

# Postgraduate Diploma Enological Chemistry





## Postgraduate Diploma Enological Chemistry

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online
- » Target Group: University graduates, postgraduates and degree holders who have previously completed any of the programs in the field of Social and Legal Sciences, Administrative and Business Administration.

Website: [www.techtute.com/us/school-of-business/postgraduate-diploma/postgraduate-diploma-enological-chemistry](http://www.techtute.com/us/school-of-business/postgraduate-diploma/postgraduate-diploma-enological-chemistry)

# Index

01

Welcome

---

*p. 4*

02

Why Study at TECH?

---

*p. 6*

03

Why Our Program?

---

*p. 10*

04

Objectives

---

*p. 14*

05

Structure and Content

---

*p. 20*

06

Methodology

---

*p. 28*

07

Our Students' Profiles

---

*p. 36*

08

Course Management

---

*p. 40*

09

Impact on Your Career

---

*p. 44*

10

Benefits for Your Company

---

*p. 48*

11

Certificate

---

*p. 52*

# 01 Welcome

One of the great advances in modern oenology has been to promote microbiological research in this area in order to obtain an adequate fermentation. In this way, better aromatic and flavor qualities are obtained, without loss of production. This is progress that the professionals must have if they wish to attract visitors through quality wine businesses or products. That is why this 100% online program was created, oriented to deepen the most sophisticated techniques in the analysis of grapes and wine, the advances in oenological microbiology and the relevance of the oak barrel in the aging of wines. All this with multimedia content elaborated by authentic experts in the sector.



Postgraduate Diploma in Enological Chemistry.  
TECH Technological University



“

*Become an expert in the elaboration process of the best wines and offer your visitors a first class wine tourism experience”*

02

# Why Study at TECH?

TECH is the world's largest 100% online business school. It is an elite business school, with a model based on the highest academic standards. A world-class center for intensive managerial skills education.



“

*TECH is a university at the forefront of technology, and puts all its resources at the student's disposal to help them achieve entrepreneurial success"*

## At TECH Technological University



### Innovation

The university offers an online learning model that balances the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"*Microsoft Europe Success Story*", for integrating the innovative, interactive multi-video system.



### The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

**95%** | of TECH students successfully complete their studies



### Networking

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

**+100000**

executives prepared each year

**+200**

different nationalities



### Empowerment

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

**+500**

collaborative agreements with leading companies



### Talent

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

After completing this program, TECH helps students show the world their talent.



### Multicultural Context

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.



TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:



### Learn with the best

---

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.



*At TECH, you will have access to the most rigorous and up-to-date case analyses in academia"*



### Analysis

---

TECH explores the student's critical side, their ability to question things, their problem-solving skills, as well as their interpersonal skills.



### Academic Excellence

---

TECH offers students the best online learning methodology. The university combines the *Relearning* methodology (the most internationally recognized postgraduate learning methodology) with Harvard Business School case studies. A complex balance of traditional and state-of-the-art methods, within the most demanding academic framework.



### Economy of Scale

---

TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, **volume + technology = a groundbreaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.

03

# Why Our Program?

Studying this TECH program means increasing the chances of achieving professional success in senior business management.

It is a challenge that demands effort and dedication, but it opens the door to a promising future. Students will learn from the best teaching staff and with the most flexible and innovative educational methodology.



“

*We have highly qualified teachers and the most complete syllabus on the market, which allows us to offer you education of the highest academic level”*

This program will provide you with a multitude of professional and personal advantages, among which we highlight the following:

**01**

### A Strong Boost to Your Career

---

By studying at TECH, students will be able to take control of their future and develop their full potential. By completing this program, students will acquire the skills required to make a positive change in their career in a short period of time.

*70% of students achieve positive career development in less than 2 years.*

**02**

### Develop a strategic and global vision of the company

---

TECH offers an in-depth overview of general management to understand how each decision affects each of the company's different functional fields.

**03**

### Consolidate the student's senior management skills

---

Studying at TECH means opening the doors to a wide range of professional opportunities for students to position themselves as senior executives, with a broad vision of the international environment.

*You will work on more than 100 real senior management cases.*

**04**

### You will take on new responsibilities

---

The program will cover the latest trends, advances and strategies, so that students can carry out their professional work in a changing environment.

05

### Access to a powerful network of contacts

TECH connects its students to maximize opportunities. Students with the same concerns and desire to grow. Therefore, partnerships, customers or suppliers can be shared.

*You will find a network of contacts that will be instrumental for professional development.*

06

### Thoroughly develop business projects

Students will acquire a deep strategic vision that will help them develop their own project, taking into account the different fields in companies.

07

### Improve *soft skills* and management skills

TECH helps students apply and develop the knowledge they have acquired, while improving their interpersonal skills in order to become leaders who make a difference.

*Improve your communication and leadership skills and enhance your career.*

08

### You will be part of an exclusive community

Students will be part of a community of elite executives, large companies, renowned institutions, and qualified teachers from the most prestigious universities in the world: the TECH Technological University community.

# 04 Objectives

The main goal of this Postgraduate Diploma is to enhance the professional improvement of students interested in the wine and tourism sector. Therefore, this program provides a deep knowledge of chemistry as the basis for the elaboration of the best wines. All through a content taught by real specialists in Enology, who will provide the most rigorous information, in a clear and simple way.



“

*Learn about the aromatic contributions of wines aged in oak barrels thanks to the numerous multimedia didactic resources of this program"*

TECH makes the goals of their students their own goals too.  
Working together to achieve them.

The Postgraduate Diploma in Enological Chemistry will enable the students to:

01

Provide the widest possible range of viticultural knowledge

02

Show the student the importance of viticulture for the production of great wines

03

Inculcate the need for environmental protection based on sustainability

04

Substantiate the enological importance of these compounds both in the winemaking stages and in the final product

05

Examine the microorganisms associated with the winemaking process, their nutritional requirements, and the beneficial or detrimental properties they can contribute to the wine

06

Provide knowledge for the production of white wines

07

Determine the wide range of existing possibilities in order to choose the most appropriate processes for a given terroir, grape variety and wine style

10

Determine the varieties used or with potential in the vinification of sparkling wines

08

Develop to the maximum the most advanced enology so that the student can produce top quality white wines

11

Examine the viticultural elements that affect winemaking

09

Turn the student into an expert in red winemaking

12

Generate specialized knowledge on expedition: preparation of wines for consumption

13

Establish the importance of winemaking for this group of great wines

14

Substantiate the need to protect these heritage treasures as part of our culture

15

Broaden knowledge of fining and elimination of the various components that can depreciate the wine





16

Broaden the knowledge of barrel construction

17

Present the importance of barrel toasting

18

Delve into the sensory analysis of wine Aspects to evaluate and how to carry it out

05

# Structure and Content

This Postgraduate Diploma has been designed to offer professionals in the tourism sector the most exhaustive knowledge of the chemical processes that affect the flavor, aroma, texture and color of the best wines. For this purpose, it has an advanced syllabus, elaborated by specialists in the sector who approach the most complex chemical concepts in a simple way.



“

*In only 6 months you will enter the exciting world of microbial ecology during winemaking”*

## Syllabus

This Postgraduate Diploma offers students a theoretical and practical approach to Enological Chemistry based on innovative pedagogical resources, developed by a team with a proven track record in the sector.

In this way, the professionals will learn about grape and wine compounds, the most advanced techniques currently used, as well as enological microbiology and its contribution to the wide variety of aromas and flavors of different types of wines.

In addition, through numerous additional teaching materials such as video summaries of each topic, videos in detail, specialized readings or case studies, the graduates will be able to delve deeper into oak barrel-aged wines.

All of this learning is perfectly compatible with the highest responsibilities. Students only need an electronic device (cell phone, tablet or computer) to access the most advanced content at any time of the day.

So, without attendance, or classes with fixed schedules, the graduates will be able to improve their professional aspirations through a unique Postgraduate Diploma in the academic panorama.

This Postgraduate Diploma takes place over 6 months and is divided into 3 modules:

**Module 1** / Grape and Wine Compounds. Analytical Techniques

**Module 2** / Enological Microbiology

**Module 3** / Importance of the Oak Barrel in Wine Aging



### Where, When and How is it Taught?

TECH offers the possibility of developing this Postgraduate Diploma in Enological Chemistry in a totally online way.

Throughout the 6 months of the educational program, you will be able to access all the contents of this program at any time, allowing you to self-manage your study time.

*A unique, key, and decisive educational experience to boost your professional development and make the definitive leap.*

**Module 1. Grape and Wine Compounds. Analytical Techniques**

**1.1. Components of the Grape and their Distribution in the Grape Bunch**

- 1.1.1. Vegetative and Reproductive Cycle of the Grapevine
- 1.1.2. Morphological Description and Composition of the Bunch
- 1.1.3. Chemical Composition of the Fruit

**1.2. Chemical Composition of Must and Wine**

- 1.2.1. Sugars
- 1.2.2. Organic acids
- 1.2.3. Nitrogen Compounds
- 1.2.4. Minerals
- 1.2.5. Polyphenols
- 1.2.6. Vitamins
- 1.2.7. Volatile Compounds

**1.3. Organic Acids**

- 1.3.1. Organic Acids
- 1.3.2. Main Acids in Grapes
- 1.3.3. Main Acids in Fermentation

**1.4. Polyphenols**

- 1.4.1. Non-Flavonoid Compounds
- 1.4.2. Flavonoids
- 1.4.3. Modifications of Phenolic Compounds During Ripening

**1.5. Sugars**

- 1.5.1. Structure and Classification
- 1.5.2. Glucose and Fructose
- 1.5.3. Other Sugars
- 1.5.4. Chemical Properties
- 1.5.5. Pectins

**1.6. Nitrogen Compounds**

- 1.6.1. Total Nitrogen and Assimilable Nitrogen
- 1.6.2. Amino Acids
- 1.6.3. Proteins
- 1.6.4. Other Forms of Nitrogen

**1.7. Aromas and Other Volatile Compounds**

- 1.7.1. Varietal Aroma
- 1.7.2. Volatile Components of the Pre-Fermentative Stage
- 1.7.3. Volatile Components of the Fermentative Stage
- 1.7.4. Volatile Constituents of Wine During Storage

**1.8. Enzymes**

- 1.8.1. Polyphenoloxidases
- 1.8.2. Aldehyde and C6 Alcohol Forming Enzymes
- 1.8.3. Glycohydrolase Enzymes
- 1.8.4. Proteolytic Enzymes

**1.9. Classical Enological Analysis**

- 1.9.1. Acid Analysis Methods
- 1.9.2. Sugar Analysis Methods
- 1.9.3. Methods of Alcohol Analysis
- 1.9.4. Methods of Polyphenol Analysis
- 1.9.5. Methods of Wine Additive Analysis

**1.10. Advanced Enological Analysis**

- 1.10.1. Liquid Chromatography: Enological Applications
- 1.10.2. Gas Chromatography: Enological Applications
- 1.10.3. Electronic Organoleptic Analysis

**Module 2. Enological Microbiology****2.1. Yeast**

- 2.1.1. Yeast Strains in Winemaking
- 2.1.2. Nutritional Requirements
- 2.1.3. Nitrogen
- 2.1.4. Growth Factors
- 2.1.5. Survival
- 2.1.6. Metabolism
- 2.1.7. Glucose, Sulfhydryl, Glycosidases, Hand Proteins, Aromatic Compounds

**2.2. Lactic Acid Bacteria**

- 2.2.1. Types of Lactic Acid Bacteria in Winemaking
- 2.2.2. Nutritional Requirements and Factors Affecting Growth and Viability in Wine
- 2.2.3. Metabolism
- 2.2.4. Sugars, Organic Acids, Nitrogenous Compounds, Glycerol Degradation, Aromatic Compounds

**2.3. Acetic Acid Bacteria**

- 2.3.1. Yeast Strains in Winemaking
- 2.3.2. Nutritional Requirements
- 2.3.3. Nitrogen, Growth Factors and Survival
- 2.3.4. Metabolism
- 2.3.5. Glucose, Hydrogen Sulfide, Glycosidases, Hand Proteins and Aromatic Compounds

**2.4. Fungi and Other Microorganisms**

- 2.4.1. Common Strains in Wine
- 2.4.2. Nutritional Requirements
- 2.4.3. Nitrogen, Growth Factors and Survival
- 2.4.4. Metabolism
- 2.4.5. Glucose, Mycotoxins and Aromatic Compounds

**2.5. Microbial Ecology During Winemaking**

- 2.5.1. Saccharomyces and Non-Saccharomyces Yeasts in Grape/Must, ALF and Post ALF
- 2.5.2. Dekkera/Brettanomyces in Grapes/Must, ALF and Post ALF
- 2.5.3. Lactic Acid Bacteria in Grapes/Must, ALF, MLF and Post MLF
- 2.5.4. Microbial Interactions
- 2.5.5. Saccharomyces/Oenococcus, Saccharomyces/Lactobacillus, Oenococcus/Pediococcus/Lactobacillus

**2.6. Importance of Malolactic Fermentation (MLF)**

- 2.6.1. Advantages of MLF
- 2.6.2. Spontaneous vs. Directed MLF
- 2.6.3. Starter Cultures
- 2.6.4. Co-Inoculation vs. Sequential MLF
- 2.6.5. Climate Change and Microbiological Stability

**2.7. Wine Alterations**

- 2.7.1. Wine Altering Microorganisms
- 2.7.2. Acetobacter, Dekkera/Brettanomyces, Veil/Biofilm Yeasts, Saccharomyces, Zygosaccharomyces
- 2.7.3. Defects in Wines Associated with Microorganisms
- 2.7.4. Volatile Acidity, Ethyl Carbamate, Mouse Aroma, Post MLF Lactic Bacteria Growth
- 2.7.5. Geranium Aroma, Biogenic Amines, Acrolein, Mannitol, Viscosities, Tartaric Turnaround

**2.8. Control of the Growth of Microorganisms**

- 2.8.1. Microbicidal Substances: Sulfur Dioxide, Dimethyl Dicarbonate, Lysozyme
- 2.8.2. Microbiostatic substances: Sorbic Acid, Chitosan, Fumaric Acid and Others
- 2.8.3. Removal of Microorganisms by Physical Methods: Nominal, Absolute and Tangential Filtration

**2.9. Biological Cleaning and Disinfection in the Winery**

- 2.9.1. Detergents, Cleaners and Surfactants: Alkali, Acids, Surfactants
- 2.9.2. Disinfectants: Iodine, Quaternary Ammonium Compounds, Sulfur Dioxide, Peroxides and Chlorine
- 2.9.3. Derivatives, Ozone, Hot Water and Steam

**2.10. Microbiological Analysis of Wine**

- 2.10.1. Microscopic Observation
- 2.10.2. Microscopic Yeast Count: Thoma Chamber and Methylene Blue
- 2.10.3. Bacteria Microscopic Count: Petroff's Chamber
- 2.10.4. Plate Count of Microorganisms: Classical Technique of Serial Dilutions and Membrane Filtration Technique
- 2.10.5. Rapid Bacterial/Yeast Classification Tests
- 2.10.6. Other Techniques

**Module 3. Importance of the Oak Barrel in Wine Aging**

**3.1. Importance of Oak for Barrel Manufacturing**

- 3.1.1. Use of the Barrel History
- 3.1.2. Knowledge about Cooperage Wood
- 3.1.3. Use of Barrels in Dry White Wines
- 3.1.4. Use of Barrels in Red Wines

**3.2. Oak**

- 3.2.1. Morphology and Anatomy
- 3.2.2. Botanical Differentiation and Origins
- 3.2.3. Notion of Grain and Porosity

**3.3. Wood Selection**

- 3.3.1. Selection in the Forest
- 3.3.2. Selection at the Sawmill
- 3.3.3. Selection in the Cooperage

**3.4. Drying and Seasoning of the Wood**

- 3.4.1. Drying the Wood
- 3.4.2. Seasoning the Wood
- 3.4.3. Importance of Microorganisms During Drying

**3.5. Barrel Manufacturing**

- 3.5.1. The Transformation of the Staves
- 3.5.2. Assembly of the Staves
- 3.5.3. The Toasting of the Barrel
- 3.5.4. Manufacture of the Barrel Tops
- 3.5.5. Finishing the Barrel

**3.6. Aromatic Contributions of Oak Barrels**

- 3.6.1. Aromatic Contributions of French Oak
- 3.6.2. Aromatic Contributions of American Oak
- 3.6.3. Aromatic Contributions of Eastern European oak

**3.7. Oak Tannin**

- 3.7.1. The Elagitannins
- 3.7.2. Enological Interest
- 3.7.3. Importance of Tannin in the Structure of Wine
- 3.7.4. Kinetics of Tannin Release from the Barrel in Time

**3.8. The Barrel, an Impermeable and Porous Container**

- 3.8.1. Impermeability of the Barrel
- 3.8.2. Porosity of the Barrel
- 3.8.3. Importance of the Barrel in the Aging Process

**3.9. The Good Use of Oak Barrels**

- 3.9.1. Reception of New Barrels
- 3.9.2. Maintenance of the Barrels Over Time
- 3.9.3. Repair of Leaks

**3.10. The Second Life of Oak Barrels**

- 3.10.1. The Interest of the Second-Hand Barrel
- 3.10.2. The Use of Second-Hand Barrels for Spirits
- 3.10.3. Alternatives to Enological Use



“

*Learn about special fermentations to obtain the most distinguished wines through this university program"*

# 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"*

## TECH Business School uses the 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”*



*This program prepares you to face business challenges in uncertain environments and achieve business success.*



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

## A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. 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 business reality is taken into account.

“

*You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments”*

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.

What should a professional do in a given situation? This is the question we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, 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 different teaching elements in each lesson.

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

*Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.*

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 online business school is the only one in the world 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 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.

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.

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



### Management Skills Exercises

They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.



### 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 senior management 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

# Our Students' Profiles

The program is aimed at University Graduates, Postgraduates and Degree holders who have previously completed any of the following degrees in the field of Social Sciences, Administrative and Economic Sciences.

This program uses a multidisciplinary approach as the students have a diverse set of academic profiles and represent multiple nationalities.

In addition, those professionals who, being university graduates in any area, have work experience in the field of Enology, can study this Postgraduate Diploma.





“

*You will become a specialist in the problems associated with the different types of wine and their deviations in the winemaking process”*

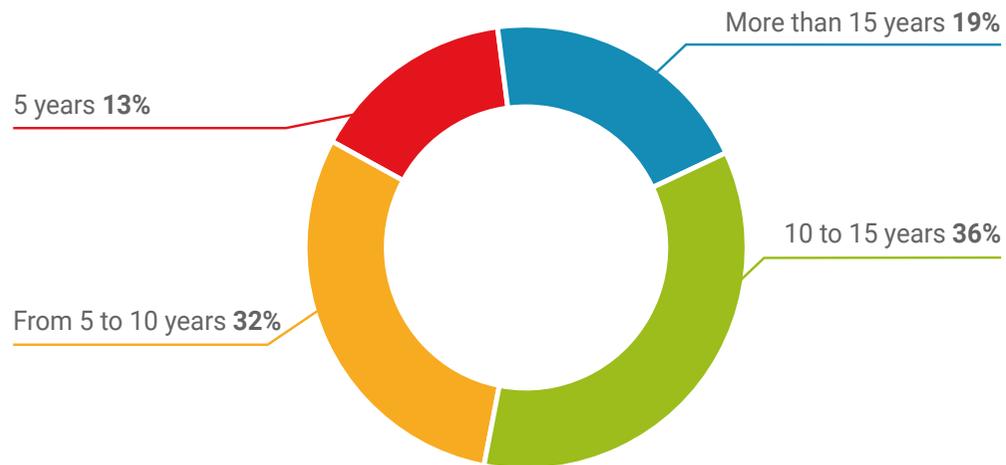
### Average Age

---

Between **35** and **45** years old

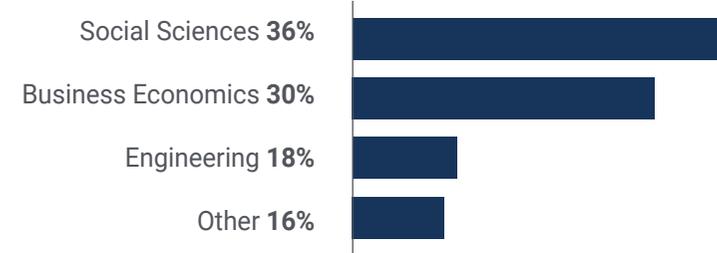
### Years of Experience

---



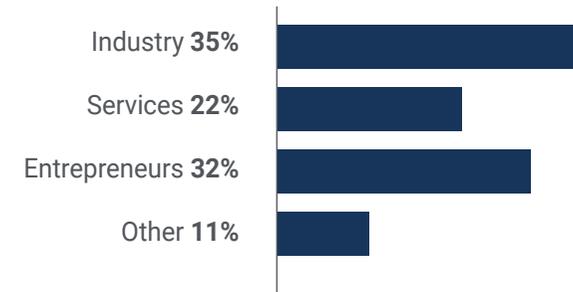
### Training

---



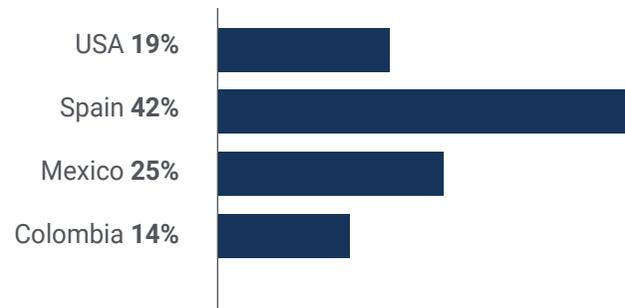
### Educational Profile

---



## Geographical Distribution

---



## Lucia Riquelme

---

Winery Director

*This program allowed me to have a much greater knowledge about wine tourism and to be able to strengthen my business project. I was lucky to be able to count on the best experts in this field and to acquire the learning I needed to be able to give value to wine products as a tourist attraction"*

08

# Course Management

The management and teaching staff of this university program is made up of excellent professional biologists and agronomists with extensive experience in the wine industry. In this way, students who immerse themselves in this program will do so with the guarantee of obtaining the most current information and under the maximum scientific rigor. All this will allow them to take firm steps in their working career and progress thanks to a booming industry.



A black and white photograph showing three people from a different perspective, looking down at a screen. The image is partially obscured by a dark blue diagonal shape that covers the top right and bottom right portions of the page.

“

*Acquire advanced learning and practical usefulness thanks to the excellent specialists in the wine sector who teach this program"*

## Management



### Ms. Clavero Arranz, Ana

- ♦ General Manager of Bodegas Cepa 21
- ♦ Chief Executive Officer of Grupo Bodegas Emilio Moro
- ♦ Chief Financial Officer of Grupo Bodegas Emilio Moro
- ♦ Head of Administration at Bodegas Cepa 21
- ♦ Administration Technician at Bodegas Convento San Francisco
- ♦ Professional Master's Degree in Business Administration and Management from the University of Valladolid
- ♦ Professional Master's Degree in Financial Management from ESIC
- ♦ Executive Coach by ICF
- ♦ Digital Immersion Program for CEOs (ICEX)
- ♦ Executive Development Program by IESE

## Professors

### Ms. Molina González, Silvia

- ♦ Operations Manager of Cepa 21 Winery
- ♦ Technical Manager at Bodegas Cepa 21
- ♦ Winemaker at Emilio Moro Winery
- ♦ Hostess for events and commercial promotions for New Line Events
- ♦ Event hostess and commercial promotions for Proderreg Agency
- ♦ Graduate in Oenology and Agricultural and Food Industries Engineering from the University of Valladolid
- ♦ Specialization in Leadership and Teamwork by the Technical School of Agricultural Engineering of Palencia

### Ms. Arranz Núñez, Beatriz

- ♦ Winemaker in Viñas del Jaro
- ♦ Assistant Winemaker at Viña Buena
- ♦ Winemaker at Familia A. De La Cal Winery
- ♦ Attendees Winemaker at Viña Cancura
- ♦ Winery worker at Vitalpe
- ♦ Winemaker trainer at the Business Development Institute
- ♦ Winemaker and guide at the Valladolid Provincial Wine Museum
- ♦ Overseer of the Superior Council of the Ribera del Duero D.O
- ♦ Degree in Enology from the University of Valladolid

### Mr. Carracedo Esguevillas, Daniel

- ♦ Laboratory Manager at Viñas del Jaro
- ♦ Assistant Winemaker at Bodegas y Viñedos de Cal Grau
- ♦ Graduates in Enology from the University of Valladolid

### Ms. Masa Guerra, Rocío

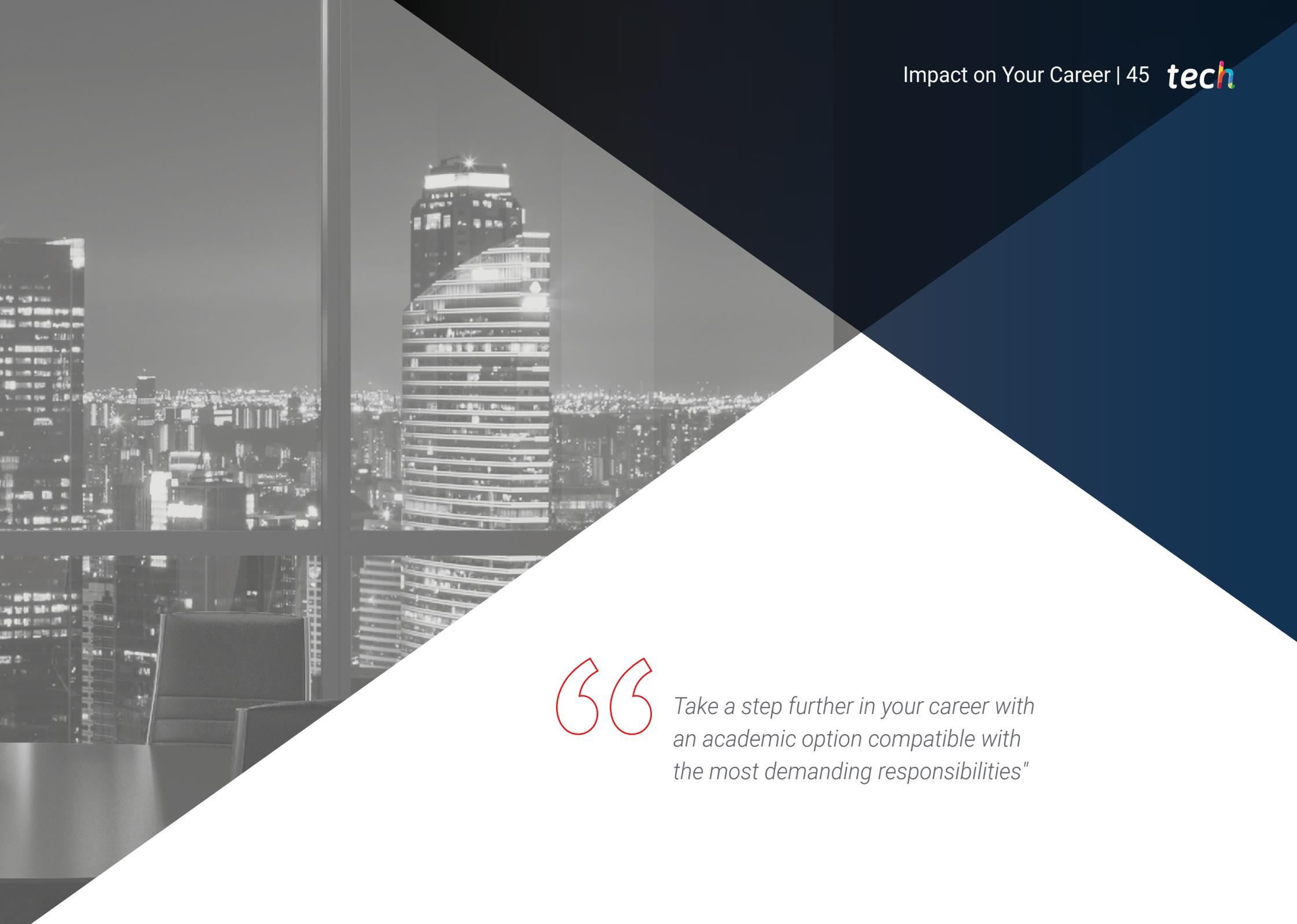
- ♦ Winemaker at Bodegas Protos
- ♦ Assistant winemaker at Matarromera Winery
- ♦ Responsible for incoming grapes at Bodega Emilio Moro
- ♦ Responsible for quality at BRC and winemaker at Viñedos Real Rubio
- ♦ Winemaking Assistant at Bodega Solar Viejo
- ♦ Winery and vineyard manager at Ébano Viñedos y Bodegas
- ♦ Assistant winemaker and laboratory technician at Bodega El Soto
- ♦ Degree in Oenology from the Escuela Técnica Superior de Ingenierías Agrarias de Palencia (Palencia School of Agricultural Engineering)
- ♦ MBA in Wine Business Management from the Business School of the Chamber of Commerce of Valladolid

09

# Impact on Your Career

This university program is a powerful academic resource for those who wish to progress in the wine industry and orient it to the world of tourism. A double aspect that will favor the creation of new projects under solid knowledge or the projection in companies of the wine industry. All a bet for this product as another factor to attract new tourists and consumers.





“

*Take a step further in your career with  
an academic option compatible with  
the most demanding responsibilities”*

## Are you ready to take the leap? Excellent professional development awaits you

This Postgraduate Diploma in Enological Chemistry from TECH is an intensive program that prepares you to face challenges and business decisions in the field of wine tourism. The main objective is to promote your personal and professional growth. Helping you achieve success.

If you want to improve yourself, make a positive change at a professional level, and network with the best, then this is the place for you.

*With this program you will be able to climb to positions of responsibility in the wine tourism sector.*

*Be an expert in wine fermentation and alterations and contribute your knowledge to the tourism sector.*

### Time of change



### Type of change



## Salary increase

---

The completion of this program represents a salary increase of more than **30%** for our students.



10

# Benefits for Your Company

In a field as specialized as wine tourism, it is essential for experts to have a dual knowledge: wine and tourism. A duality that will undoubtedly favor companies that have professionals who take this program with the aim of providing the maximum knowledge to their entities. A unique opportunity to turn advanced learning into the driving force to promote and lead the most innovative projects in wine tourism.



“

*Boost your professional career and that of your company with a unique academic option in the university panorama”*

Developing and retaining talent in companies is the best long-term investment.

01

### **Growth of talent and intellectual capital**

The professional will introduce the company to new concepts, strategies, and perspectives that can bring about significant changes in the organization.

---

02

### **Retaining high-potential executives to avoid talent drain**

This program strengthens the link between the company and the professional and opens new avenues for professional growth within the company.

03

### **Building agents of change**

You will be able to make decisions in times of uncertainty and crisis, helping the organization overcome obstacles.

---

04

### **Increased international expansion possibilities**

Thanks to this program, the company will come into contact with the main markets in the world economy.



05

### **Project Development**

The professional can work on a real project or develop new projects in the field of R & D or business development of your company.

---

06

### **Increased competitiveness**

This program will equip students with the skills to take on new challenges and drive the organization forward.

# 11

# Certificate

The Postgraduate Diploma in Enological Chemistry guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



“

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

This **Postgraduate Diploma in Enological Chemistry** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Diploma in Enological Chemistry**

Official N° of Hours: **450 h.**



\*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.



## Postgraduate Diploma Enological Chemistry

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

# Postgraduate Diploma Enological Chemistry

