

Postgraduate Certificate

Enotechnics and
Stabilization of Wines





Postgraduate Certificate

Enotechnics and Stabilization of Wines

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

Website: www.techtute.com/pk/nutrition/postgraduate-certificate/enotechnics-stabilization-wines

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 20

06

Certificate

p. 28

01

Introduction

Microorganisms play a fundamental role in winemaking. Their balance will be responsible for obtaining one result or another, depending on the interest and the type of wine desired. Far from thinking that the alterations produced by these agents in the composition of the wine are always negative, the transformation of grape juice into wine is a microbiological process in itself, which reflects the dependence of these actors. However, its stabilization will also offer the possibility of producing a quality product. For this reason, in enology it is essential to have specialists in nutrition who have the necessary criteria to interpret the consequences of their presence at a given moment in the production of a wine. In response to this demand, TECH offers a 100% online program that delves into the clarification and stabilization of wines, with a teaching material and methodology that adapts to the personal and professional needs of the students.



“

With this Postgraduate Certificate you will master the microbiological stabilization of wine and its influence on the coloring of the product in only 6 weeks”

The chemical composition of wines ultimately determines the aroma, taste and color of the product. Therefore, the appearance of microorganisms in the early stages of winemaking is a very delicate aspect of the process, as their influence on the characteristics of the wine can be irreversible. For this reason, studies in recent years in this field have focused on alcoholic fermentation yeasts and malolactic bacteria. Moreover, given the strong competitiveness in the wine industry, companies depend on highly qualified professionals who master the controls, stabilization and fining of wines of different types.

For this reason, TECH offers a comprehensive qualification in the microbiological analysis of red, white and rosé wines and Enotechnics in general. In this way, the enrolled specialists will be able to investigate filtration, the stabilization of potassium bitartrate in wine, as well as calcium tartrate, colorants and the instability that can be caused by metals. A 100% online program that aims to teach students to master the physicochemical instabilities of the wine product and to ensure a nutritional composition that is much more beneficial to the consumer.

Graduates in Nutrition and other professionals interested in wine stabilization will therefore benefit from an education based on new technologies and offered in a 100% online format to reach all students, regardless of their geographical location, language or availability. TECH, in short, offers all possible flexibility to students who will also be able to enjoy this Postgraduate Certificate with a group of experienced teachers in Viticulture, who will provide them with theoretical and practical knowledge.

This **Postgraduate Certificate in Enotechnics and Stabilization of Wines** contains the most complete and up-to-date scientific program on the market. The most important features include:

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



Enroll now to join a transcendent program that delves into the viticultural and enological conditions that favor microbial development in the final product”

“

Are you tired of orthodox programs that fail to capture your attention and limit your learning? With TECH you will have at your disposal a teaching group that will guide you in your qualification”

The program’s teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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

The design of this program focuses on Problem-Based Learning, by means of which the professionals must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned experts.

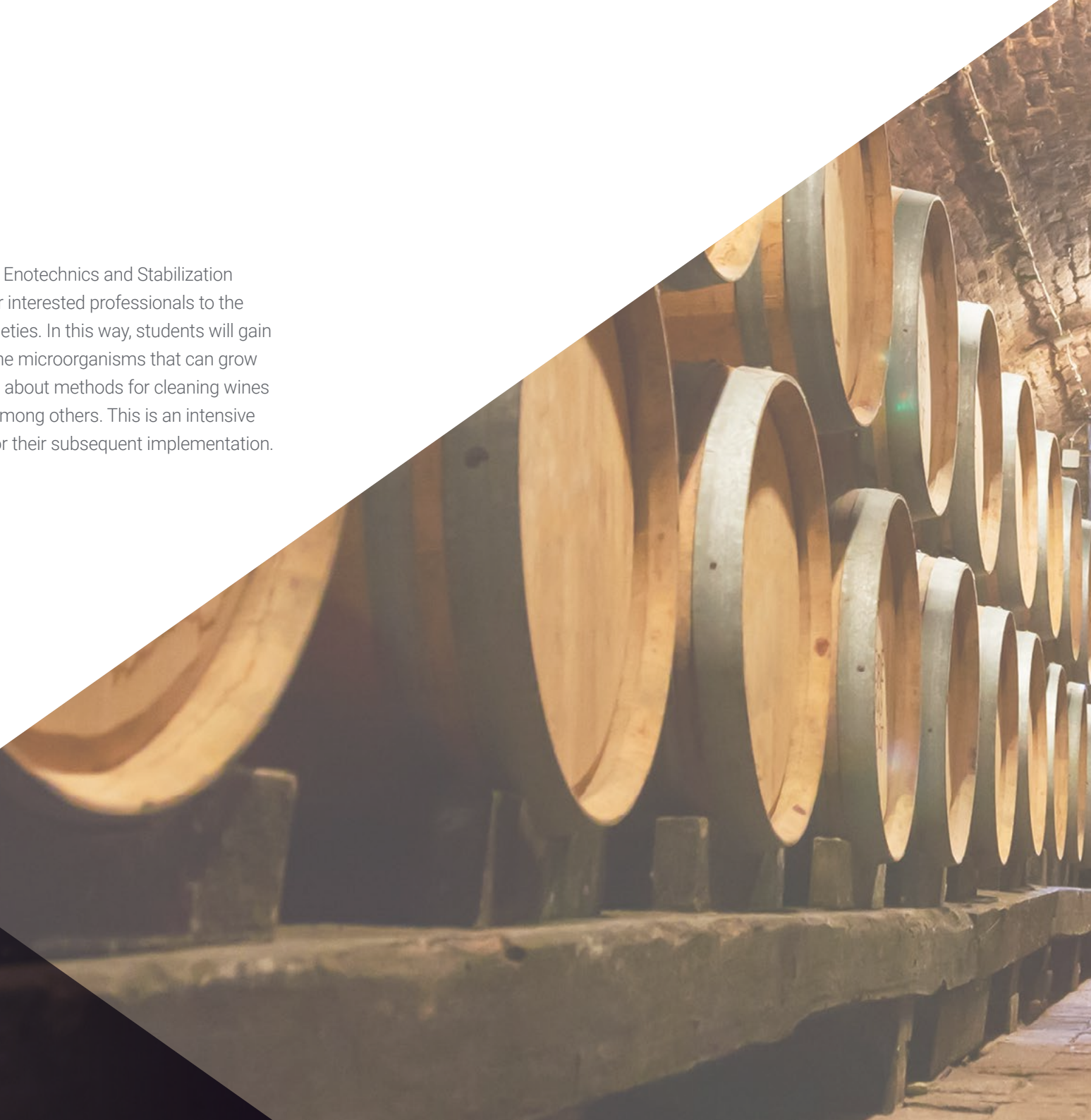
With this program you will obtain all the knowledge to master the physicochemical instabilities that can occur in the components of wine.

Thanks to the 100% online mode of this program in Enotechnics and Stabilization of Wines, you will be the one who adapts the pace of study freely.



02 Objectives

The main objective of this Postgraduate Certificate in Enotechnics and Stabilization of Wines is to introduce Nutrition graduates and other interested professionals to the stabilization and clarification of wines of different varieties. In this way, students will gain knowledge in Enotechnics, including the analysis of the microorganisms that can grow in wine and their origin. In addition, students will learn about methods for cleaning wines after clarification: centrifuge, *decanter* and flotation, among others. This is an intensive program that aims at perfecting the students' skills for their subsequent implementation.





“

Don't wait any longer, achieve your objectives in only 150 academic hours through the learning offered by this Postgraduate Certificate in Enotechnics and Stabilization of Wines"



General Objectives

- ♦ Provide the widest possible range of viticultural knowledge
- ♦ Show the student the importance of viticulture for the production of great wines
- ♦ Inculcate the need for environmental protection based on sustainability
- ♦ Substantiate the enological importance of these compounds both in the winemaking stages and in the final product
- ♦ Examine the microorganisms associated with the winemaking process, their nutritional requirements, and the beneficial or detrimental properties they can contribute to the wine
- ♦ Provide knowledge for the production of white wines
- ♦ Determine the wide range of existing possibilities in order to choose the most appropriate processes for a given terroir, grape variety and wine style
- ♦ Develop to the maximum the most advanced enology so that the student can produce top quality white wines
- ♦ Turn the student into an expert in red winemaking
- ♦ Determine the varieties used or with potential in the vinification of sparkling wines
- ♦ Examine the viticultural elements that affect winemaking
- ♦ Generate specialized knowledge about the expedition Preparation of wines for consumption
- ♦ Establish the importance of winemaking for this group of great wines
- ♦ Substantiate the need to protect these heritage treasures as part of our culture
- ♦ Broaden knowledge of fining and elimination of the various components that can depreciate the wine
- ♦ Broaden the knowledge of barrel construction
- ♦ Present the importance of barrel toasting
- ♦ Delve into the sensory analysis of wine Aspects to evaluate and how to carry it out
- ♦ Identify the organoleptic alterations of the wine





Specific Objectives

- ♦ Be able to identify an organoleptic problem (gustatory, aromatic or visual) and be able to correct it by means of the different types of fining
- ♦ Give practical and visual examples to help identify the different instabilities or problems that can occur in a wine
- ♦ Determine solutions to avoid the problems of physical-chemical and microbiological instability of wine
- ♦ Avoid bad practices in the use of fining agents
- ♦ Promote the knowledge of wine altering microorganisms and to know how to avoid their development
- ♦ Analyze the filtration methods prior to wine stabilization, and to have the ability to choose the most appropriate one(s) according to the objectives to be achieved
- ♦ Make the students aware of the importance of stabilization in order to avoid problems with the final product or its depreciation on the market
- ♦ Encourage the student's interest in the use of ecological and non-allergenic products (fining agents) As well as, the choice of stabilization methods that involve less energy expenditure

“

Enroll now in this Postgraduate Certificate and enjoy a comprehensive education that offers theoretical and practical materials for you to learn in a dynamic way”

03

Course Management

Following the line of academic rigor based on which TECH is governed, this organization has selected a teaching group specialized in Viticulture to develop the contents of the program and impart the theoretical and practical knowledge of the same. In this way, the Nutrition specialist and the rest of the interested students who have enrolled in the program will be provided with specific theoretical knowledge, but also with reliable advice from the real performance of the teachers. At the same time, students will be able to contact the experts through a direct communication channel, the Virtual Campus, through which they will be able to solve all their questions in relation to the subject.





“

This is your opportunity to delve into the microbiological stabilization of wine, thanks to the most prestigious professionals dedicated to Viticulture"

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. 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 Enology 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

Mr. Sáez Carretero, Jorge

- ♦ Viticulture Manager at Cepa 21 Winery
- ♦ Viticulture Technician at Fontana Winery
- ♦ Viticulture Manager at GIVITI
- ♦ Graduate in and Science Engineering from the Polytechnic University of Madrid
- ♦ Professional Master's Degree in Viticulture and Enology from the Polytechnic University of Madrid
- ♦ Accredited as Integrated Pest Management Advisor
- ♦ Accredited as Advisors of the Official Register of Producers and Operators of Phytosanitary Defense Means

04

Structure and Content

The syllabus of this Postgraduate Certificate in Enotechnics and Stabilization of Wines has been designed by a team of professionals that TECH has previously chosen according to their resume and their human character. In the contents, students will find a wide range of knowledge on fining of red, white and rosé wines, among other types; the stabilization of this product, filtration by adsorption or other methods and a specific section dedicated to the instability caused by metals that the future nutritional enologist will have to face. All of this, with great facilities by treating the learning process with innovative pedagogical tools such as the *Relearningsystem*, which exempts the students from long hours of memorization and allows them to assimilate the contents in a simple way.





“

Be part of the avant-garde professionals who are at the forefront of winemaking and wine marketing, thanks to this Postgraduate Certificate"

Module 1. Wine Clarification and Stabilization

- 1.1. Clarification of Red Wines
 - 1.1.1. Clarification of Tannins, Elimination of Harshness and Bitterness
 - 1.1.2. Clarification of Coloring Matter (Anthocyanins)
 - 1.1.3. Substitution of Allergenic Fining Agents in Red Wines
 - 1.1.4. Specific Clarification to Eliminate Microorganisms
- 1.2. Clarification of White and Rosé Wines
 - 1.2.1. Elimination of Wine Proteins
 - 1.2.2. Elimination of Oxidizable Polyphenols
 - 1.2.3. Substitution of Allergenic Clarification Agents in White and Rosé Wines
 - 1.2.4. Clarification for the Elimination of Microorganisms Prevention of Malolactic Fermentation
- 1.3. Wine Filtration
 - 1.3.1. Influence of Turbidity on Wine Stabilization
 - 1.3.2. Depth Filtration or Adsorption Filtration: Soil Filtration and Plate Filtration
 - 1.3.3. Tangential Filtration
 - 1.3.4. Direct Membrane Filtration
 - 1.3.5. Other Methods for Wine Purification after Clarification: Centrifuge, Decanter, Flotation
- 1.4. Stabilization of Potassium Bitartrate in Wine
 - 1.4.1. Origin of Potassium in Grapes and Wine
 - 1.4.2. Cation Exchange
 - 1.4.3. Cold Treatment of Wines
 - 1.4.4. Reverse Osmosis
 - 1.4.5. Use of Potassium Polyaspartate
 - 1.4.6. Carboxymethyl Cellulose and Metatartaric Acid
- 1.5. Stabilization of Calcium Tartrate
 - 1.5.1. Origin of Calcium in Grapes and Wine
 - 1.5.2. Factors Influencing the Formation of Calcium Tartrate Crystals
 - 1.5.3. Calcium Removal in Wine



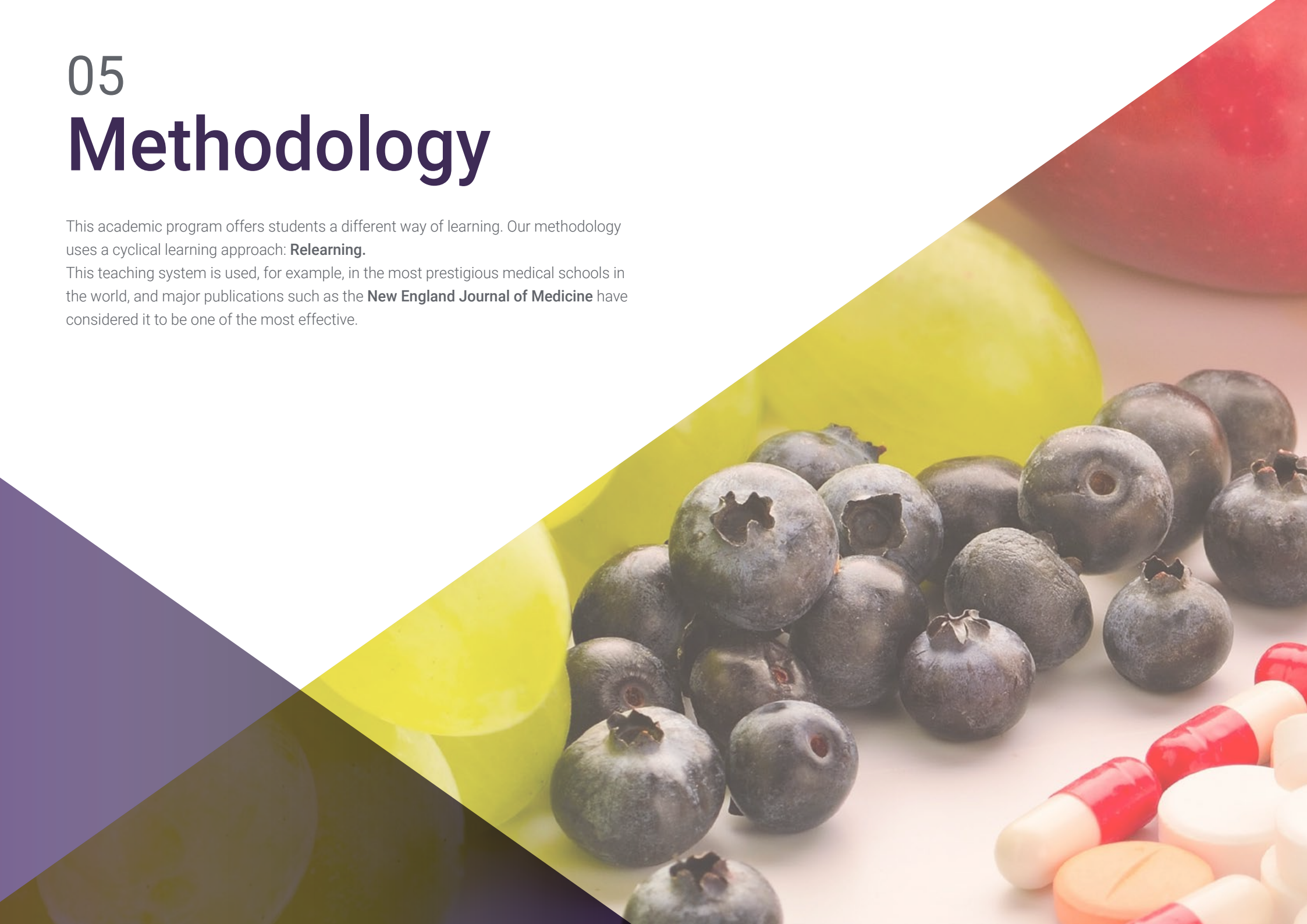
- 1.6. Stabilization of Coloring Matter in Red Wines
 - 1.6.1. Origin and Formation of Anthocyanins in Grapes
 - 1.6.2. Fixation of the Coloring Matter
 - 1.6.3. Anthocyanin-Tannin Condensation
 - 1.6.4. Fixation and Stabilization of Anthocyanins with Polysaccharides
- 1.7. Instability Caused by Metals
 - 1.7.1. Ferrous Breakdown
 - 1.7.2. Copper Breakdown
 - 1.7.3. Other Physical-Chemical Instabilities
- 1.8. Microbiological Stabilization of Wine
 - 1.8.1. Microorganisms that Can Grow in Wine and their Origin
 - 1.8.2. Viticultural and Enological Conditions that Favor Microbial Growth
 - 1.8.3. Prevention of Microbial Growth
- 1.9. Prevention of Bacterial Growth and Elimination
 - 1.9.1. Acetic Acid Bacteria
 - 1.9.2. Oenococcus Oeni
 - 1.9.3. Other Lactic Acid Bacteria: Lactobacillus and Pediococcus
- 1.10. Preventing the Growth and Elimination of Yeasts and Molds
 - 1.10.1. Bretanomyces
 - 1.10.2. Saccharomyces Cerevisiae
 - 1.10.3. Apiculate Yeasts
 - 1.10.4. Molds

“Are you going to be left at the back of the specific qualification in Enotechnics? Join TECH to change your career path and update your skills around the nutritional value of wine”

05 Methodology

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

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





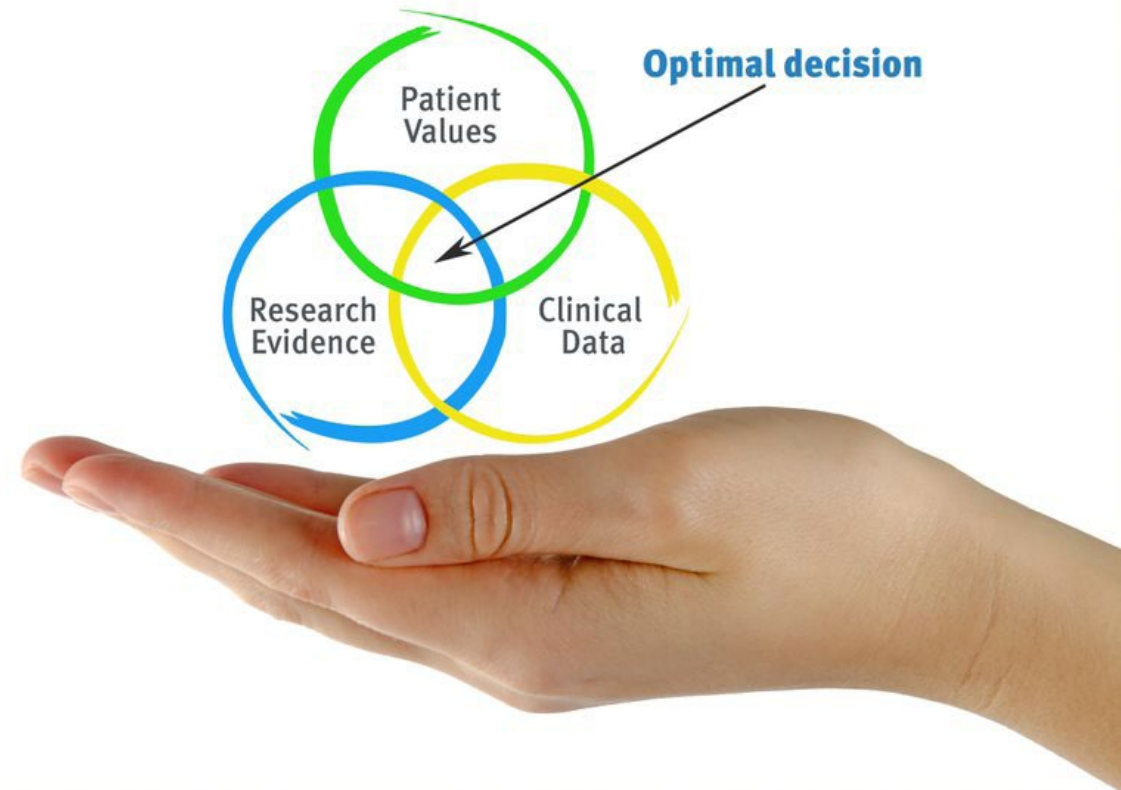
“

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

At TECH we use the Case Method

In a given situation, what should a professional do? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH, nutritionists can experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions of professional nutritional practice.

“

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”

The effectiveness of the method is justified by four fundamental achievements:

1. Nutritionists who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity through exercises to evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the nutritionist to better integrate knowledge into clinical practice.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

The nutritionist will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 45,000 nutritionists have been trained with unprecedented success in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

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.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



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.



Nutrition Techniques and Procedures on Video

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current nutritional counselling techniques and procedures. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



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".



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.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



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.



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.



Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



06 Certificate

The Postgraduate Certificate in Enotecnics and Stabilization of Wines guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 Certificate in EnoTechnics and Stabilization of Wines** contains the most complete and up-to-date scientific on the market.

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

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

Title: **Postgraduate Certificate in EnoTechnics and Stabilization of Wines**

Official N° of Hours: **150 h.**



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

future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present

online training

development languages

virtual classroom

tech technological
university

Postgraduate Certificate

Enotechnics and
Stabilization of Wines

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

Postgraduate Certificate

Enotechnics and
Stabilization of Wines