacturing, promoting the ability to make informed decisions at each stage of the process
- Analyze the different injection and ignition methods in alternative internal combustion engines, specifying the advantages and challenges of each type of injection system in different applications
- Determine the natural vibration of internal combustion engines, modally analyzing their frequency and dynamic response, the impact on engine noise in normal and abnormal operation
- Study applicable vibration and noise reduction methods, international regulations and impact on transportation and industry
- Analyze how the latest technologies are redefining energy efficiency and reducing emissions in internal combustion vehicles
- Explore in depth Miller cycle engines, controlled compression ignition (HCCI), compression ignition (CCI) and other emerging concepts
- Analyze the technologies that enable compression ratio adjustment and their impact on efficiency and performance
- Fundamentals of integrating multiple approaches, such as the Atkinson-Miller cycle and spark controlled ignition (SCCI), to maximize efficiency under a variety of conditions
- Delve into the principles of engine data analysis
- Analyze the different alternative fuels on the market, their properties and characteristics, storage, distribution, emissions and energy balance
- Analyze the different systems and components of hybrid and electric motors
- Determine the energy control and management methods, their optimization criteria and their implementation in the transportation sector
- Fundamentals of an in-depth and up-to-date understanding of the challenges, innovations and future prospects in the field of engine research and development, with a focus on alternative internal combustion engines and their integration with advanced technologies and emerging propulsion systems

Get up-to-date on the evolution of non-conventional fuels and opt for energy sources that reduce environmental impact"

Specific Objectives

Module 1. Alternative fuels and their impact on performance

- Determine the different alternative fuels on the market
- Analyze the characteristics and properties of different alternative fuels
- Examine the forms of storage and distribution of each of the alternative fuels
- Evaluate alternative fuels performance and impact on emissions
- Identify the advantages and disadvantages of each based on their applicability
- Compile the environmental regulations surrounding alternative fuels
- Establish the economic and social impact of alternative fuels

Module 2. Optimization: electronic management and emission control

- Develop advanced concepts on which engine optimization is applied
- Analyze heat losses and mechanical losses of combustion engines and their improvement points
- Establish the different methods of optimization based on consumption and efficiency
- Evaluate performance optimization in internal combustion engines
- Review the main concepts of thermal and volumetric optimization
- Examine the different emission control methods
- Strengthen detection and electronic management methods
- Review the regulations applicable to gas emissions

Module 3. Hybrid engines and extended-range electric vehicles

- Identify the types of hybrid and electric motors
- Develop the parameters and challenges of electric and hybrid motor design
- Establish optimization criteria for hybrid and electric motors
- Analyze energy recovery systems
- Identify the fundamental aspects of the loading infrastructure

Module 4. Research and development of new engine concepts

- Analyze the economic and commercial prospects of internal combustion and reciprocating engines, exploring how they influence research and development investment as well as business strategies
- Develop the ability to understand and design policies and strategies to promote innovation in engines, considering the role of governments and companies in this process
- Explore emerging trends and analyze the different sectors and their future prospects

03

Course Management

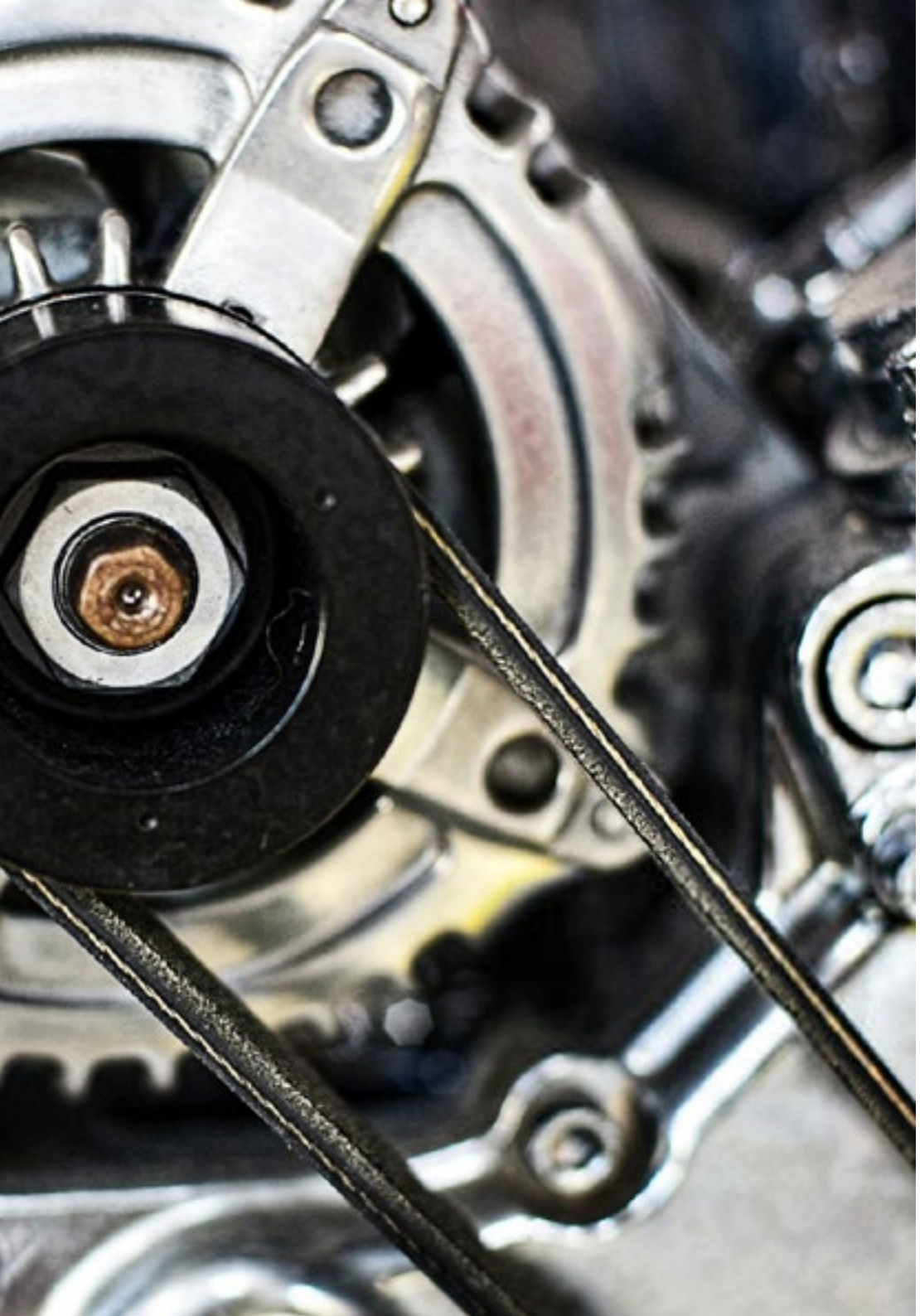
The teachers of this program are distinguished specialists in the field of research, design and optimization of Sustainable Engines. Most of the members of this faculty have been part of the aeronautical industry, accumulating experience in the development and implementation of more efficient machinery for the evolution of this sector. This knowledge, based on the latest technological advances, has been captured in this very complete educational itinerary. In this way, graduates have access to the most rigorous and demanding updating.

Total commitment to your global and exhaustive updating: that is the premise of the faculty members of this Postgraduate Diploma"

Management

Mr. Del Pino Luengo, Isatsi

- Airbus Defence & Space CC295 FWSAR program certification and airworthiness technical manager
- Airworthiness and certification engineer for the engine section in charge of the MTR390 program at the National Institute for Aerospace Technology (NIAT)
- Airworthiness engineer and certification for the VSTOL section by the National Institute for Aerospace Technology (NIAT)
- Aeronautical design and certification engineer for the life extension project of the Spanish Navy AB212 helicopters (PEVH AB212) at Babcock MCSE
- Design and Certification Engineer in the DOA department at Babcock MCSE
- Fleet Technical Office Engineer AS 350 B3/ BELL 212/ SA 330 J.Babcock MCSE
- Qualifying Master's Degree in Aeronautical Engineering from the University of León
- Aeronautical Technical Engineer in Aeromotors, Polytechnic University of Madrid



Professors

Mr. Mariner Bonet, Iñaki

- Head of Flight Test Office at Avincis Aviation Technics
- Design, Certification and Test Engineer at Avincis Aviation Technics
- Calculation and materials engineer at the Aragon Institute of Technology
- Calculus Engineer at the Polytechnic University of Valencia
- Master in Flight Test and Aircraft Certification (EASA cat 2) by the Polytechnic University of Madrid
- Aeronautical Engineer from the Polytechnic University of Valencia

Ms. Horcajada Rodríguez, Carmen

- Civil servant of the Ministry of Defense at the National Institute of Aerospace Technology (ISDEFE)
- Technical Assistant for ISDEFE
- Design and Certification Engineer for Sirium Aerotech
- Master's Degree in Integrated Quality, Environmental and Occupational Risk Prevention
- Management Systems
- Degree in Aerospace Engineering
- Specialization in Aerospace Vehicles by the Polytechnic University of Madrid

Mr. Caballero Haro, Miguel

- Customer Success Manager for Slack/Salesforce
- Test Manager in Vodafone
- Test Manager in Apple Online Store
- SCRUM Product Owner by Scrum Alliance
- LeanSixSigma by Green belt Certificate
- Managing people efectively by Cork College of Commerce

04

Structure and Content

This Postgraduate Diploma analyzes alternative fuels such as biofuels, natural gas, hydrogen, among others. At the same time, it examines ways to optimize Internal Combustion Engines, taking into account power, consumption and efficiency. It also addresses environmental regulations and the implementation of complementary technologies for electric mobility. In turn, it delves into hybrid systems, their design, control and validation. In this way, through this 100% online syllabus, engineers have the opportunity to update their practices immediately.

You will delve into this syllabus from a complete virtual campus with a variety of multimedia resources such as videos and interactive summaries"

Module 1. Alternative fuels and their impact on performance

1.1. Alternative Fuels
- 1.1.1. Conventional Fuels: Gasoline and Diesel
- 1.1.2. Alternative Fuels: Types
- 1.1.3. Alternative Fuels Comparison and Parameters

1.2. Biocarburants: Biodiesel, Bioethanol, Biogas, Bioethanol
- 1.2.1. Obtaining Biofuels Properties
- 1.2.2. Storage and Distribution: International Regulations
- 1.2.3. Performance, Emissions and Energy Balance
- 1.2.4. Applicability in Transportation and Industry

1.3. G Fuels. Natural Gas, Liquefied Gas, Compressed Gas
- 1.3.1. Obtaining Gas Fuels Properties
- 1.3.2. Storage and Distribution: International Regulations
- 1.3.3. Performance, Emissions and Energy Balance
- 1.3.4. Applicability in Transportation and Industry

1.4. Electricity as a Fuel Source
- 1.4.1. Obtaining Electricity and Batteries Properties
- 1.4.2. Storage and Distribution: International Regulations
- 1.4.3. Performance, Emissions and Energy Balance
- 1.4.4. Applicability in Transportation and Industry

1.5. Hydrogen as a Fuel Source: Fuel Cells and Internal Combustion Vehicles
- 1.5.1. Hydrogen Production and Fuel Cells Properties of Hydrogen as a Energy Source
- 1.5.2. Storage and Distribution: International Regulations
- 1.5.3. Performance, Emissions and Energy Balance
- 1.5.4. Applicability in Transportation and Industry

1.6. Synthetic Fuels
- 1.6.1. Obtaining Synthetic or Neutral Fuels Properties
- 1.6.2. Storage and Distribution: International Regulations
- 1.6.3. Performance, Emissions and Energy Balance
- 1.6.4. Applicability in Transportation and Industry

1.7. Next Generation Fuels
- 1.7.1. Properties of Second Generation Fuels
- 1.7.2. Storage and Distribution: Regulations
- 1.7.3. Performance, Emissions and Energy Balance
- 1.7.4. Applicability in Transportation and Industry

1.8. Performance and Emissions Evaluation with Alternative Fuels
- 1.8.1. Performance of Different Alternative Fuels
- 1.8.2. Performance Comparison
- 1.8.3. Emissions from Different Alternative Fuels
- 1.8.4. Emissions Comparison

1.9. Practical Application Short-, Medium- and Long-Haul Performance and Emissions Analysis
- 1.9.1. Alternative Fuels and Environmental Regulations
- 1.9.2. Evolution of International Environmental Regulations
- 1.9.3. International Regulations in the Transportation Sector
- 1.9.4. International Regulations in the Industrial Sector

1.10. economic and Social Impact of Alternative Fuels
- 1.10.1. Energy and Technology Resources
- 1.10.2. Market Availability of Alternatives Fuels
- 1.10.3. Economic, Environmental and Socio-Political Impact

Module 2. Optimization: electronic management and emission control

2.1. Optimization of Alternative Internal Combustion Engines
- 2.1.1. Power, Consumption and Thermal Efficiency
- 2.1.2. Identification of Improvement Points: Heat and Mechanical Losses
- 2.1.3. Optimization of Consumption and Thermal Efficiency

2.2. Heat and Mechanical Losses
- 2.2.1. Parameterization and Sensing of Thermal and Mechanical Losses
- 2.2.2. Cooling
- 2.2.3. Lubrication and Oils

2.3. Measuring Systems
- 2.3.1. Sensors
- 2.3.2. Analysis of Results
- 2.3.3. Practical Application: Analysis and Characterization of a Reciprocating Internal Combustion Engine

2.4. Thermal Performance Optimization
- 2.4.1. Optimization of Engine Geometry: Combustion Chamber
- 2.4.2. Fuels Injection and Control Systems
- 2.4.3. Ignition Time Control
- 2.4.4. Modification of the Compression Ratio

2.5. Volumetric Performance Optimization
- 2.5.1. Overfeeding
- 2.5.2. Modification of the Distribution Diagram
- 2.5.3. Evacuation of Waste Gases
- 2.5.4. Variable Admissions

2.6. Electronic Management of Internal Combustion Engines
- 2.6.1. The Emergence of Electronics in the Combustion Control System
- 2.6.2. Yield Optimization
- 2.6.3. Applicability n Industry and Transportation
- 2.6.4. Electronic Control in Alternative Internal Combustion Engines

2.7. Emission Control in Alternative Internal Combustion Engines
- 2.7.1. Types of Emissions and Their Effects on the Environment
- 2.7.2. Evolution of Applicable International Regulations
- 2.7.3. Emission Reduction Technologies

2.8. Emissions Analysis and Measurement
- 2.8.1. Emission Measurement Systems
- 2.8.2. Emission Certification Tests
- 2.8.3. Impact of Fuels and Design on Emissions

2.9. Catalytic Converters and Exhaust Gas Treatment Systems
- 2.9.1. Types of Catalysts and Filters
- 2.9.2. Exhaust Gas Recirculation
- 2.9.3. Emission Control Systems

2.10. Alternative Emission Reduction Methods
- 2.10.1. Use of Reciprocating Engine to Promote Emission Reduction
- 2.10.2. Practical Application: Analysis of the City vs. Highway Driving Method of an Alternative Internal Combustion Engine
- 2.10.3. Practical Application Analysis of Mass Transit and Carbon Footprint per Passenger

Module 3. Hybrid engines and extended-range electric vehicles

3.1. Hybrid Engines and Hybrid System Architectures
- 3.1.1. Hybrid Engines
- 3.1.2. Energy Recovery Systems
- 3.1.3. Hybrid Engines Types

3.2. Electric motors and Energy Storage Technologies
- 3.2.1. Electric Motors
- 3.2.2. Components of Electric Motors
- 3.2.3. Energy Storage Systems

3.3. Hybrid Vehicle Design and Development
- 3.3.1. Component Sizing
- 3.3.2. Energy Management Strategies
- 3.3.3. Useful Life of the Components

3.4. Control and Management of Hybrid Propulsion Systems
- 3.4.1. Energy Management and Power Distribution in Hybrid Systems
- 3.4.2. Transition Strategies between Operating Modes
- 3.4.3. Optimization of Operations for Maximum Efficiency

3.5. Hybrid Vehicle Assessment and Validation
- 3.5.1. Hybrid Vehicle Efficiency Measurement Methods
- 3.5.2. Emissions Testing and Compliance
- 3.5.3. Market Trends

3.6. Electrical Vehicle Design and Development
- 3.6.1. Component Sizing
- 3.6.2. Energy Management Strategies
- 3.6.3. Useful Life of the Components

3.7. Electric Vehicle Assessment and Validation
- 3.7.1. Electric Vehicle Efficiency Measurement Methods
- 3.7.2. Emissions Testing and International Regulatory Compliance
- 3.7.3. Market Trends

3.8. Electric Vehicles and its Impact on Society
- 3.8.1. Electric Vehicles and Technological Evolution
- 3.8.2. Electric Vehicles in Industry
- 3.8.3. Collective Transportation

3.9. Charging Infrastructure and Fast Charging Systems
- 3.9.1. Recharging Systems
- 3.9.2. Recharge Connectors
- 3.9.3. Residential and Commercial Load
- 3.9.4. Public and Fast Charging Networks

3.10. Cost-Benefit Analysis of Hybrid and Electric Systems
- 3.10.1. Economic Evaluation of the Implementation of Hybrid and Extended Range Electric Systems
- 3.10.2. Manufacturing, Maintenance and Operating Cost Analysis
- 3.10.3. Life Cycle Analysis Amortizations

Module 4. Research and development of new engine concepts

4.1. Evolution of Global Environmental Norms and Regulations
- 4.1.1. Impact of International Environmental Regulations on the Engine Industry
- 4.1.2. International Emission and Energy Efficiency Standards
- 4.1.3. Regulation and Compliance

4.2. Research and Development in Advanced Engine Technologies
- 4.2.1. Innovations in Engine Design and Technology
- 4.2.2. Advances in Materials, Geometry and Manufacturing Processes
- 4.2.3. Balance between Performance, Efficiency and Durability

4.3. Integration of Internal Combustion Engines in Propulsion and Electric Systems
- 4.3.1. Integration of Internal Combustion Engines with Hybrid and Electric Systems
- 4.3.2. Role of Engines in Bbattery Charging and Range Extension
- 4.3.3. Control Strategies and Energy Management in Hybrid Systems.

4.4. Transition to Electric Mobility and Other Propulsion Systems
- 4.4.1. Shift from Traditional Propulsion to Electric and Other Alternatives
- 4.4.2. The Different Propulsion Systems
- 4.4.3. Infrastructure Needed for Electric Mobility

4.5. Economic and Commercial Prospects for Internal Combustion Engines
- 4.5.1. Current and Future Economic Scenario for Internal Combustion Engines
- 4.5.2. Market Demand and Consumption Trends
- 4.5.3. Evaluation of the Impact of the Economic Perspective on I+D Investment

4.6. Development of Policies and Strategies to Promote Innovation in Engines
- 4.6.1. Promotion of Innovation in Engines
- 4.6.2. Incentives, Financing and Collaborations in the Development of New Technologies
- 4.6.3. Success Stories in the Implementation of Innovation Policies

4.7. Sustainability and Environmental Aspects of Engine Design
- 4.7.1. Sustainability in Engine Design
- 4.7.2. Approaches to Reduce Emissions and Minimize Environmental Impact
- 4.7.3. Eco-Efficiency in Terms of the Life Cycle of Engines

4.8. Engine Management Systems
- 4.8.1. Emerging Trends in Motor Control and Management
- 4.8.2. Artificial Intelligence, Machine Learning and Real-Time Optimization
- 4.8.3. Analysis of the Impact of Advanced Systems on Performance and Efficiency

4.9. Internal Combustion Engines in Industrial and Stationary Applications
- 4.9.1. Role of Combustion Engines in Industrial and Stationary Applications
- 4.9.2. Use Cases in Power Generation, Industry and Freight Transportation
- 4.9.3. Analysis of the Efficiency and Adaptability of Motors in Industrial and Stationary Applications

4.10. Research in Motor Technologies for Specific Sectors: Maritime, Aerospace
- 4.10.1. Research and Development of Engines for Specific Industries
- 4.10.2. Technical and Operational Challenges in Sectors such as Marine and Aerospace
- 4.10.3. Analysis of the Impact of the Demands of These Sectors in Driving Innovation in Engines

05

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.

The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

> *Our program prepares you to face new challenges in uncertain environments and achieve success in your career"*

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Relearning Methodology

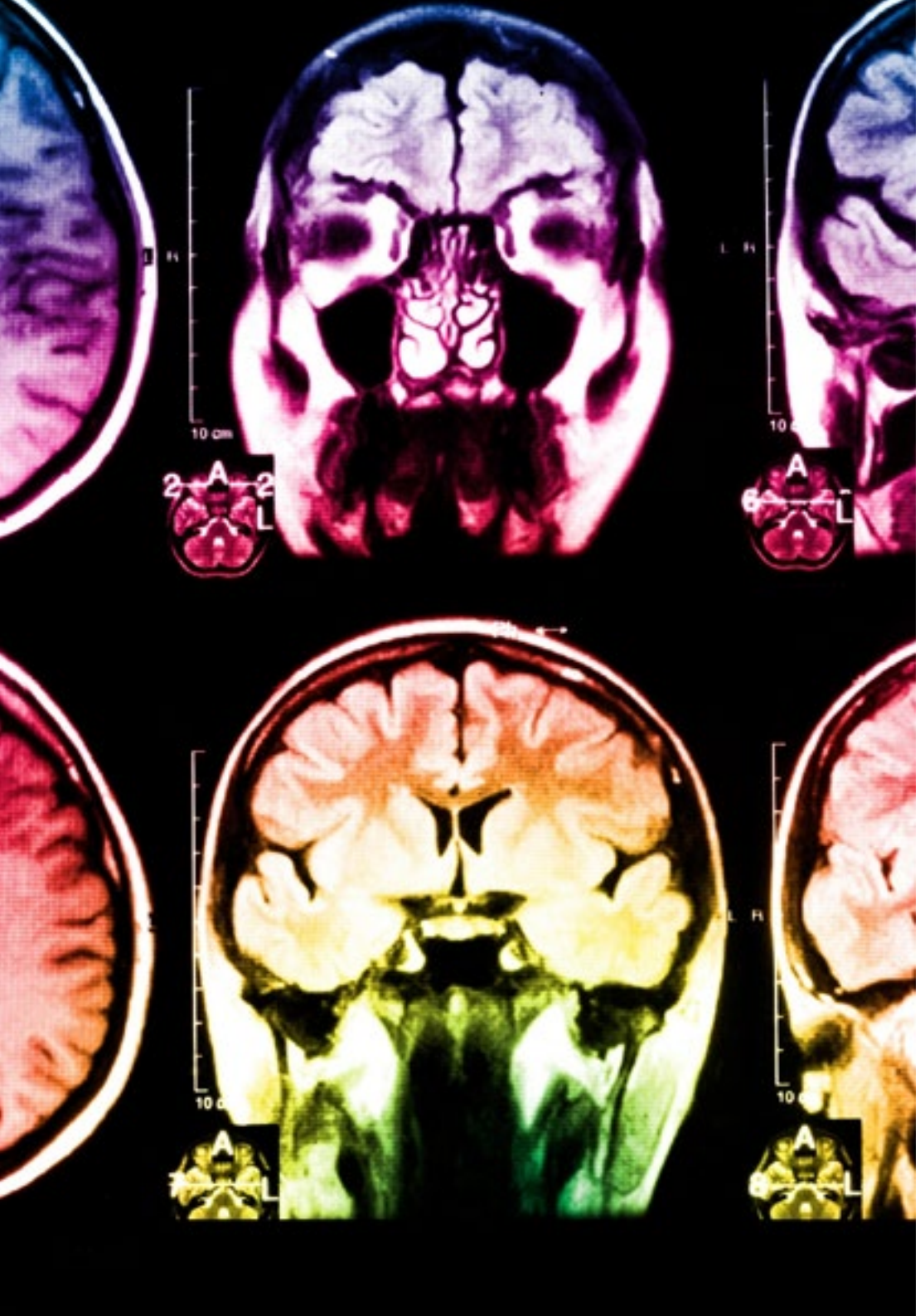
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

In 2019, we obtained the best learning results of all online universities in the world.

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically. This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.

This program offers the best educational material, prepared with professionals in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

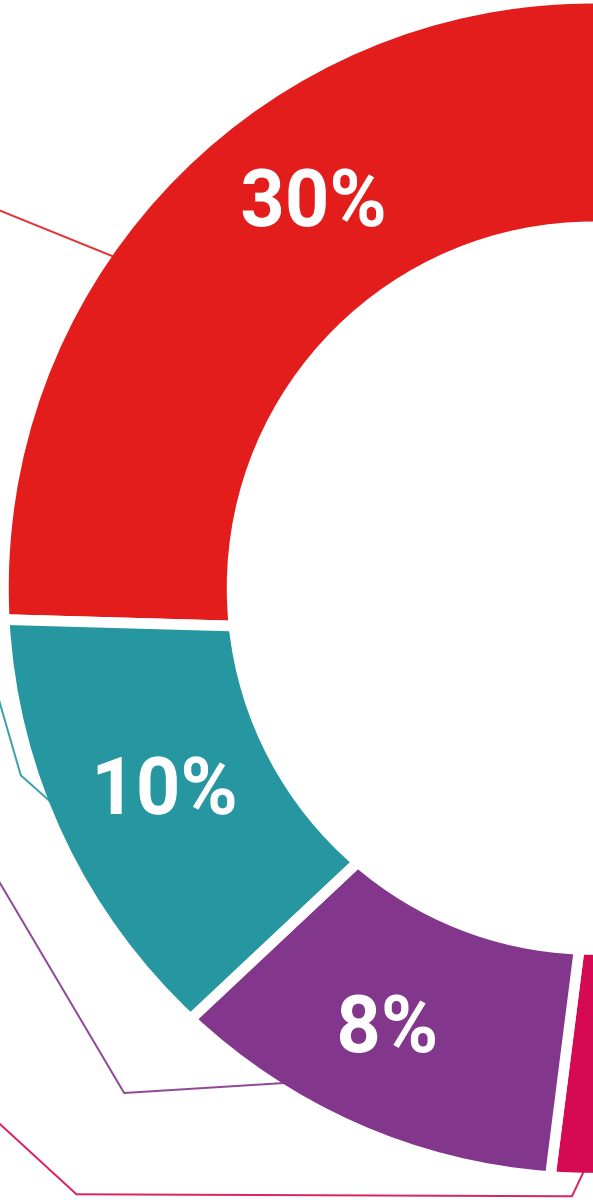
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

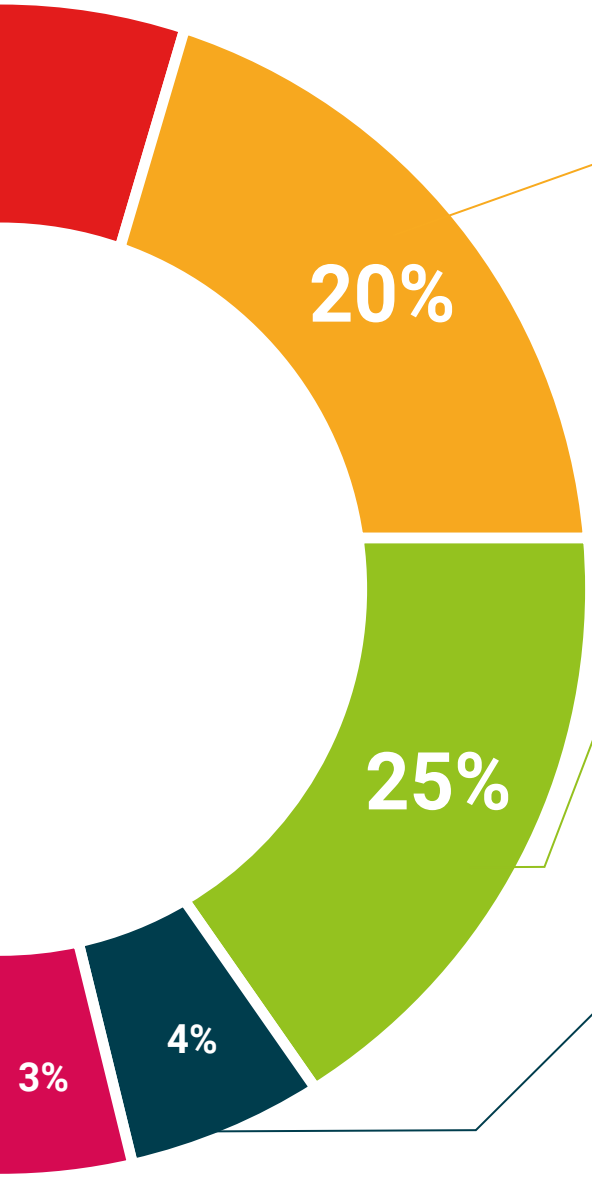
Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

06

Certificate

This Postgraduate Diploma in Sustainable Engines in Engineering and Transportation guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This program will allow you to obtain your **Postgraduate Diploma in Sustainable Engines in Engineering and Transportation**endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (***official bulletin***). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

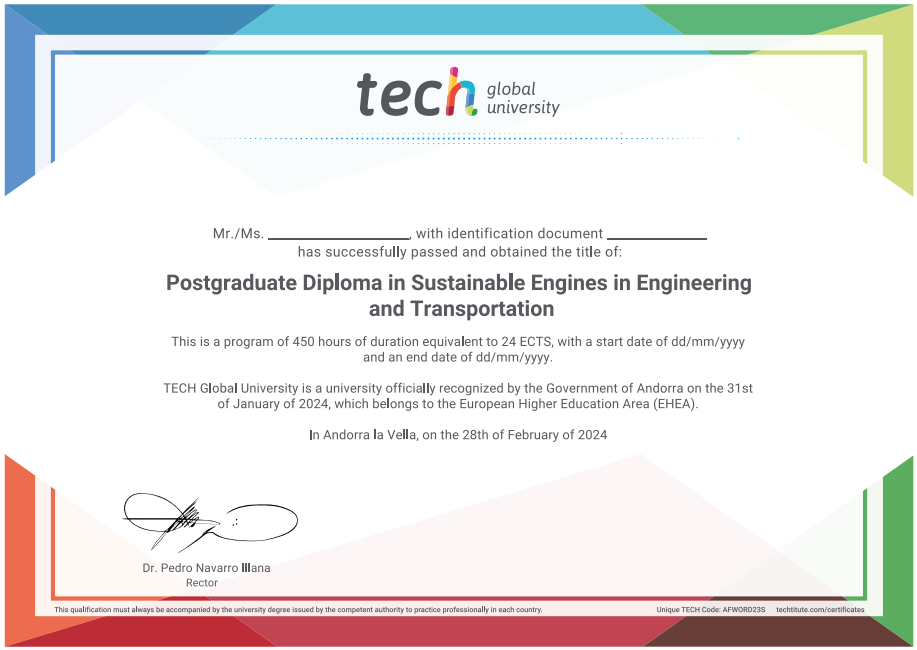
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Sustainable Engines in Engineering and Transportation**

Modality: **online**

Duration: **6 months**

Accreditation: **24 ECTS**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Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Sustainable Engines in Engineering and Transportation

This is a program of 450 hours of duration equivalent to 24 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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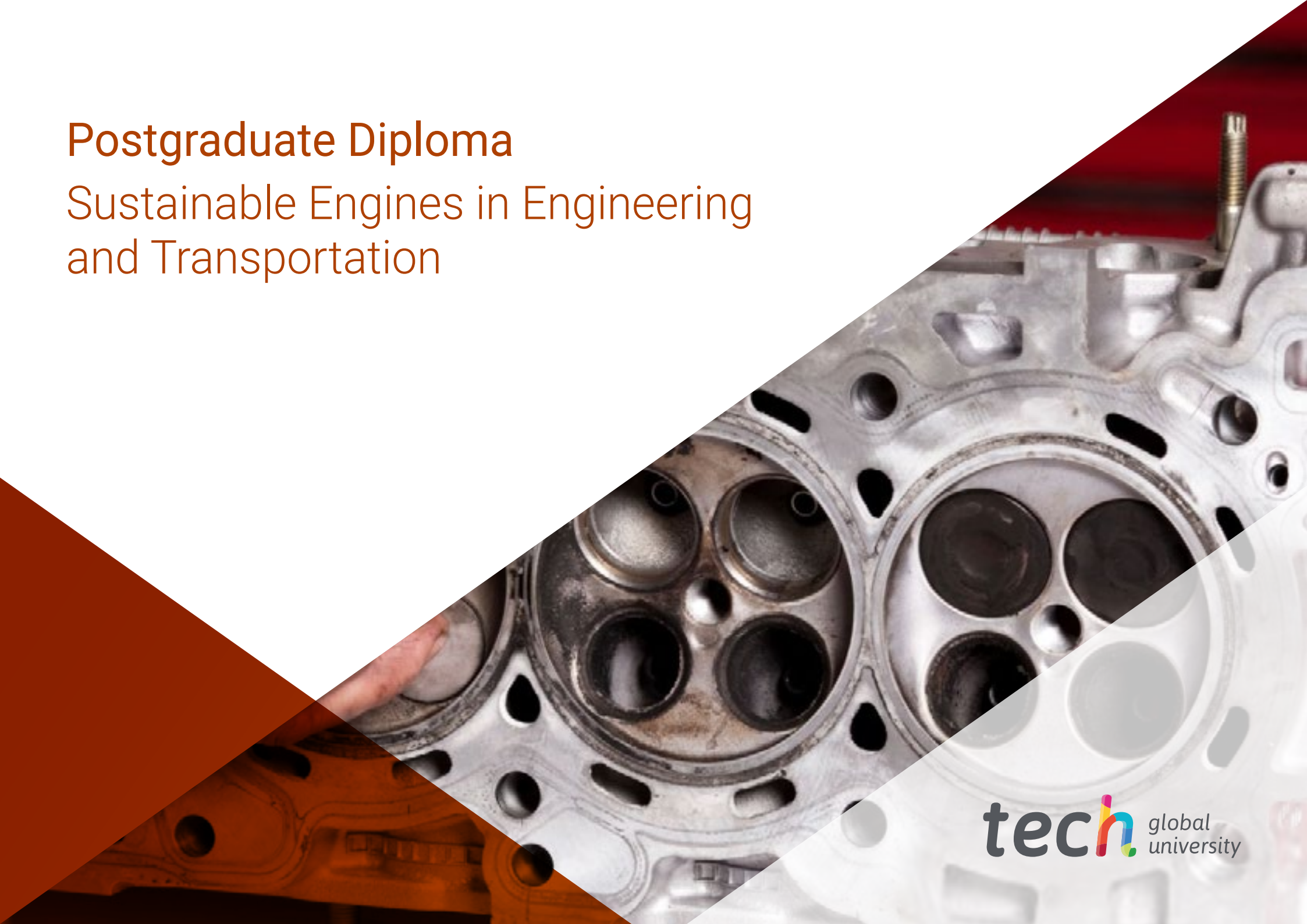
Postgraduate Diploma

Sustainable Engines in Engineering and Transportation

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Diploma

Sustainable Engines in Engineering and Transportation



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