

Postgraduate Certificate

Chemical Analysis of Grape and Wine Compounds





Postgraduate Certificate Chemical Analysis of Grape and Wine Compounds

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online
- » Target Group: University graduates who have previously completed any of the qualifications in the field of Social, Administrative and Business Sciences

Website: www.techtute.com/us/school-of-business/postgraduate-certificate/chemical-analysis-grape-wine-compounds

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. 18

06

Methodology

p. 24

07

Our Students' Profiles

p. 32

08

Course Management

p. 36

09

Impact on Your Career

p. 40

10

Benefits for Your Company

p. 44

11

Certificate

p. 48

01 Welcome

Wine is a gastronomic product of powerful attraction for the consumer, as is everything that surrounds its production. A process where the hand of man is essential in traditional methods, but where chemistry has a great relevance. This way, knowing the techniques of grape analysis allows to have a much deeper judgment on the acidity of the wine, the degree of alcohol or the amount of sulfites it possesses. In this line, TECH offers Tourism professionals an advanced program essential to promote wine tourism business under the maximum scientific rigor. Everything, in addition, with a multimedia teaching material 100% online, taught by the best experts in Oenology.



Postgraduate Certificate in Chemical Analysis of Grape and Wine Compounds.
TECH Global University



“

A 100% online Postgraduate Certificate that gives you the keys to determine the origin and authenticity of wines"

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 Global 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:



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.



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"

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.

Our global vision of companies will improve your strategic vision.

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.

45% of graduates are promoted internally.

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.

20% of our students develop their own business idea.

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 Global University community.

We give you the opportunity to study with a team of world-renowned teachers.

04 Objectives

This Postgraduate Certificate has been designed to offer in just 180 teaching hours, the most relevant content on the chemical processes used for the analysis of grape and wine compounds. An essential knowledge to be able to undertake projects related to wine tourism, where the quality of the information provided to the visitor and the contribution of the wine products of the highest level.



“

Delve into the polyphenols, organic acids or minerals that constitute the chemical essence of the best wines in the world”

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

The Postgraduate Certificate in Chemical Analysis of Grape and Wine Compounds will enable students to:

01

Examine the basics of general, inorganic and organic chemistry and their applications in the winemaking process

04

Be able to choose and carry out the necessary analyses for the control of raw materials, oenological products, intermediate products of the winemaking process and final products

02

Be able to organize and control the transformation of grapes into wine according to the type of product to be elaborated

03

Be able to use the knowledge acquired on the composition of grapes and wine and their evolution in making decisions on oenological practices and treatments

05

Discover new analytical possibilities to know in depth the chemical composition of grapes and wine



06

Provide the widest possible range of viticultural knowledge

08

Inculcate the need for environmental protection based on sustainability



07

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

09

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

10

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

05

Structure and Content

This Postgraduate Certificate has been designed to provide professionals in the tourism sector with intensive learning on the chemical analysis of grape and wine compounds. Transcendental information in projects or initiatives linked to wine tourism or the most exquisite cuisine. A solid knowledge base provided by the best experts in just 6 weeks.



“

You have multimedia pills and numerous additional resources that you can access 24 hours a day, 7 days a week”

Syllabus

The structure of this program has been planned and elaborated by a teaching team composed of professionals established in the field of Viticulture. Its experience in the sector and scientific-technical knowledge are evident in the agenda of this program focused on the Chemical Analysis of Grape and Wine Compounds.

Then, throughout the 180 teaching hours, the professionals will enter the components of the grape, the vegetative and reproductive cycle of the vine and the chemical composition of the fruit itself. In addition, aided by multimedia material, specialized readings and practical case studies, students can delve into sugars, organic acids, minerals, polyphenols or vitamins.

In this way, you will access complex information in a dynamic and simple way. In addition, thanks to the Relearning system, based on the reiteration of content, it will be able to advance progressively through the syllabus and consolidate the new concepts acquired.

A unique opportunity to obtain advanced knowledge through a flexible and avant-garde university program. And it is that you only need an electronic device with an Internet connection to view, at any time, the content of the program. This way, without attendance or classes subject to schedules, the professional will be able to perform this instruction and make it perfectly compatible with their daily responsibilities.

This Postgraduate Certificate is developed over 6 weeks and is divided into 1 module:

Module 1

Chemical Analysis of Grape and Wine Compounds



Where, when, and how it is taught

TECH offers the possibility to develop this Postgraduate Certificate in Chemical Analysis of Grape and Wine Compounds completely online. During the 6 weeks of the specialization, the students will be able to access all the contents of this program at any time, which will allow the students to self-manage their study time.

A unique educational experience, key and decisive 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



An academic journey that brings you closer to the most advanced oenological analyses today"



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.

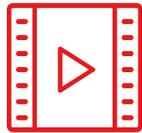
Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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.



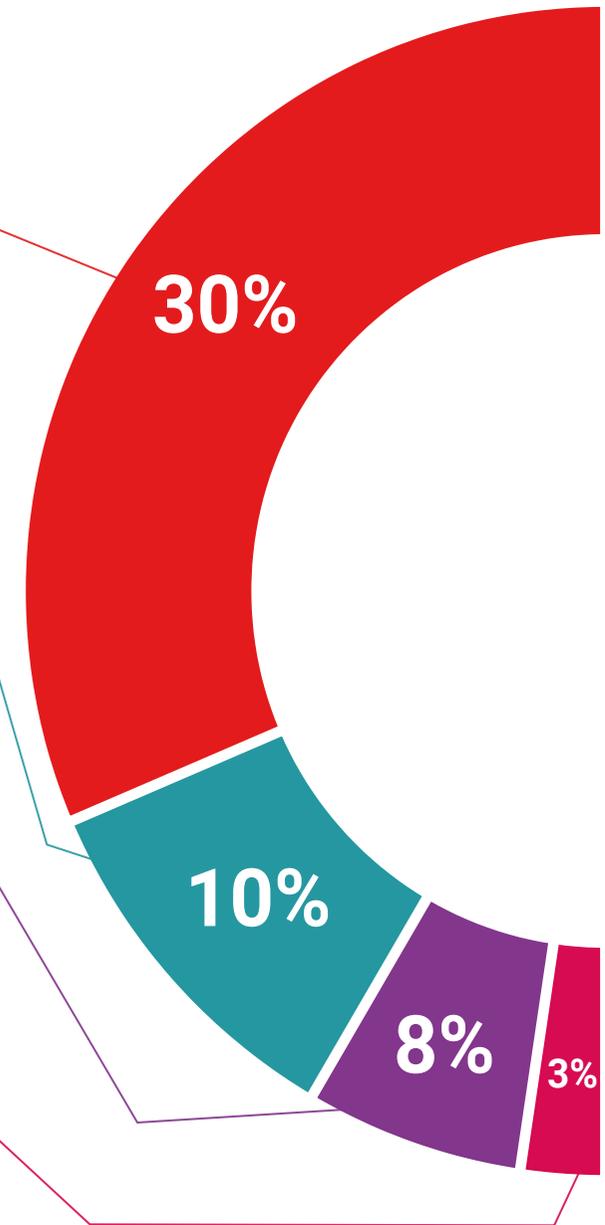
Management Skills Exercises

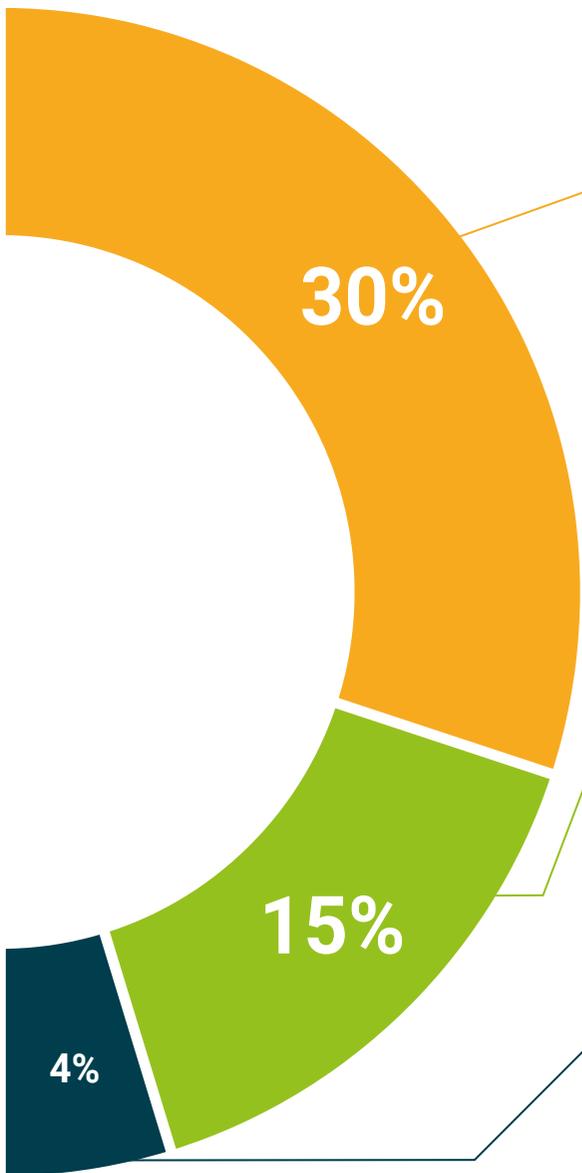
They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.



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 Postgraduate Certificate 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.

Professionals who, being university graduates in any area, have work experience in the Fields of Enology may also take the Postgraduate Certificate.





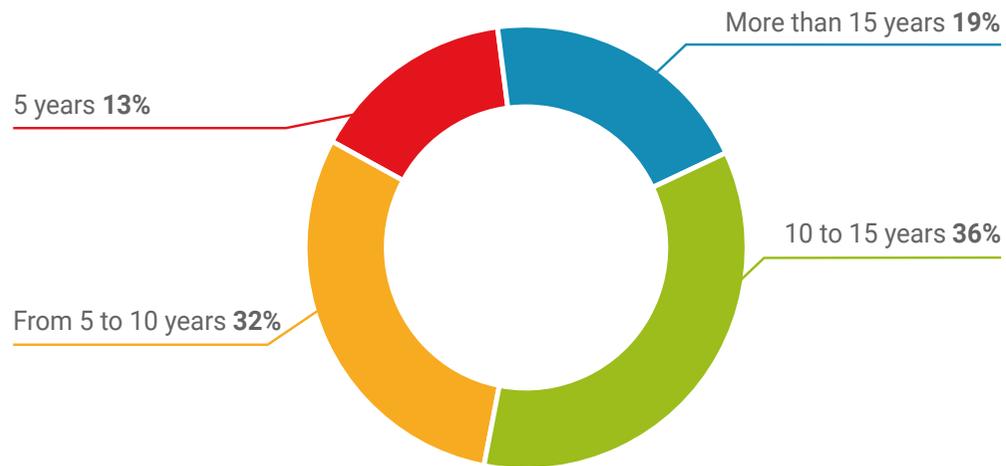
“

This Postgraduate Certificate will give you the opportunity to add key knowledge for the development of wine tourism projects"

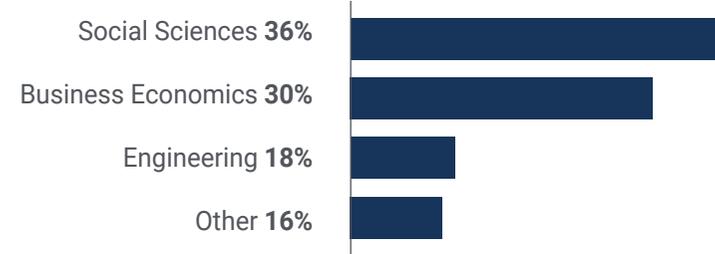
Average Age

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

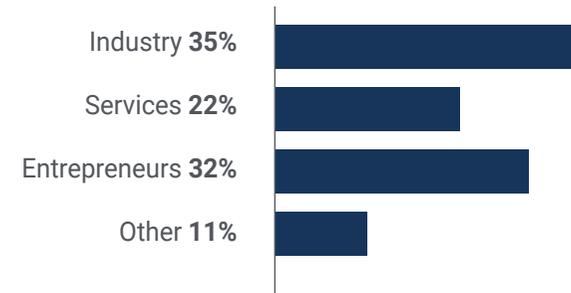
Years of Experience



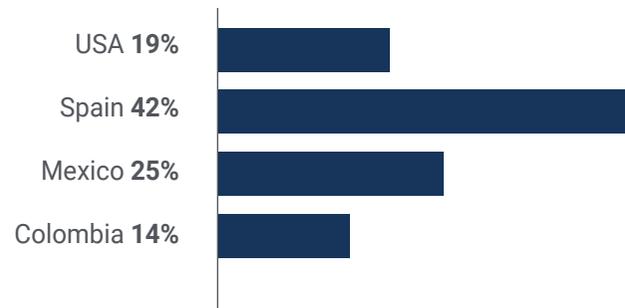
Training



Educational Profile



Geographical Distribution



Lorenzo Rodríguez

CEO of noturism

"With this Postgraduate Certificate I obtained the knowledge I needed to be able to offer customers much more accurate information and develop innovative tourism products aimed at a much more specialized audience. TECH gave it the boost my career needed"

08

Course Management

TECH maintains a philosophy based on quality teaching in all its programs. To achieve this goal, it carries out a rigorous selection process of each and every teacher who is part of the programs. In this way, students will access an advanced program taught by Agronomic and Chemical Engineers with extensive experience in the field of Oenology. In addition, thanks to its closeness the students will be able to solve any doubts they have about the content of this program.





“

TECH puts at your disposal the best specialists in Oenology to obtain the most advanced theoretical and practical knowledge"

Management



Ms. Clavero Arranz, Ana

- ◆ 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
- ◆ 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. 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. ID

Ms. Molina González, Silvia

- ◆ Technical manager of Bodegas Cepa 21
- ◆ Winemaker in Bodegas Emilio Moro Event Hostess 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 Higher Technical School of Agricultural Engineering of Palencia



09

Impact on Your Career

This Postgraduate Certificate provide the professionals with an advanced learning process, which can be applied directly in their day to day as specialists in the wine sector or undertake projects related to Enology. A wide range of possibilities that will manifest themselves directly and successfully after completing this university program.



“

*Create successful tourism projects
with the solid knowledge you will get
about the chemical essence of wines”*

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

The Postgraduate Certificate in Chemical Analysis of Grape and Wine Compounds 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.

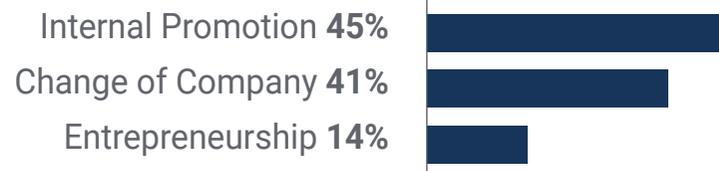
Become a specialist in wines and the complexity of the development process thanks to this qualification.

Do you want to direct your career towards wine tourism? With this program you will take the first steps towards success.

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

This university program will favor not only the professional who holds it, but also the companies in which it is performing its work. This knowledge about the chemical composition of grapes and wine will favor the creation of disruptive initiatives in the wine sector or the promotion of actions to offer a higher quality tourist service to visitors. An excellent opportunity to contribute with the information provided by the best experts.





“

Your learning will contribute to your professional career and to the promotion of your projects related to Oenology"

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 Certificate in Chemical Analysis of Grape and Wine Compounds guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



“

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

This program will allow you to obtain your **Postgraduate Certificate in Chemical Analysis of Grape and Wine Compounds** endorsed by **TECH Global University**, the world's largest online university.

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

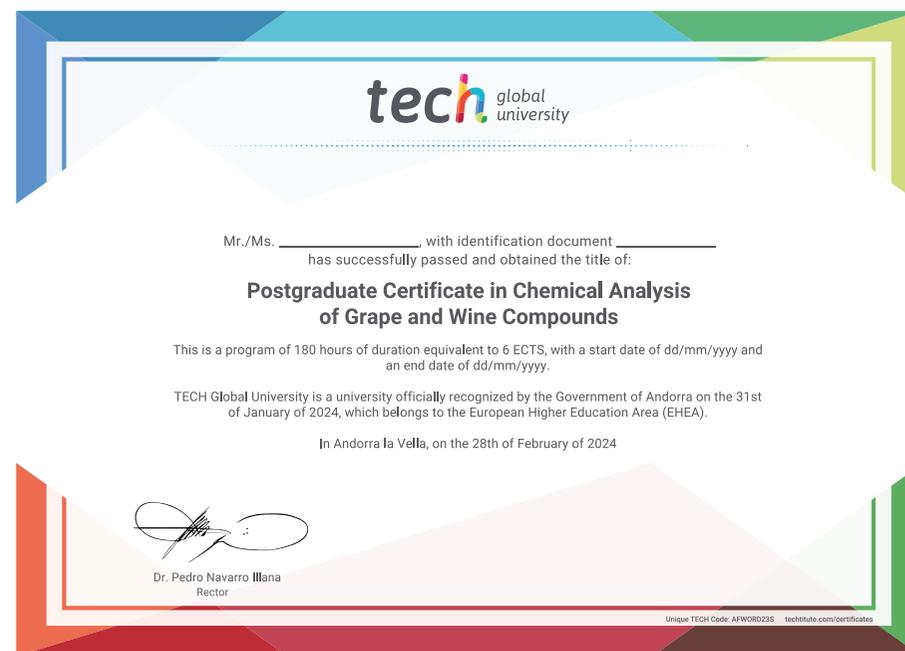
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Chemical Analysis of Grape and Wine Compounds**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





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Postgraduate Certificate

Chemical Analysis of Grape and Wine Compounds