Postgraduate Diploma
Circular Waste Sustainability

tech technological university

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Postgraduate Diploma
Circular Waste Sustainability

- Modality: **online**
- Duration: **6 Months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/engineering/postgraduate-diploma/postgraduate-diploma-circular-waste-sustainability**

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01

Introduction

The impact of the circular economy on water and waste management makes it necessary to understand it in depth, as well as the existing tools that can be applied and to search for cost-effective solutions in the market in accordance with the environmental and economic needs. Get trained with this comprehensive Postgraduate Diploma and acquire the necessary skills to develop your profession with total rigor.

Circular waste management allows us to work towards environmental sustainability. Don't think twice and join the fight against pollution.

A comprehensive and multidisciplinary educational program that will allow you to excel in your career, following the latest advances in circular waste sustainability"

The generation of waste generated by human activity is still pending a solution so as not to jeopardize the capacity of future generations. This is why there is a European Waste Policy. Inadequate waste management produces significant impacts on the receiving environments, generating adverse effects on water, soil and air, contributing to climate change, affecting ecosystems and of course human health.

This course provides the student with a solid knowledge of urban waste management, its sources and degree of production, the importance of minimization and the effects on the environment. Aspects related to landfill management and its significant environmental, social, visual and land degeneration impacts are included.

In addition, the circular economy is proposed as a formula for the correct management of waste with the main objective of promoting sustainability, both environmentally and economically. Therefore, it is proposed to reuse as many products as possible using as little energy as possible.

Specifically, this Postgraduate Diploma will present the principles and characteristics of the circular economy, its advantages and its strategic vision. In this way, students are introduced to the efficient and sustainable use of water both at source (rainwater and graywater) and at destination (irrigation water or process water). Students will learn about the key factors in determining the revaluation of waste and/or sub-processes, including examples of entrepreneurship in this particular sector.

On the other hand, in order to understand the waste management and water engineering framework, it is essential to know the legal requirements on which it is based. The regulations concerning these environmental aspects are continually updated to adapt to changes in production and consumption.

It should be noted that since this is a 100% online Postgraduate Diploma, the student is not conditioned by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life.

This **Postgraduate Diploma in Circular Waste Sustainability** contains the most complete and up to date educational program on the market. The most important features of the program include:

- The development of case studies presented by Experts in circular waste sustainability.
- 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 the self-assessment process can be carried out to improve learning.
- Its special emphasis on innovative methodologies in circular waste sustainability.
- Theoretical lessons, questions to the expert, discussion forums on controversial topics and individual reflection papers.
- Content that is accessible from any fixed or portable device with an Internet connection.

Do not miss the opportunity to take this Postgraduate Diploma in Circular Waste Sustainability with us. It's the perfect opportunity to advance your career"

This Postgraduate Diploma is the best investment you can make in selecting a refresher program to update your knowledge in circular waste sustainability"

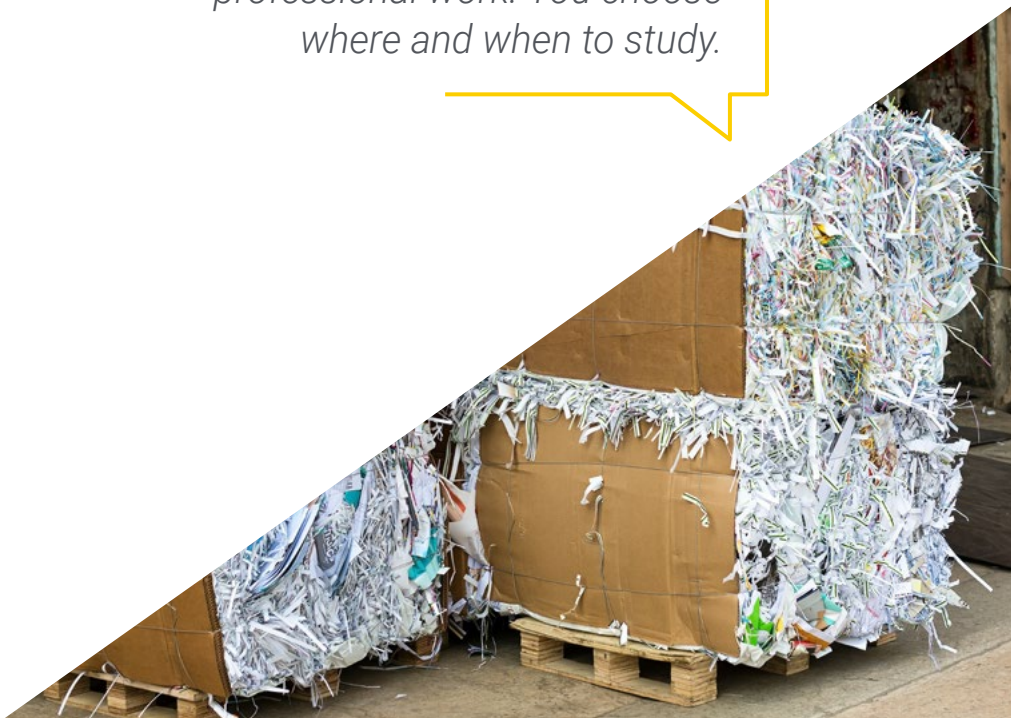
This training comes with the best didactic material, providing you with a contextual approach that will facilitate your learning.

This 100% online Postgraduate Diploma will allow you to combine your studies with your professional work. You choose where and when to study.

Its teaching staff includes professionals from the field of waste management, who contribute their work experience to this training program, in addition to renowned 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 training that is programmed to train students in real situations.

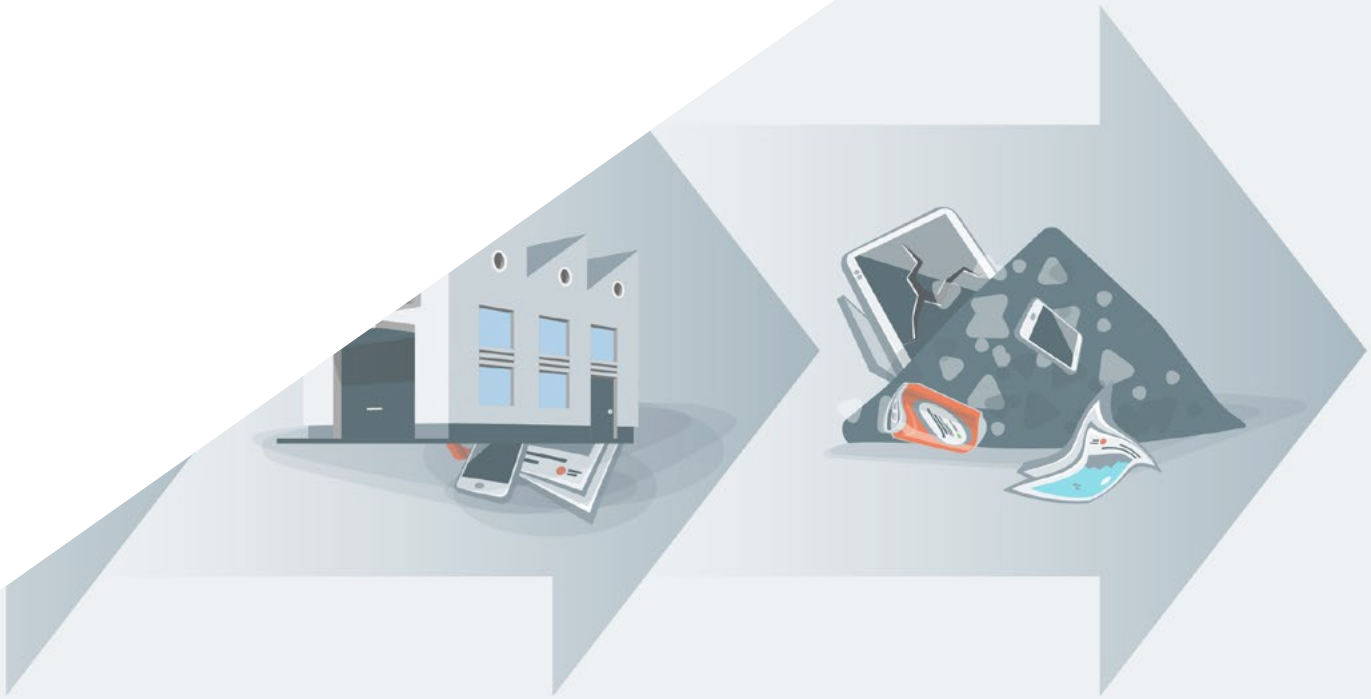
This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and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



02

Objectives

The **Postgraduate Diploma in Circular Waste Sustainability** is aimed at facilitating the performance of the professional to acquire and learn about the main developments in this area.



Our goal is to make you the best professional in your sector. And for this we have the best methodology and content"

General Objectives

- Know the latest applicable legislation that supports waste management and water engineering, allowing the student to know the legal instruments used in environmental management.
- Apply the circular economy in water and waste management systems to quantify the economic and environmental impact of water and waste reuse and revaluation improvements in the organization through appropriate tools and methodologies.
- Identify the origin of urban or municipal waste and the evolution in its production.
- Have key knowledge on the potential health and environmental effects of municipal waste and landfill issues.
- Know the main digital technologies available in municipal solid waste management.

Take the step to get up to speed on the latest developments in Circular Waste Sustainability"

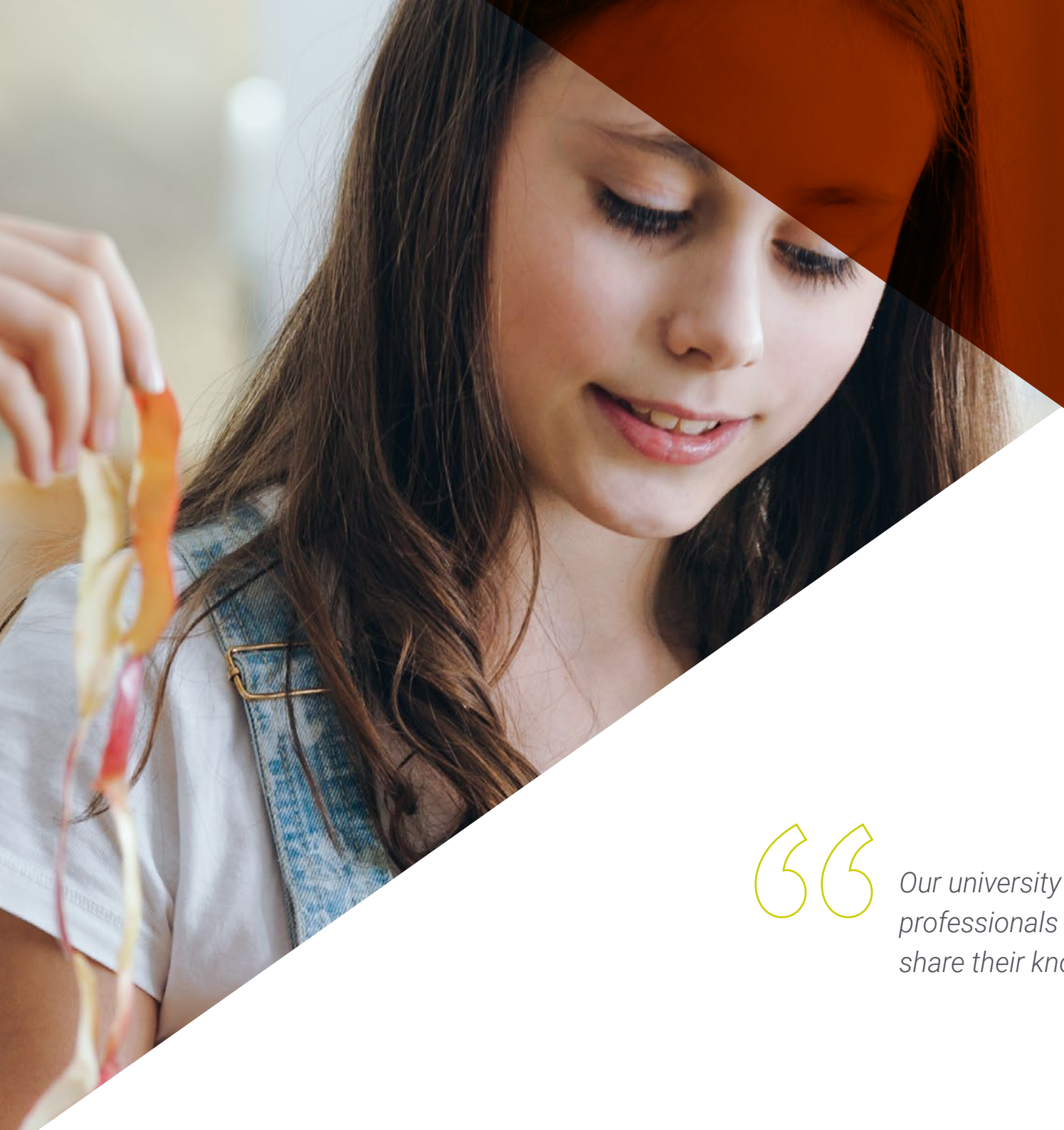
Specific Objectives

- Acquire knowledge of environmental law at the community, state and regional levels.
- Have an updated legislation repertory to ensure proper compliance with applicable regulations.
- Know the necessary procedures for the figures of waste producer and manager.
- Understand the requirements of the different environmental management systems, ISO 14001 and EMAS.
- Deepen understanding of the circular economy for its strategic implementation through proposals for efficient and sustainable use of water and revaluation of waste and by-products.
- Measure through life cycle analysis, eco-design and zero discharge tools the environmental impact of products and/or processes in order to develop improvement plans capable of becoming benchmark success stories.
- Know the criteria of Green Public Procurement and the innovative public procurement tool to address and meet proposals from public administrations.
- Establish environmental accounting to quantify and classify proposed improvements and the environmental costs by integrating them into the organization's accounting system.
- Analyze the evolution of waste production by origin and type of waste.
- Know how to analyze and assess the health and environmental impact of waste management.
- Propose measures to reduce, recycle and reuse the waste generated.
- Propose landfill management and restoration models.
- Deepen understanding of the latest digital technologies available in municipal solid waste management.

03

Course Management

In our university we have professionals specialized in each area of knowledge, who bring their work experience into our training programs.



Our university employs the best professionals in all areas who share their knowledge to help you"

Management

Mr. Nieto-Sandoval González, Nicolás David

- Industrial Technical Engineer from E.U.P. of Malaga.
- Industrial Engineer from E.T.S.I.I.
- Master's Degree in Integral Management of Quality, Environment and Health and Safety at Work from the University of the Balearic Islands.
- For more than 11 years, he has been working both for companies and on his own account, for clients in the private agri-food industry and the institutional sector, as a consultant in engineering, project management, energy saving and circularity in organizations.
- Professor certified by the EOI in the areas of Industry, Entrepreneurship, Human Resources, Energy, New Technologies and Technological Innovation.
- Trainer of the European INDUCE project.
- Trainer in institutions such as COGITI and COIIM.

Professors

Mrs. Álvarez Cabello, Begoña

- Degree in Biology from the University of Córdoba.
- Master's Degree in Environmental Quality and Sustainability in Local and Territorial Development from the University of Castilla-La Mancha.
- Technician in Occupational Risk Prevention by the Fundación de la Construcción.
- Specialist in Geographic Information Systems (GIS).
- Extensive experience as an environmental and occupational risk prevention technician, with more than 15 years of experience in different sectors: waste, renewable energies, industries, environmental impact assessment, local and regional administration, and conservation biology.
- Teacher of Certificate of Professionalism and approved by the EOI in environmental, waste and water issues.
- Member of the Association Harmush Estudio y Conservación de Fauna, which develops international projects on endangered species and various publications.

Mr. Titos Lombardo, Ignacio

- Degree in Environmental Sciences from the University of Castilla-La Mancha.
- Master's Degree in Integrated Quality and Environmental Management.
- Senior Technician in Occupational Risk Prevention.
- Partner-Consultant of Implantación Integral de Sistemas de Calidad, S.L., a consulting firm created in 1998 and specialized in the development of quality, environmental and prevention consulting and auditing projects and in advising local corporations on environmental matters.
- The company has been operating for more than 12 years, advising and auditing companies in sectors as varied as waste, water, food, industrial, transportation, renewable energy, etc.
- Teacher of Certificates of Professionalism.
- Currently, he is the administrator of Imsica Formación, S.L., an entity specialized in in-company training for its clients.
- Teacher of the Recicla2 Project for the promotion of waste management and recycling and the creation of green companies.

04

Structure and Content

The structure of the contents has been designed by the best professionals in the circular waste sustainability sector, with extensive experience and recognized prestige in the profession.

We have the most complete and up-to-date academic program in the market. We strive for excellence and for you to achieve it too"

Module 1. Legislation

1.1. 2030 Agenda for Sustainable Development
- 1.1.1. SDG 6. Clean Water and Sanitation
- 1.1.2. SDG 12. Responsible Production and Consumption

1.2. European Strategy
- 1.2.1. Objective Municipal Waste
- 1.2.2. Target Waste of Greatest Generation/Impact
- 1.2.3. Circular Economy

1.3. Main European Legislation
- 1.3.1. European Directives on Waste and Circular Economy
- 1.3.2. European Drinking Water Directives
- 1.3.3. European Waste Water Directive

1.4. National Strategy
- 1.4.1. State Inspection Plan for Transboundary Shipments of Waste 2017-2019
- 1.4.2. State Program for Waste Prevention 2014-2020
- 1.4.3. State Waste Management Framework Plan (PEMAR) 2016-2022
- 1.4.4. Spanish National Integral Waste Plan (PNIR)
- 1.4.5. State Waste Management Framework Plan (PEMAR) 2016-2022
- 1.4.6. Green Paper on Water Governance
- 1.4.7. Spanish Water Technology Platform

1.5. Main Domestic Legislation

1.5.1. Waste
- 1.5.2. Waste Flows
- 1.5.3. Responsabilidad ambiental
- 1.5.4. Water Law
- 1.5.5. Drinking Water
- 1.5.6. Wastewater

1.6. Regional Master Plans
- 1.6.1. Waste Management Plans
- 1.6.2. Water Master Plans

1.7. Main Regional Legal Differences
- 1.7.1. Distribution of Competencies
- 1.7.2. Jurisprudence

1.8. Procedures as Waste Producer
- 1.8.1. Discharge Procedures
- 1.8.2. Generation Control Statements
- 1.8.3. Minimization

1.9. Procedures as a Waste Manager
- 1.9.1. Manager Types and Discharge Procedures
- 1.9.2. Transportation Control and Management
- 1.9.3. Final Destination of Waste. Statements

1.10. International Standards
- 1.10.1. Environmental Management Systems
- 1.10.2. ISO Business School 14001
- 1.10.3. EMAS

Module 2. Circular Economy

2.1. Aspects and Characteristics of Circular Economy
- 2.1.1. Origin of the Circular Economy
- 2.1.2. Principles of the Circular Economy
- 2.1.3. Key Features

2.2. Adaptation to Climate Change
- 2.2.1. Circular Economy as a Strategy
- 2.2.2. Economic Advantages

2.2.3. Social Advantages
2.2.4. Business Advantages
2.2.5. Environmental Advantages
2.3. Efficient and Sustainable Water Use
2.3.1. Stormwater
2.3.2. Gray Water
2.3.3. Irrigation Water. Agriculture and Gardening
2.3.4. Process Water. Agri-food Industry
2.4. Revaluation of Wastes and By-Products
2.4.1. Water Footprint of Waste
2.4.2. From Waste to By-product
2.4.3. Classification According to Production Sector
2.4.4. Revaluation Undertakings
2.5. Life Cycle Analysis
2.5.1. Life Cycle Assessment (LCA)
2.5.2. Stages
2.5.3. Reference Standards
2.5.4. Methodology
2.5.5. Tools
2.6. Ecodesign
2.6.1. Ecodesign Principles and Criteria
2.6.2. Product Characteristics
2.6.3. Methodologies in Ecodesign
2.6.4. Eco-design Tools
2.6.5. Success Stories
2.7. Zero Discharge
2.7.1. Principles of Zero Discharge
2.7.2. Benefits
2.7.3. Systems and Processes
2.7.4. Success Stories
2.8. Green Public Procurement
2.8.1. Legislation
2.8.2. Green Procurement Manual
2.8.3. Guidelines for Public Procurement
2.8.4. Public Procurement Plan 2018-2025
2.9. Innovative Public Procurement
2.9.1. Types of Innovative Public Procurement
2.9.2. Recruitment Process
2.9.3. Document design
2.10. Environmental Accounting
2.10.1. Best Available Environmental Technologies (BAT)
2.10.2. Ecotaxes
2.10.3. Green Account
2.10.4. Environmental Cost

Module 3. Municipal Solid Waste Management

3.1. Sources and Production
3.1.1. Sources of Origin
3.1.2. Composition Analysis
3.1.3. Evolution of Production
3.2. Municipal Solid Waste Management
3.2.1. Classification According to Standards
3.2.2. Characteristics of Municipal Solid Waste
3.3. Effects on Public Health and the Environment

3.3.1. Health Effects of Air Pollution
3.3.2. Health Effects of Chemicals
3.3.3. Effects on Fauna and Flora
3.4. Importance of Minimization
3.4.1. Waste Reduction
3.4.2. The 5Rs and their Benefits
3.4.3. Fractionation and Problems
3.5. Phases of Operational Waste Management
3.5.1. Waste Containerization.
3.5.2. Waste Collection Types and Systems
3.5.3. Transfer and Transportation
3.6. Types of Urban Waste Treatment I
3.6.1. Sorting Plants
3.6.2. Composting.
3.6.3. Biomethanization.
3.6.4. Energy Recovery
3.7. Types of Urban Waste Treatment II
3.7.1. Landfills
3.7.2. Environmental Impact of Landfills
3.7.3. Landfill Sealing
3.8. Municipal Management of MSW Landfills
3.8.1. Social Perception and Physical Situation
3.8.2. MSW Landfill Management Models
3.8.3. Current MSW Landfill Issues
3.9. Waste as a Source of Business
3.9.1. From Health Protection to Circular Economy
3.9.2. The Economic Activity of Waste Management
3.9.3. From Waste to Resource
3.9.4. Waste as a Substitute for Raw Materials
3.10. Digitalization in the Management Process
3.10.1. Classification Based on Deep Learning
3.10.2. Container Sensing
3.10.3. Smart Bins

This training will allow you to advance in your career comfortably"


DESIGN
PRODUCE
DISTRIBUTE
CONSUME
RECYCLE
CIRCULAR
ECONOMY

05

Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used 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 Re-learning, 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"

At TECH we use the Case Method

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

With TECH you can experience a way of learning that is shaking the foundations of traditional universities around the world"

We are the first online university to combine Harvard Business School case studies with a 100% online learning system based on repetition.

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

A learning method that is different and innovative.

This Engineering program at TECH Technological University is an intensive program that prepares you to face all the challenges in this area, both nationally and internationally. We are committed to promoting your personal and professional growth, the best way to strive for success, that is why at TECH Technological University you will use Harvard case studies, with which we have a strategic agreement that allows us to offer you material from the best university in the world.

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

The case method has been the most widely used learning system among the world's leading business schools for as long as they have existed. 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.

In a given situation, what would you do? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, you will be presented with multiple real cases. You will have to combine all your knowledge, and research, argue, and defend your ideas and decisions.

Re-learning Methodology

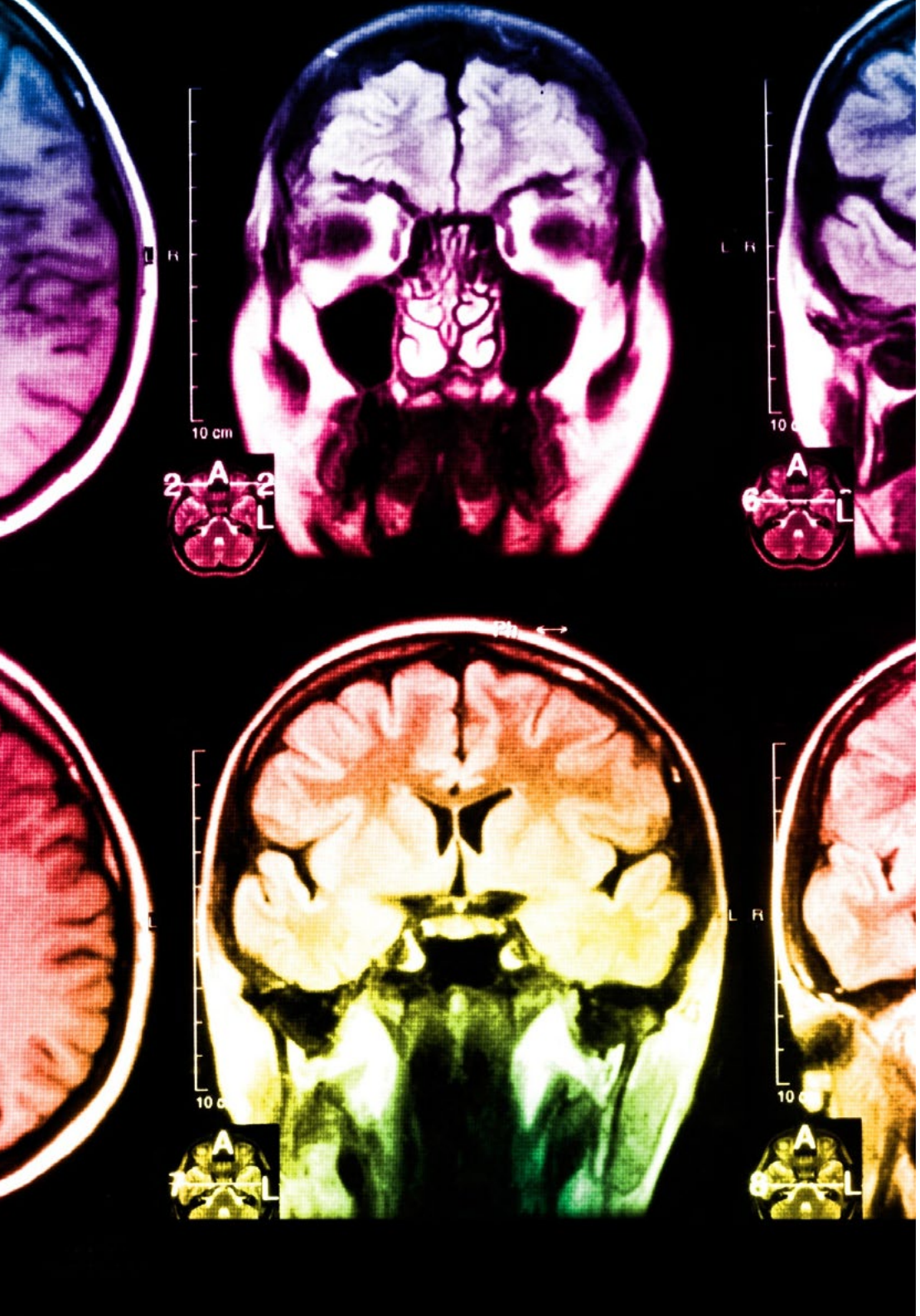
Our University is the first in the world to combine Harvard University case studies with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance Harvard case studies with the best 100% online teaching method: Re-learning.

In 2019 we obtained the best learning results of all Spanish-language online universities in the world.

At TECH you will learn with an innovative methodology designed to train the managers of the future. This method, at the forefront of international teaching, is called Re-learning.

Our University is the only one in Spanish-speaking countries licensed to incorporate 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 Spanish online university indicators.



In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically. With this methodology we have 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, markets, and financial 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.

Re-learning 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 to success.

Based on the latest evidence in neuroscience, not only do we know how to organize information, ideas, images, memories, but we also know that the place and context where we have learned something is crucial for us to be able to remember it and store it in the hippocampus, and 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.

In this program you will have access to the best educational material, prepared with you 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 really specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.

Classes

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

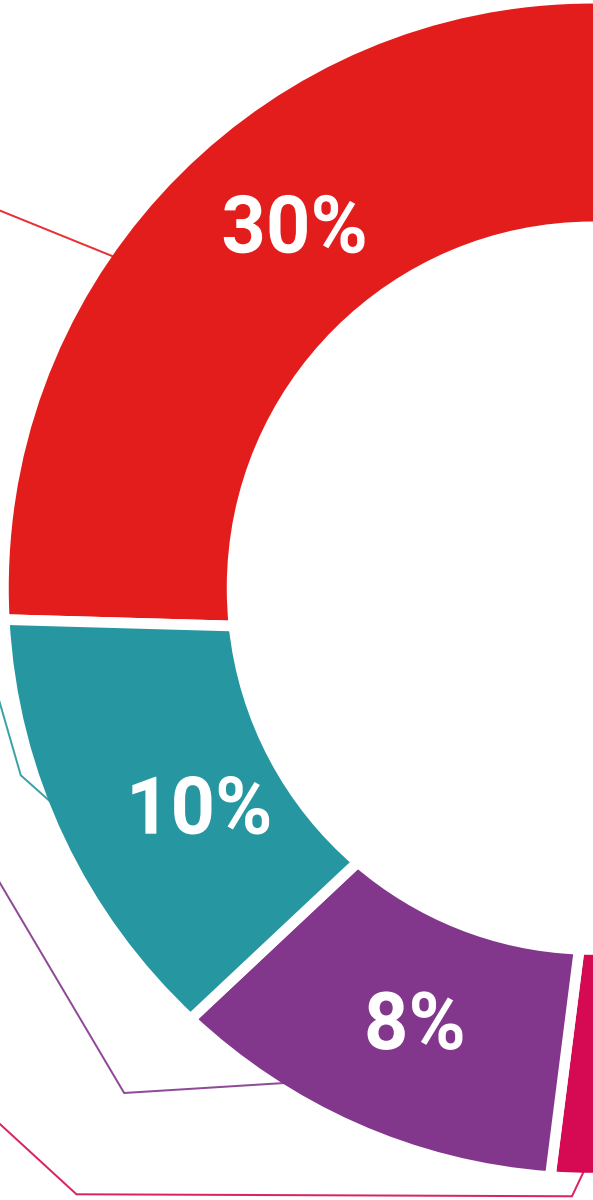
Learning from an Postgraduate Diploma strengthens knowledge and memory, and generates confidence in our difficult future decisions.

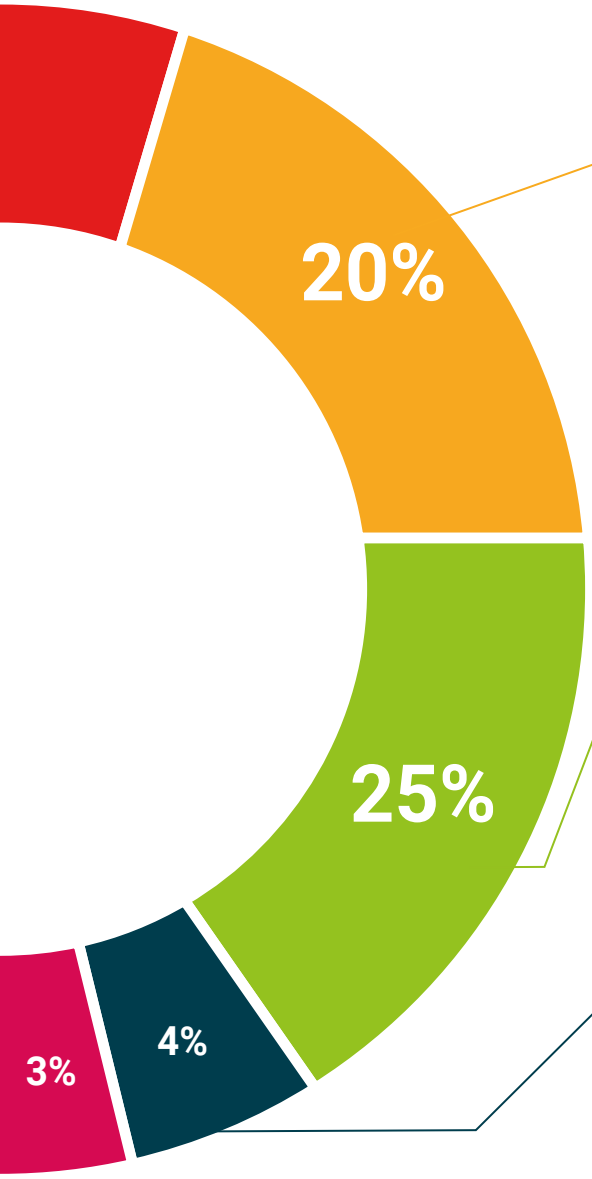
Practising Skills and Abilities

You 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 we live in.

Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





Case Studies

You will complete a selection of the best case studies in the field used at Harvard. Cases that are presented, analyzed, and supervised by the best senior management specialists in Latin America.

Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".

Testing & Re-Testing

We periodically evaluate and re-evaluate your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.

06

Certificate

Through a different and stimulating learning experience, you will be able to acquire the necessary skills to take a big step in your training. An opportunity to progress, with the support and monitoring of a modern and specialized university, which will propel you to another professional level.

Include in your specialization a Postgraduate Diploma in Circular Waste Sustainability: a high added value qualification for any professional in this field"

This **Postgraduate Diploma in Circular Waste Sustainability** contains the most complete and up to date scientific program on the market.

After the student has passed the evaluations, they will receive by mail with acknowledgement of receipt their corresponding Postgraduate Diploma issued by **TECH Technological University.**

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma commonly required by labor exchanges, competitive examinations and professional career evaluation commissions.

Title: **Postgraduate Diploma in Circular Waste Sustainability**

ECTS: **18**

Official Number of Hours: **450**


tech technological university

Awards the following

DIPLOMA

to

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

For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Circular Waste Sustainability

This is a qualification awarded by this University, with 18 ECTS credits and equivalent to 450 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

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

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