Professional Master's Degree

Corporate Sustainability Management

tech technological university

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Professional Master's Degree
Corporate Sustainability Management

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/in/engineering/professional-master-degree/master-corporate-sustainability-management**

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01

Introduction

This program represents the most comprehensive and in-depth study of the different fields of development that determine the sustainability and energy efficiency of organizations. A highly practical course, focused on the knowledge of the standards, trends and innovations that are being developed in this field. This knowledge will enable the environmental objectives of any project to be met, including the integration of sustainable development parameters and audits, with the monitoring of options involving different usable energy sources and adaptation to climate change.

A complete update on the regulation and application of environmental and energy management systems in organizations"

In this Professional Master's Degree, the focus will be on the organization of companies, establishing a relationship between companies, the environment and sustainable development, dealing in detail with historical, current and future environmental problems. The competency and regulatory frameworks will be analyzed and the main international agreements on sustainability such as the Paris Agreement and the United Nations Sustainable Development Goals will be covered. We will also look at the 2050 Roadmap and the National Integrated Energy and Climate Plan (Spain). Fossil fuels, extraction, generation and associated environmental impacts will be analyzed and aspects of electricity, renewable energy sources and nuclear energy will also be covered.

The processes of energy transformation and distribution will be explained in detail, as well as the equipment required to carry out the transformation and distribution, and how these processes affect the total energy consumed.

The current energy regulatory framework will be reviewed, focusing on the adaptation of European directives to the national market (Spain). Environmental impact assessment and climate change adaptation strategies are also covered.

Other aspects to be analyzed are those affecting water management and pollution, addressing the regulatory framework of the water sector, establishing the regulatory hierarchy, the European Water Charter and the guidelines of a sanctioning dossier.

During the program, the guidelines and actions that an organization can implement in terms of Zero Waste will be analyzed.

Furthermore, we will carry out an in-depth study of the main tools that organizations can use for environmental management, and students will acquire sound knowledge of the processes and competitive advantages of environmental and energy certifications in buildings and organizations.

We will study the energy management system presented in the latest version of ISO 50001: 2018, which incorporates the high-level structure as well as the requirements of ISO 14001 Environmental Management Systems, and the basic requirements of EMAS, analyzing the main differences between this model and ISO 14001..

Students will gain in-depth knowledge of the requirements and procedures for the development of internal audits of company management systems, analyzing the different types of audits and the principles by which they should be governed, analyzing the ISO 19011 standard.

The tools and techniques necessary to carry out the audits will be presented, as well as the verification process of the applied methodology. In addition, specific requirements for the development of management system audits based on ISO 14001 and ISO 50001 standards will be analyzed.

This **Professional Master's Degree in Corporate Sustainability Management** contains the most complete and up-to-date educational program on the market. The most important features of the specialization are:

- Practical cases presented by experts in Corporate Sustainability Management
- The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- 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

Integrate the requirements outlined by the current environmental management standards into your way of working, following the standards of ISO 14001"

With comprehensive and up-to-date teaching material and the best audiovisual systems on the educational market, you have access to an immersive learning experience.

A 100% online Professional Master's Degree that will allow you to balance your studies with your professional work in a completely flexible way.

Supported by excellent multimedia content, developed with the latest educational technology, this Professional Master's Degree will provide the professional with situated and contextual learning, i.e., the opportunity to study in a simulated environment that will provide immersive learning programmed to train 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 academic year. For this purpose, the professional will be assisted by an innovative interactive video system, developed by renowned and experienced experts in Corporate Sustainability Management.

02

Objectives

The general objective of this Professional Master's Degree is to enhance the professional's capacity to act in this field so that they can incorporate the main advances in this field of work and intervention into their daily work.

The objective of this program is to give you the most comprehensive and up-to-date knowledge on all aspects involved in environmental and energy management in organizations"

General Objectives

- Gain an in-depth understanding of business organization and climate change mitigation strategies
- Develop a solid understanding of the main energy sources used globally and the innovations in the energy industry
- Gain an in-depth understanding of electrical energy, breaking down the main consuming equipment and its applications
- Master the most commonly used fuels and fuel consuming equipment
- Train in the use of environmental and energy tools
- Carry out energy audits
- Conduct environmental impact assessments
- Develop and implement environmental and energy improvements
- Perform an in-depth breakdown of water and waste management to enable the learner to plan management plans and operational improvements
- Gain an in-depth understanding of the applicable legislation and regulatory framework for each of the program's topics
- Carry out the calculation of the carbon and water footprint of different facilities
- Carry out product life cycle analysis
- Develop a solid understanding of energy and environmental certifications
- Develop and implement an ISO 14001 environmental management system
- Develop and implement an ISO 50001 energy management system
- Be able to carry out internal audits of management systems of organizations

Specific Objectives

Module 1. Environmental and Energy Management of Organizations

- Perform an in-depth study of the organizational foundations of companies
- Understand and concisely learn the current regulatory framework, international agreements and the SDGs
- Analyze aspects related to sustainable development and current environmental and energy issues
- Gain an in-depth understanding of the circular economy and its environmental benefits
- Understand and internalize the function, systematics and applicability of sustainability reports

Module 2. Energy Sources

- Gain an in-depth understanding of current energy sources and their impact on the environment
- Analyze the operation, advantages and disadvantages of renewable energies
- Understand, in detail, the different processes of electrical and thermal generation
- Identify the operation and application of developing energy sources

Module 3. Electrical Energy

- Have in-depth knowledge of all aspects related to the generation and consumption of electrical energy
- Analyze the main characteristics of electrical energy consuming equipment
- Identify the most important aspects of energy billing
- Carry out an in-depth breakdown of all aspects related to the generation and consumption of energy generated from combustion
- Establish the main characteristics of combustion systems and fuels

Module 4. Energy Management Tools

- Achieve a broad vision of the current applicable regulations
- Master regulatory inspections of energy systems
- Develop energy audits according to UNE-EN 16247-1: 2012
- Identify and use of energy simulation tools
- Study consumption monitoring and asset management in detail
- Elaborate energy efficiency master plans

Module 5. Environmental Impact Assessment and Climate Change Adaptation Strategies

- Identify and establish business strategies for climate change
- Address environmental impact assessment regulations and their application in organizations, both for projects and processes
- Identify and classify the factors to be taken into account for environmental impact assessment
- Develop preventive and corrective actions for environmental impact
- Analyze the risks and opportunities generated by environmental impact
- Acquire guidelines for the development of climate change adaptation plans

Module 6. Pollution, Water and Waste Management

- Gain an in-depth understanding of water management and treatment processes
- Characterize wastewater by composition
- Analyze the current water regulatory framework
- Identify and develop strategies for efficient water use and management
- Acquire in-depth knowledge of solid waste management
- Analyze the waste regulatory framework
- Classify waste according to the source
- Determine the energy valuation of waste

Module 7. Environmental Management Tools

- Precisely establish the application of environmental management tools in organizations
- Identify carbon markets and their utility
- Master the calculation of the carbon footprint of organizations, products and events based on international reference standards
- Acquire all the necessary knowledge for the implementation of climate change mitigation tools
- Calculate the water footprint and know the principles of the reference standards
- Develop a life cycle analysis and identify its different approaches
- Gain an in-depth understanding of the characteristics and principles of environmental and energy certifications of sustainable buildings

Module 8. Energy Management Systems

- Understand the implementation and development of energy management systems according to ISO 50001
- Carry out energy review development
- Know the application of tools for baseline calculation
- Tackle energy efficiency awareness campaigns

Module 9. Environmental Management Systems

- Master the application and development of the environmental management system in organizations
- Analyze and implement the requirements and specifications of the ISO 14001 standard: 2015
- Identify and assess the significant environmental aspects, environmental impacts, and environmental risks and opportunities for organizations
- Identify non-conformities and corrective actions of an environmental management system
- Establish, in detail, the differences between ISO 14001 and EMAS and study how to transition the management system from ISO 14001 to EMAS

Module 10. Management Systems Audits

- Gain an in-depth understanding of the different types of management system audits
- Establish the responsibilities of auditors and auditees
- Design the process for the application and development of management system audits
- Plan and manage an audit program
- Master the practice of conducting a management system audit
- Write an audit report, including non-conformities, observations and areas for improvement
- Identify the particularities of environmental and energy management system audits, as well as identify objective and tangible evidence derived from the audit

Professional growth that will give you the boost you've been looking for"

03

Skills

After passing the assessments of this Professional Master's Degree, the student will have acquired the skills required for professional practice that incorporates the most up-to-date and competitive vision in the environmental and energy management of organizations.

With a specific criterion of practical skills training, this program will allow you to convert your learning into real working abilities almost immediately"

General Skills

- Know the applicable regulatory framework in reference to energy and environmental management and sustainability
- Master terminology in the field of energy (generation and consumption), renewable energies and electrical, thermal and lighting installations
- Accurately conduct energy audits, sustainability certifications, and carbon and water footprint calculations for organizations and/or products

Acquire the most up-to-date skills, mastering all aspects involved in environmental and energy management and compete among the best in the industry"

Specific Skills

- Control environmental and energy management processes in any type of organization
- Recognize the differences and advantages of different energy sources
- Consider the appropriate uses of electrical energy from the point of view of environmental and energy management
- Incorporate the consideration of the European energy framework into the management of organizations
- Know how to apply adaptation strategies to climate change from the environmental impact point of view that is most appropriate to the standard and to the current situation
- Work to reduce pollution through proper water and waste management
- Use an up-to-date and appropriate way to perform environmental management
- Implement energy management systems adapted to ISO 50001: 2018 and ISO 50001: 2011
- Apply ISO 14001 environmental management systems

04

Course Management

A multidisciplinary teaching staff will offer the most up-to-date and comprehensive knowledge in this field, accompanying the professional during the learning process and sharing with them their experience and real vision of the profession. A unique opportunity to learn directly from experts in this field of work.

You will learn from experts in this sector, who will provide you with a specific and direct vision of the reality of this field of work"

Management

Ms. Cubillo Sagües, María Ignacia

- Senior Mining Engineer, Polytechnic University of Madrid
- Executive MBA Academic discipline: Executive MBA from IE (Business Institute)
- Master's Degree in "The Economics of Energy Management of Buildings", Agustín Betancourt Foundation, ETSI Roads, Polytechnic University of Madrid
- CMVP (Certificate in Measurement and Verification of Energy Savings), Academic discipline IPMVP (International Measurement and Verification Protocol) from the Association of Energy Engineers (AEE)
- Chief Energy Auditor in Industry and Building, Academic discipline Energy Efficiency. Certified by the AEC (Spanish Quality Association)
- Technical Auditor for ENAC in ISO 50001 National Accreditation Entity
- Technical Auditor in ISO 17020, ISO 17021 and ISO 17024, for ENAC, in Energy Efficiency
- General Director of SinCeO2 Energy Consulting

Professors

Mr. Royo, Eduardo Ángel

- Energy Consultant/Auditor in the tertiary sector at SinCeO2, Energy Consultancy
- Degree in Agricultural Engineering, specializing in Agricultural Operations and Horticulture and Gardening at the Polytechnic University of Madrid. r
- Specialist in Environmental Education at Imefe
- Course in Environmental Auditing at the Chamber of Commerce of Madrid

Mr. Piña, David

- Technical Mining Engineer, specialized in fuels and explosives of energy resources at the Polytechnic University of Madrid
- CEPSA Chairman on Lubricating Oils at the E.T.S.I. de Minas of Madrid
- Energy Audits Course at BESEL
- International Energy Savings Measurement and Verification Protocol Training at SinCeO2, Energy Consultancy

Mr. Ortega Abad, Alberto

- Chief Energy Auditor in Buildings for the Spanish Quality Association (AEC)
- Degree in Chemical Sciences from the National Distance Education University (UNED)
- Master's Degree in Food Technology and Control from the Centro de Estudios Superiores de la Industria Farmacéutica de Madrid (Center for Higher Studies of the Pharmaceutical Industry of Madrid)
- European Energy Manager from the Eurem Program
- Technical Expert Diploma in ISO 17024 Inspection Entities, by the National Accreditation Entity (ENAC)

Ms. González del Cura, Lidia

- Graduated in Environmental Sciences from the Autonomous University of Madrid
- Training in "Professional Technician in Product Environmental Analysis: LCA, Ecolabelling , Carbon and Water Footprint", "Climate Change and Carbon Footprint"
- Training in ISO 9001 Quality Management Systems, ISO 14001 Environment and ISO 50001 Energy and "Equal Opportunities: practical application in the company and HR"
- More than five years of experience in the field of environmental consulting
- Internal auditor of management systems, accreditation from different certifiers as third party verification auditor in ISO 14064 regarding Carbon Footprint of Organizations, and third party verification auditor of EU ETS Greenhouse Gases

Mr. Gordaliza, Daniel

- Consultant / Auditor in the energy sector within the Industry Department of SinCeO2 Energy Consulting
- Technical Mining Engineer, specialized in fuels and explosives from energy resources at the Polytechnic University of Madrid
- Certified Energy Manager from PREPA (Chapter of the Association of Energy Engineers of Spain)
- Expert in the use of technical measurement equipment at the Higher Technical School of Mining Engineers (ETSI de Minas)
- Course on Industrial Applications of Radiation and Radiation Protection given by the Nuclear Safety Council

Mr. Garrido Peral, Vicente

- Degree in Chemical Sciences, Industrial Chemistry branch from the Complutense University of Madrid
- Master's Degree in Occupational Risk Prevention, in the specialties of Occupational Safety and Industrial Hygiene
- Technician in Hygienic-Sanitary Maintenance Operations for Prevention and Control of Legionellosis in Apthisa, Hygienic-Sanitary Technological Center
- Expert Technician in Energy Certification in Buildings in MasterD
- Certificate of Pedagogical Aptitude in the Institute of Education Sciences of the U.C.M

Mr. Alvarado Ponce, Lenny

- Responsible for the Energy Monitoring and Management department of SinCeO2 Consultoría Energética
- Degree in Higher Industrial Engineering from the University of San Simón
- Master's Degree in Renewable Energies and the Environment, at the Higher Technical School of Engineering and Industrial Design from the Polytechnic University of Madrid
- Master's Degree in Renewable Energy, Fuel Cells and Hydrogen from Menéndez Pelayo International University (UIMP)

05

Structure and Content

The syllabus of this Professional Master's Degree includes all the contents required to achieve broad and up-to-date knowledge of all the aspects involved in the adequate management of the environmental impact. It relates to the new existing requirements and the field of energy efficiency, with the consideration and analysis of all the existing possibilities in this field. A program specifically created to provide our students with a continuous improvement process that will boost their professional skills.

A stimulating and flexible learning process that will allow you to go through all the knowledge areas you need to intervene as an expert in this field"

Module 1. Environmental and Energy Management of Organizations

1.1. Organizational and Business Fundamentals
- 1.1.1. Organizational Management
- 1.1.2. Types and Structure of an Organization
- 1.1.3. Standardization of Business Management

1.2. Sustainable Development: Business and Environment
- 1.2.1. Sustainable Development. Objectives and Goals
- 1.2.2. Economic Activity and its Impact on the Environment
- 1.2.3. Corporate Social Responsibility

1.3. Environmental and Energy Issues. Scope and Current Framework
- 1.3.1. Major Current Environmental Problems: Waste, Water, Food
- 1.3.2. Energy Issues. Demand, Consumption and Source Distributions
- 1.3.3. Current Energy Projections

1.4. European Summits and the Paris Agreement
- 1.4.1. EU Climate Targets
- 1.4.2. European Summits
- 1.4.3. The Paris Agreement

1.5. The 2030 Agenda and the Sustainable Development Goals
- 1.5.1. The 2030 Agenda: Background, Approval Process and Content
- 1.5.2. The 17 Sustainable Development Goals (SDGs)
- 1.5.3. SDG Compass Guide

1.6. Circular Economy
- 1.6.1. The Circular Economy
- 1.6.2. Legislation and Strategies to Support the Circular Economy
- 1.6.3. Circular Economy System Diagrams

1.7. Sustainability Reports
- 1.7.1. Communication of Social Responsibility Management
- 1.7.3. The Process of Preparing a Sustainability Report according to GRI

Module 2. Energy Sources

2.1. Fossil Fuels
- 2.1.1. Coal
- 2.1.2. Natural Gas
- 2.1.3. Oil

2.2. Electricity
- 2.2.1. Electricity
- 2.2.2. Electricity Generation
- 2.2.3. Uses of Electricity

2.3. Nuclear Energy
- 2.3.1. Nuclear Energy
- 2.3.2. Nuclear Power Plants
- 2.3.3. Environmental Opportunities
- 2.3.4. Environmental Risks
- 2.3.5. Nuclear Waste Treatment

2.4. Solar Energy
- 2.4.1. Electricity Generation
- 2.4.2. Thermal Generation
- 2.4.3. Solar Power Plants
- 2.4.4. Risks and Opportunities

2.5. Wind Energy
- 2.5.1. Wind Farms
- 2.5.2. Advantages and Disadvantages
- 2.5.3. Microgeneration

2.6. Biomass
- 2.6.1. Thermochemical and Biochemical Methods
- 2.6.2. The Biomass Market
- 2.6.3. Advantages and Disadvantages

2.7. Geothermal Energy
- 2.7.1. Geothermal Deposits
- 2.7.2. Electricity Generation
- 2.7.3. Advantages and Disadvantages

2.8. Other Renewable Energies
- 2.8.1. Hydraulic Energy
- 2.8.2. Tidal Energy
- 2.8.3. Wave Energy

2.9. Energy Sources in Development
- 2.9.1. Green Hydrogen
- 2.9.2. Tidal Energy
- 2.9.3. Biogas and Biomethane

2.10. Energy Sources for Mobility
- 2.10.1. Electric Vehicles
- 2.10.2. CNG Vehicles
- 2.10.3. Other Alternatives for Sustainable Mobility

Module 3. Electrical Energy

3.1. Electrical Energy Voltage, Current, Power and Energy
- 3.1.1. Voltage and Current
- 3.1.2. Active, Reactive and Apparent Energy
- 3.1.3. Electrical Power. Load Curves

3.2. Energy Transformation
- 3.2.1. Power Transformers
- 3.2.2. Electricity Transportation
- 3.2.3. Electricity Distribution

3.3. Electrical Energy Consuming Systems: Electric Motors
- 3.3.1. Applications, Pumps, Fans and Compressors
- 3.3.2. Frequency Inverters
- 3.3.3. Motor-Based Consumer Systems: Heat Pump Air Conditioning

3.4. Other Electricity Consuming Systems
- 3.4.1. Joule Effect
- 3.4.2. Lighting
- 3.4.3. Direct Current Powered Systems

3.5. Electricity Billing
- 3.5.1. Legislation
- 3.5.2. Electricity Rates
- 3.5.3. Electricity Billing Term

3.6. Units of Measurement of Fuel Consumption and their Transformation into Energy Units
- 3.6.1. Energy Produced by Heat of Combustion: HHV and LLV
- 3.6.2. Volumetric Measurements of Combustible Liquids
- 3.6.3. Volumetric Measurements of Combustible Gases. Establishment and Calculation of Normal Conditions

3.7. Combustion Systems and Fuel Elements
- 3.7.1. Combustion Efficiency
- 3.7.2. Burners
- 3.7.3. Heat Transfer

3.8. Boilers
- 3.8.1. Calculation of Boiler Efficiency by Direct and Indirect Method
- 3.8.2. Types of Heat Transfer Fluids
- 3.8.3. Steam Boilers

3.9. Other Fuel-Consuming Equipment
- 3.9.1. Ovens
- 3.9.2. Engines
- 3.9.3. Generating Sets

3.10. Fuel Billing
- 3.10.1. Legislation
- 3.10.2. Natural Gas Rates
- 3.10.3. Natural Gas Billing Terms

Module 4. Energy Management Tools

4.1. Energy Regulatory Framework
- 4.1.1. European Energy Efficiency Directive
- 4.1.2. Main Energy Regulations

4.2. Regulatory Inspections
- 4.2.1. Air Conditioning Inspections
- 4.2.2. High/Low Voltage Inspections
- 4.2.3. Other Regulatory Inspections

4.3. Energy Audits
- 4.3.1. Conducting an Energy Audit Identification of Improvement Opportunities
- 4.3.2. UNE-EN 16247-1:2012

4.4. Energy Simulation tools
- 4.4.1. Light Simulations
- 4.4.2. Air Conditioning Simulations
- 4.4.3. Building Energy Demand Simulations

4.5. Supply Management: Monitoring
- 4.5.1. Types of Monitoring
- 4.5.2. Energy Management Platforms
- 4.5.3. Fundamental Equipment

4.6. Energy Services
- 4.6.1. Energy Services
- 4.6.2. Energy Services Companies
- 4.6.3. Types of Contracts

4.7. IPMVP
- 4.7.1. Calculating Savings Avoided Cost and Standardized Savings Models
- 4.7.2. Options A, B, C and D
- 4.7.3. Establishing Baselines

4.8. Energy Efficiency Master Plans
- 4.8.1. Methodology for Preparing a Master Plan
- 4.8.2. Management Models
- 4.8.3. Energy Efficiency within a Master Plan

4.9. Asset Management
- 4.9.1. What is Asset Management?
- 4.9.2. ISO 55001 Asset Management
- 4.9.3. Benefits of Implementing Asset Management

4.10. Grants and Subsidies
- 4.10.1. European Grants and Subsidies

Module 5. Environmental Impact Assessment and Climate Change Adaptation Strategies

5.1. Business Strategies for Climate Change
- 5.1.1. Greenhouse Effect and Climate Change. Causes and Consequences
- 5.1.2. Climate Change Projections
- 5.1.3. Corporate Action against Climate Change. Roadmap for the Integration of Climate Change in Companies

5.2. Identification and Classification of Environmental Factors
- 5.2.1. Environmental Catalog Environmental Variables
- 5.2.2. Search for Environmental Information and Inventory
- 5.2.3. Inventory Valuation

5.3. Evaluation and Assessment of the Environmental Impacts of a Project
- 5.3.1. Environmental Analysis of a Project
- 5.3.2. Pre-Operational Status
- 5.3.3. Construction, Operation and Abandonment Phase
- 5.3.4. Quantitative Methods

5.4. Preventive and Corrective Measures
- 5.4.1. Preventative Actions
- 5.4.2. Corrective Actions
- 5.4.3. Compensatory Actions

5.5. Environmental Monitoring Program
- 5.5.1. EMP
- 5.5.2. Objectives and Structure of an EMP
- 5.5.3. Phases in the Development of an EMP

5.6. Strategic Environmental Assessment
- 5.6.1. Modalities for Integrating the Environmental Dimension
- 5.6.2. Environmental Assessment in the Phases of the Program

5.7. Analysis of Climate Change Risks and Opportunities
- 5.7.1. European Regulatory Context (Directive 2001/42/EC)
- 5.7.2. Environmental Risk Analysis and Assessment
- 5.7.3. Risk Management

5.8. Development of Climate Change Adaptation Plans for Organizations
- 5.8.1. Adaptation to Climate Change
- 5.8.2. Climate Change Vulnerability Assessment
- 5.8.3. Methodology for Prioritizing Climate Change Adaptation Measures

Module 6. Pollution, Water and Waste Management

6.1. Water Management and Pollution
- 6.1.1. Water Management
- 6.1.2. Hydrological Water Cycle
- 6.1.3. Water Diagnostics
- 6.1.4. Characterization of Wastewater
- 6.1.5. DWTP, WWTP and WWTP. Definition and Typical Operating Diagrams

6.2. Distribution of Water Uses and Demand
- 6.2.1. Demand Management
- 6.2.2. Types of Uses or Demands
- 6.2.3. Supply. Supply Ratios
- 6.2.4. Cost of Water and the Energy Derived from Water Heating for DHW

6.3. Measures for Efficient Water Use and Management
- 6.3.1. 'Ecological' Criteria. Consumption Factor, Ecological Correction Factor and Efficiency Level
- 6.3.2. From Resolution MAH/1603/2004 to OGUEA
- 6.3.3. Facility Management and Optimization

6.4. Sustainable Water Management Plan
- 6.4.1. Origin of the Sustainable Water Plan. Purpose and Scope
- 6.4.2. Parts to Be Included in an ESMP
- 6.4.3. Organization and Programming
- 6.4.4. Implementation of the ESMP
- 6.4.5. Checks and Corrective Actions

6.5. Solid Waste Management
- 6.5.1. Residue and By-Product
- 6.5.2. Types of Waste
- 6.5.3. Stages of Waste Management

6.6. Waste Regulatory Framework
- 6.6.1. EU Waste Management Strategies
- 6.6.2. Future Waste Management Policy

6.7. Municipal and Industrial Solid Waste
- 6.7.1. MSW Production
- 6.7.2. MSW Management Systems
- 6.7.3. Characterization and Classification of Industrial Wastes
- 6.7.4. Industrial Waste Management Systems

6.8. Waste-to-Energy Valuation
- 6.8.1. Valuation Methods
- 6.8.2. Feasibility of Valuation
- 6.8.3. Recovery Techniques

6.9. Zero Waste
- 6.9.1. Zero Waste
- 6.9.2. Zero Waste Methodology and Requirements
- 6.9.3. The 5Rs: Reject, Reduce, Reuse, Reincorporate and Recycle

Module 7. Environmental Management Tools

7.1. Carbon Markets
- 7.1.1. KP Flexibility Mechanisms
- 7.1.2. CAP and Trade and Carbon Funds Schemes
- 7.1.3. Voluntary Carbon Markets

7.2. Organizational Carbon Footprint
- 7.2.1. Methodological Reference Standards
- 7.2.2. Scopes for Organizational Carbon Footprint
- 7.2.3. Calculation Process

7.3. Product and Event Carbon Footprint
- 7.3.1. Methodological Reference Standards
- 7.3.2. Scopes for Product Carbon Footprint
- 7.3.3. Scopes for Carbon Footprint of Events

7.4. Climate Change Mitigation Tools
- 7.4.1. Reduction and Limitation of Emissions
- 7.4.2. Emissions Offsets
- 7.4.3. Business Benefits. Certifications

7.5. Water Footprint
- 7.5.1. Stages and Units
- 7.5.2. Differentiation of Water for Calculations
- 7.5.3. The Water Footprint for Companies

7.6. Life Cycle Analysis
- 7.6.1. Differentiation of Approaches
- 7.6.2. LCA Process
- 7.6.3. Software Tools for LCA

7.7. Eco-Design and Eco-Labeling
- 7.7.1. Eco-Design Standardization
- 7.7.2. Types of Eco-Labeling
- 7.7.3. Eco-Labeling Process

7.8. LEED and BREEAM
- 7.8.1. The Value of Sustainable Building Certification
- 7.8.2. Approaches to Both Certifications
- 7.8.3. Technical Comparison between the Two Certifications

7.9. Other Sustainable Building Certifications
- 7.9.1. Passive House
- 7.9.2. Well
- 7.9.3. VERDE (Building Reference Efficiency Evaluation)

7.10. Energy Certification of Buildings
- 7.10.1. Energy Efficiency in Buildings
- 7.10.2. Technical Conditions and Procedures
- 7.10.3. Main Calculation Programs

Module 8. Energy Management Systems

8.1. Management Systems: ISO 50001
- 8.1.1. Reference Standard and Other Associated Standards
- 8.1.2. Approach to Energy Performance
- 8.1.3. Correspondence between ISO 50001: 2018 and ISO 50001: 2011

8.2. Organizational Context and Leadership
- 8.2.1. Scope
- 8.2.2. Energy Policy
- 8.2.3. Stakeholder Identification and Risk/Opportunity Assessment

8.3. Energy Review
- 8.3.1. Identification of Energy Sources
- 8.3.2. Determination of Significant Energy Uses
- 8.3.3. Identification of Variables and Static Factors
- 8.3.4. Calculation of Energy Performance
- 8.3.5. Estimation of Future Consumption
- 8.3.6. Identification of Improvement Opportunities

8.4. Baseline and Energy Performance Indicators
- 8.4.1. Establishment of the Reference Period
- 8.4.2. Establishment of Energy Performance Indicators
- 8.4.3. Monitoring of Consumption, Baselines and Indicators

8.5. Support
- 8.5.1. Training Needs within the SGEn
- 8.5.2. Communications within the SGEn
- 8.5.3. Documentation Control

8.6. Operation: Maintenance and Operations
- 8.6.1. Establishing the Most Efficient Operating Criteria
- 8.6.2. Establishing the Most Efficient Maintenance Ranges
- 8.6.3. Energy Savings from Predictive Maintenance

8.7. Operation: Design of Efficient Facilities
- 8.7.1. Purchases of Energy Consuming Equipment
- 8.7.2. Design of New Thermal Installations
- 8.7.3. Design of New Lighting Installations

8.8. Performance Evaluation
- 8.8.1. Evaluation of Compliance with Legal Requirements
- 8.8.2. Internal Audit as a Fundamental Tool
- 8.8.3. Management Review. Objectives and Points to Be Addressed

8.9. Improvement
- 8.9.1. Non-Conformities and Corrective Actions
- 8.9.2. Continuous Improvement of the SGEn
- 8.9.3. Continuous Improvement of Energy Performance

8.10. Energy Efficiency Awareness
- 8.10.1. Facility Users as Key SGEn Personnel
- 8.10.2. Awareness Campaign Models
- 8.10.3. Case Study

Module 9. Environmental Management Systems

9.1. Management Systems: ISO 14001
- 9.1.1. Environmental Management Systems
- 9.1.2. Benefits of the Environmental Management System
- 9.1.3. Phases in the Implementation of an EMS

9.2. Organizational Context and Leadership
- 9.2.1. Understanding of the Organization, its Context and Stakeholders
- 9.2.2. Scope of the System
- 9.2.3. Environmental Policy
- 9.2.4. Roles and Responsibilities

9.3. Planning: Environmental Aspects and Impacts
- 9.3.1. Environmental Aspects and Impacts: Cause-Effect Relationship
- 9.3.2. Identification of Environmental Aspects
- 9.3.3. Evaluation of Environmental Aspects

9.4. Planning: Objectives, Risks and Opportunities
- 9.4.1. Actions to Address Risks and Opportunities
- 9.4.2. Legal Requirements
- 9.4.3. Environmental Objectives and Planning to Achieve Them

9.5. Support: Resources, Competence and Awareness
- 9.5.1. Resources
- 9.5.2. Competition
- 9.5.3. Awareness

9.6. Support: Documented Communication and Information
- 9.6.1. Internal and External Environmental Communication
- 9.6.2. Documented Information
- 9.6.3. Documentation Control

9.7. Operation
- 9.7.1. Operational Planning and Control
- 9.7.2. Life Cycle Analysis Perspective
- 9.7.3. Emergency Preparation and Response

9.8. Performance Evaluation
- 9.8.1. Monitoring, Measurement, Analysis and Evaluation
- 9.8.2. Internal Audit
- 9.8.3. Management Review

9.9. Improvement
- 9.9.1. Non-Conformities and Corrective Actions
- 9.9.2. Continuous Improvement of the EMS
- 9.9.3. Continuous Improvement of Environmental Performance

9.10. Transition from 14001 to EMAS
- 9.10.1. The EMAS Regulation
- 9.10.2. Transition from ISO 14001 to EMAS
- 9.10.3. ISO 14001 vs EMAS

Module 10. Management System Audits

10.1. Management System Audits
- 10.1.1. Characteristics of Management System Audits
- 10.1.2. Types of Management System Audits
- 10.1.3. Management Systems Auditing Principles

10.2. Standards and Organizations Involved
- 10.2.1. Actors and Organizations Involved
- 10.2.2. Certification Process
- 10.2.3. UNE- EN ISO 19011

10.3. Audit Program Management
- 10.3.1. Audit Program
- 10.3.2. Establishing the Objectives of the Audit Program
- 10.3.3. Audit Program Risks and Opportunities

10.4. Conducting an Audit
- 10.4.1. Start of the Audit and Preparation of Activities
- 10.4.2. Conducting Audit Activities
- 10.4.3. Conclusions and Audit Closing

10.5. Auditor Competence and Evaluation
- 10.5.1. Auditors' Responsibilities and Functions
- 10.5.2. Determining the Competence of the Auditor and Audited Personnel
- 10.5.3. Selecting the Auditing Team

10.6. Tools and Application Techniques. Audit Development
- 10.6.1. Interview Techniques
- 10.6.2. Checklists or Verification Lists
- 10.6.3. Checklist Templates

10.7. Tools and Application Techniques. Final Report
- 10.7.1. Audit Report Preparation
- 10.7.2. Audit Report Distribution
- 10.7.3. Audit Report Models

10.8. Tools and Application Techniques. Processing of Findings
- 10.8.1. Generation of Audit Findings
- 10.8.2. Treatment of Audit Findings
- 10.8.3. Corrective Action Plans

10.9. Particular Aspects of Environmental Management System Audits
- 10.9.1. Verification of Methodologies for Identification and Assessment of Environmental Aspects
- 10.9.2. Specific Criteria for Validation of Environmental Aspects
- 10.9.3. Visit to the Facilities During the Audit Process

10.10. Particular Aspects of Energy Management System Audits
- 10.10.1. Verification of Energy Consumption Collection Methodologies
- 10.10.2. Criteria for Validation of Energy Performance
- 10.10.3. Visit to the Facilities During the Audit Process

Advance your skills with the most interesting study systems on the online teaching scene"

06

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

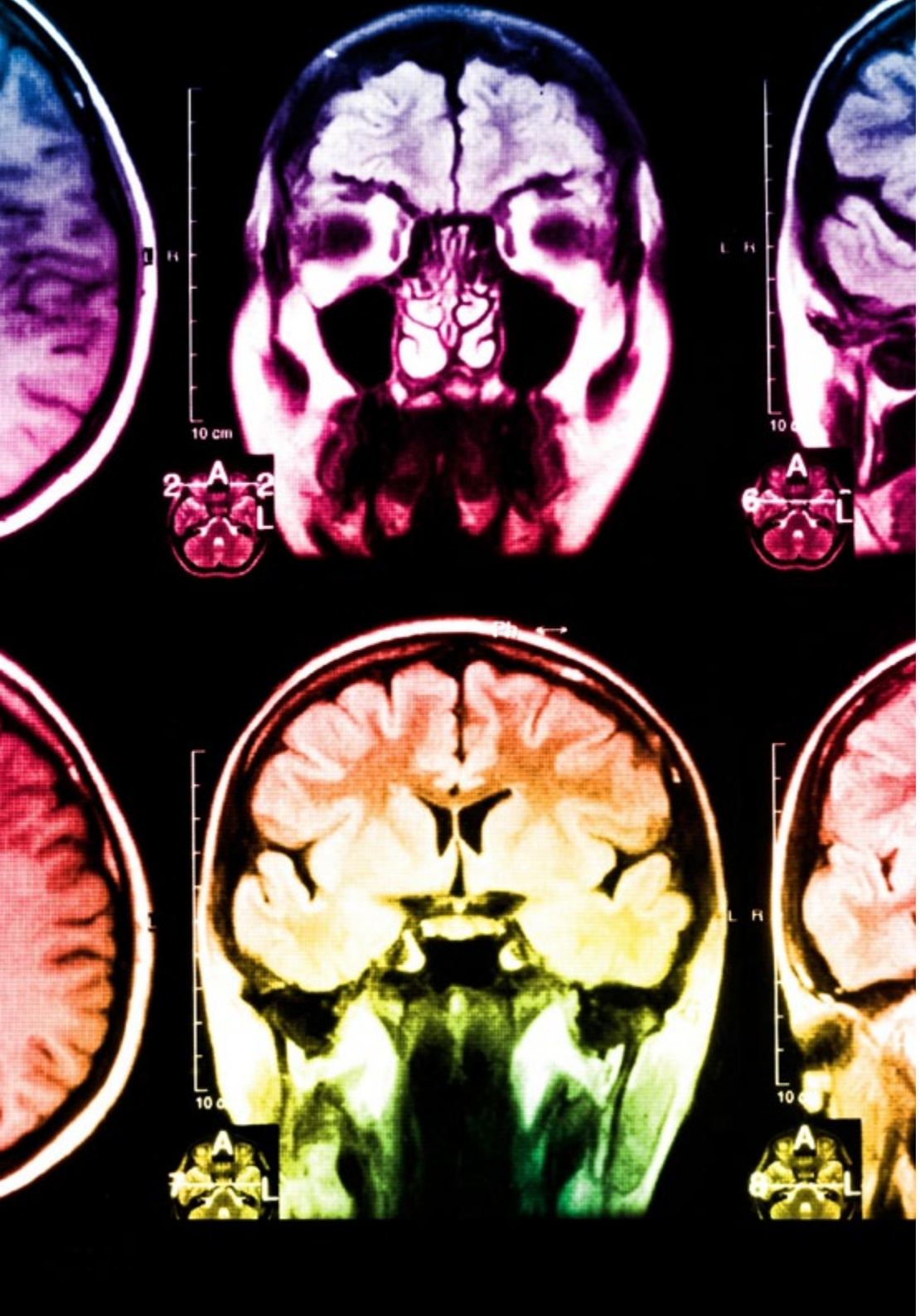
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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 learning, 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.

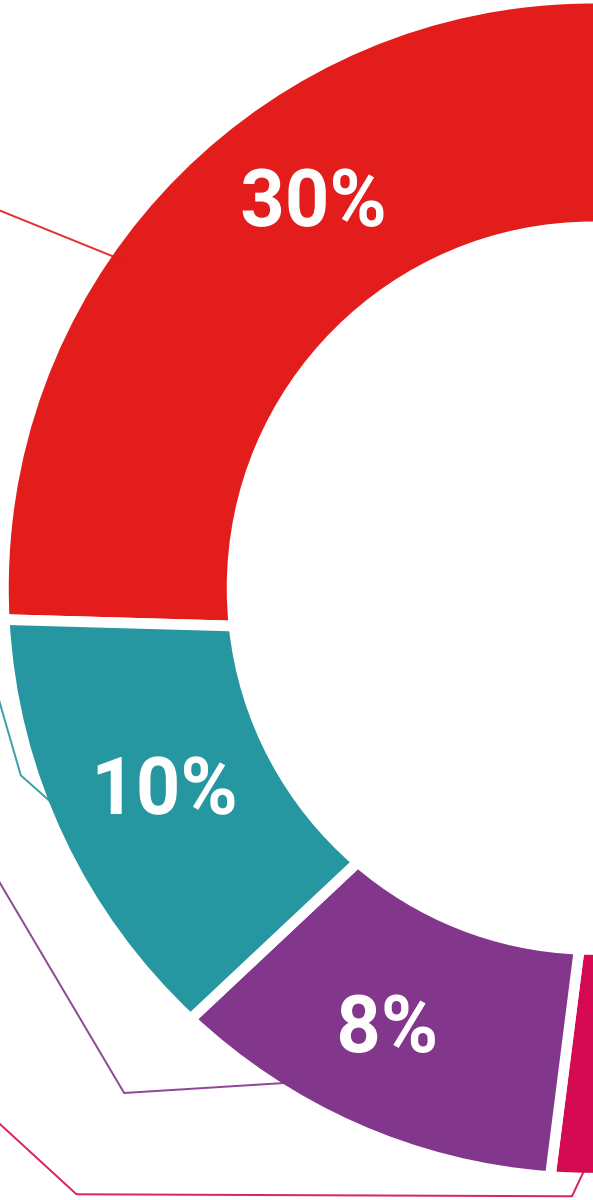
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

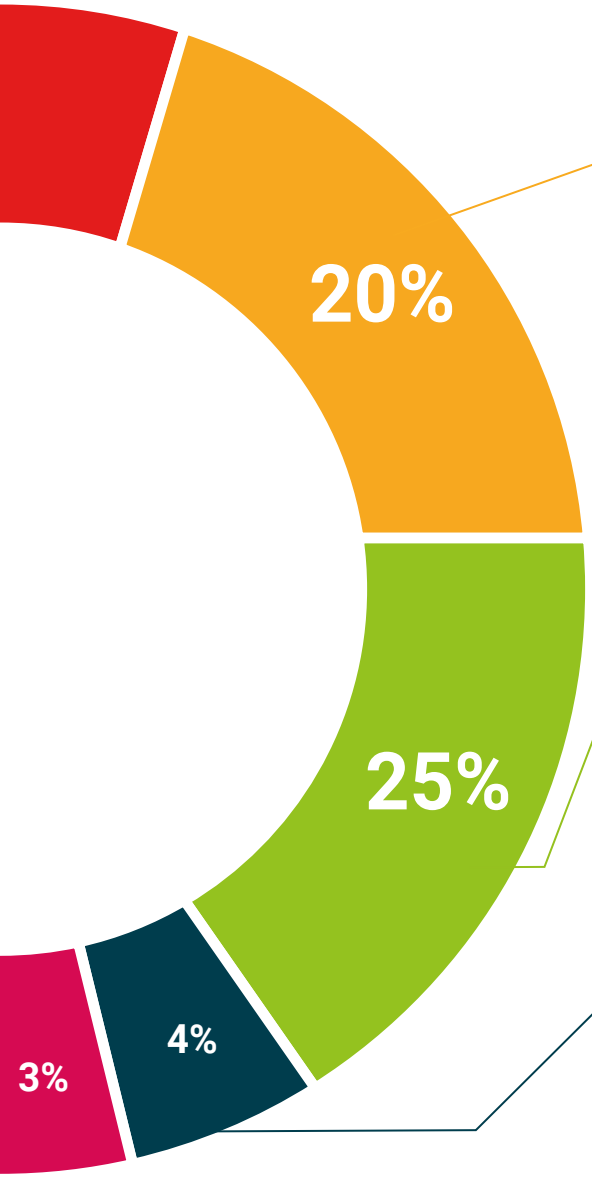
Practising Skills and Abilities

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.

07

Certificate

The Professional Master's Degree in Corporate Sustainability Management guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree issued by TECH Technological University.

Successfully complete this program and receive your university diploma without travel or laborious paperwork"

This **Professional Master's Degree in Corporate Sustainability Management** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labour exchanges, competitive examinations, and professional career evaluation committees.

Title: **Professional Master's Degree in Corporate Sustainability Management**

Official Nº of hours: **1,500 h.**


tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE

in

Corporate Sustainability Management

This is a qualification awarded by this University, equivalent to 1,500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

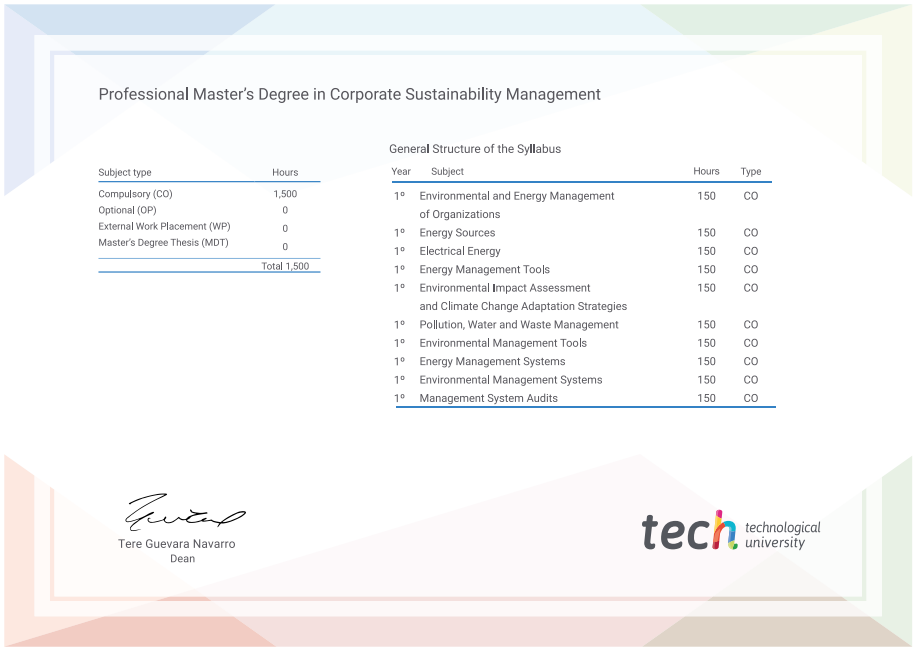
TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

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


Professional Master's Degree in Corporate Sustainability Management

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 1,500

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Environmental and Energy Management of Organizations	150	CO
1º	Energy Sources	150	CO
1º	Electrical Energy	150	CO
1º	Energy Management Tools	150	CO
1º	Environmental Impact Assessment and Climate Change Adaptation Strategies	150	CO
1º	Pollution, Water and Waste Management	150	CO
1º	Environmental Management Tools	150	CO
1º	Energy Management Systems	150	CO
1º	Environmental Management Systems	150	CO
1º	Management System Audits	150	CO

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

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Professional Master's Degree
Corporate Sustainability Management

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Professional Master's Degree

Corporate Sustainability Management

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