Postgraduate Certificate
Physiology of Nutrition

tech global university

Postgraduate Certificate
Physiology of Nutrition

- » Modality: **online**
- » Duration: **6 weeks**
- » Certificate: **TECH Global University**
- » Credits: **6 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/us/nutrition/postgraduate-certificate/physiology-nutrition**

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01
Introduction

Mastering knowledge about the nutrients that food provides to the body is a highly relevant activity in the field of nutrition. This is because its study allows professionals to create more balanced diets and prevention programs for patients with any type of condition. For this reason, experts in this area are in great demand and job offers are wide-ranging. With this in mind, TECH has developed an academic programme focused on broadening the knowledge of its students and providing them with a very complete syllabus, in which they will find the concepts of nutrient physiology. All this, based on a 100% online methodology that will allow the student to have greater control over their time.

"The mix of the best multimedia resources and the most innovative methodology on the planet will be the perfect cocktail to broaden your knowledge of Physiology of Nutrition"

The physiology of human nutrition is a fundamental subject in the study of health sciences, as it provides an understanding of the mechanisms by which the body processes and utilises the nutrients it obtains from the food it has ingested. Therefore, this Postgraduate Certificate program aims to provide students with a solid understanding of the key concepts and definitions in this area, as well as the processes of digestion, absorption and bioavailability of nutrients.

During the course of the degree, students will have the opportunity to delve deeper into elements related to the stages of the digestive system, as well as the analysis of the processes of digestion and absorption of the different groups of nutrients, including carbohydrates, proteins and lipids. In this way, the student will achieve a specialised knowledge of the food sources and recommended intakes of these nutrients, with the aim of being able to establish dietary education guidelines.

All this, through the innovative Relearning methodology, which allows education to be delivered 100% online, a benefit that will give students the opportunity to study from home and organise their learning schedules, since they will have access to multimedia resources 24 hours a day. In addition, you will strengthen your professional skills and problem-solving capacity, as you will analyse practical cases that will help you to place yourself in a real-life scenario.

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

- The development of case studies presented by experts in Physiology of Nutrition
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- 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

A Postgraduate Certificate program that will help you stand out in the field of Nutrition and advance your professional career"

From the comfort of your own home and at your own pace, you will gain up-to-date knowledge in this field"

Develop prevention programs, thanks to the advanced knowledge you will gain about the Physiology of Nutrition.

Identifies the main characteristics of vitamins and the functions they perform for the proper functioning of the body.

The program's teaching staff includes professionals from 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 professional 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 professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

02
Objectives

The main objective of this Postgraduate Certificate is to provide the student with the essential tools to effectively carry out the classification of nutrients in food. In this way, students will be able to update their knowledge in this field and improve their skills to face the specific challenges that exist in the sector, using multimedia materials specially designed by leading professionals in this field.

" *Have a strong grasp of the metabolic process that nutrients go through once they enter the body and the benefits they provide once ingested"*

General Objectives

- Identify and understand biology as an experimental science through the application of the scientific method
- Explain the basic knowledge and apply it to population growth and sustainable exploitation of natural resources
- Know and apply the procedures for toxicity assessment
- Contribute to consumer protection within the framework of food safety

Take advantage of this incredible opportunity and become a professional expert in the physiological processes of Nutrition"
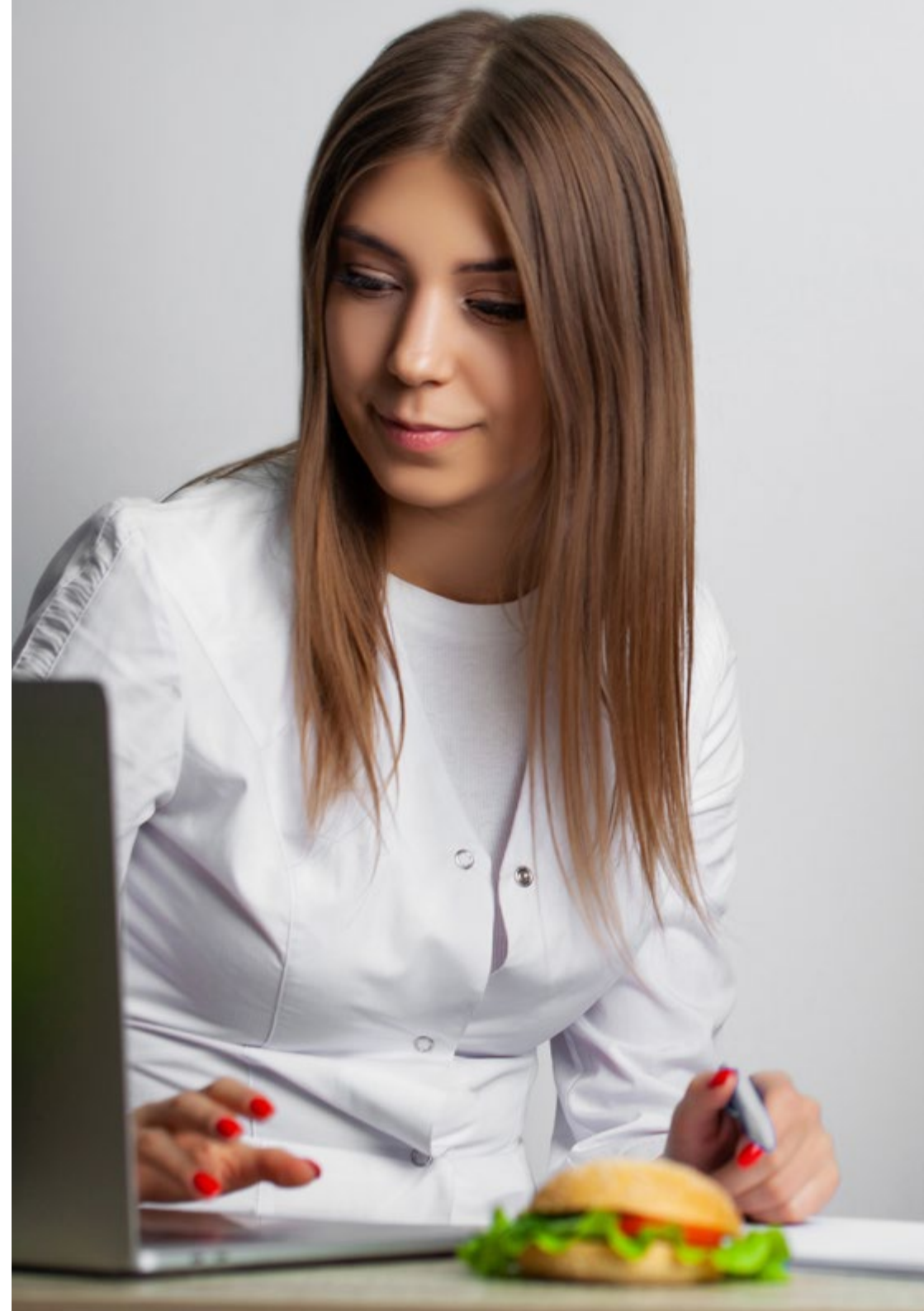
Specific Objectives

- Classify the nutrients that make up food
- Understand the range of factors that determine and condition nutrition
- Outline the metabolism of each nutrient and micronutrient, and their recommended intakes
- To understand different aspects of applied physiological knowledge for human health
- Identify the factors influencing human nutrition
- Plan and implement health promotion and prevention programs
- Develop and establish food education guidelines
- Interpret the basic structure of the nervous and endocrine systems, as well as the mechanisms of action of the respective hormones

03

Structure and Content

The syllabus of this Postgraduate Certificate has been created by experts in Physiology of Nutrition. The aim is to provide students with specialised and up-to-date knowledge about the processes that organisms carry out to take advantage of the nutrients they obtain through food. In addition, through the study of multimedia resources and the analysis of case studies, students will strengthen their professional competences.
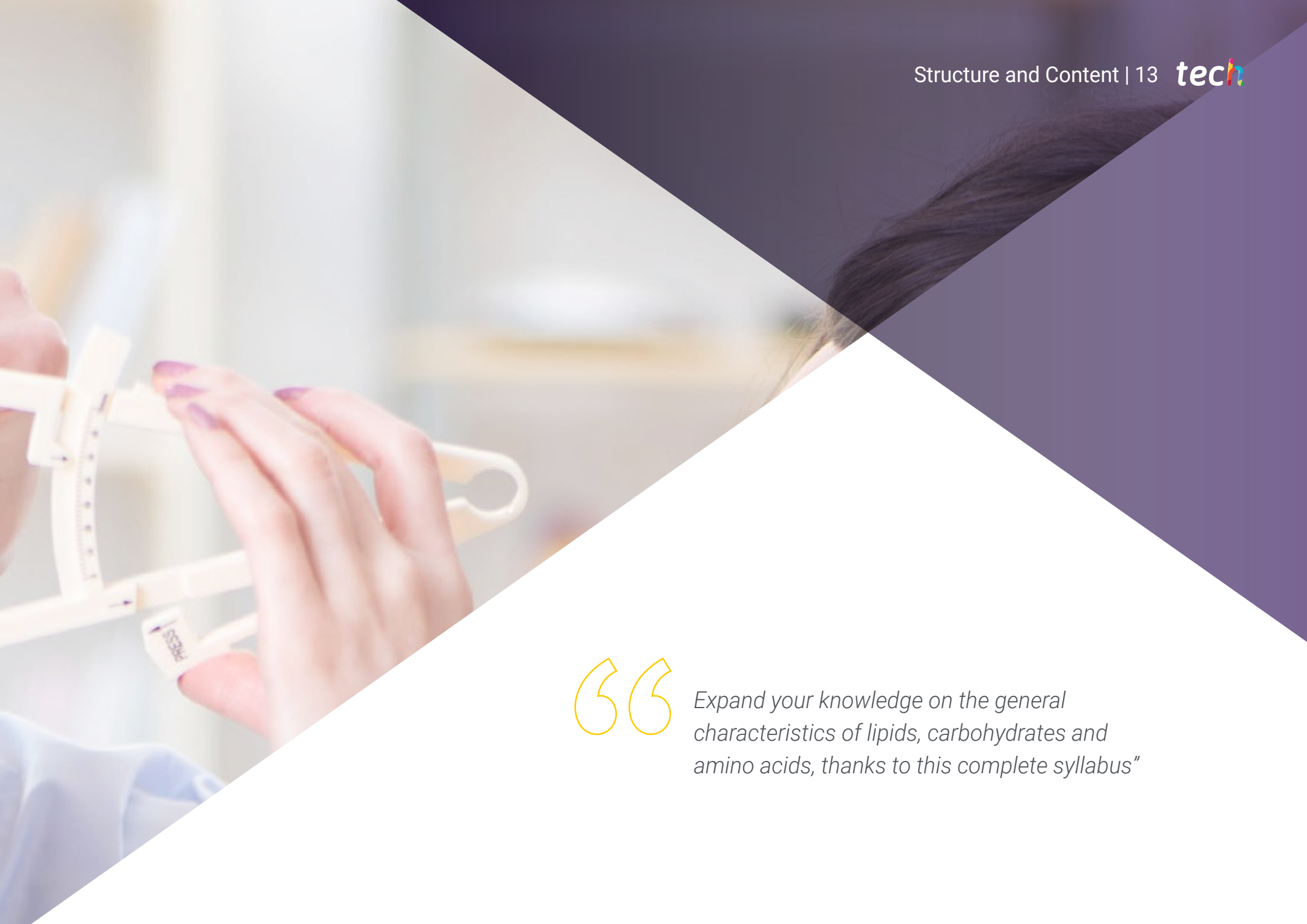
Expand your knowledge on the general characteristics of lipids, carbohydrates and amino acids, thanks to this complete syllabus"

Module 1. Fundamentals of General Physiology

1.1.   Physiology of Human Nutrition
    1.1.1.   Introduction to Nutrition, Concepts and Definitions
    1.1.2.   Body Composition and Main Nutrients
    1.1.3.   Digestive System and Digestion
        1.1.3.1. Digestive Tract Stages
        1.1.3.2. Digestive regulators
    1.1.4.   Bioavailability of Nutrients
1.2.   Carbohydrates
    1.2.1.   General Characteristics: Biochemistry and Classification
    1.2.2.   Digestion and Absorption of Carbohydrates: Physiological Utility
    1.2.3.   Food Sources and Recommended Carbohydrate Intakes
    1.2.4.   Pathologies Associated with Carbohydrate Ingestion
1.3.   Dietary fiber:
    1.3.1.   General Characteristics: Biochemistry and Classification
    1.3.2.   Digestion and Absorption of Fiber: Physiological Utility
    1.3.3.   Food Sources and Recommended Intakes
    1.3.4.   Pathologies and Harmful Effects
1.4.   Amino acids and proteins
    1.4.1.   General Characteristics: Amino Acids and Metabolism
        1.4.1.1. Protein amino acids
        1.4.1.2. Non-protein amino acids
    1.4.2.   Digestion and Absorption of Protein: Physiological Utility
    1.4.3.   Food Sources and Recommended Intakes of Proteins
    1.4.4.   Pathologies Associated with Protein Metabolism
1.5.   Lipids
    1.5.1.   General Characteristics: Classification and Structure
        1.5.1.1. Structure and Special Properties of Cholesterol
        1.5.1.2. Structure and Special Properties of Lipoproteins
    1.5.2.   Digestion and Absorption of Lipids: Physiological Utility
    1.5.3.   Food Sources and Recommended Intakes
    1.5.4.   Pathologies Associated with Lipids Hypercholesterolemia

1.6.   Minerals and Trace Elements
    1.6.1.   Introduction and Classification
    1.6.2.   Major Minerals: Calcium, Phosphorus, Magnesium, Sulphur
    1.6.3.   Trace Elements: Copper, Iron, Zinc, Manganese
    1.6.4.   Digestion and Absorption of Minerals: Bioavailability of Minerals
    1.6.5.   Food Sources and Recommended Intakes
    1.6.6.   Pathologies Associated with Minerals
1.7.   Vitamins
    1.7.1.   General Characteristics: Structure and Function
        1.7.1.1. Hydrosoluble Vitamins
        1.7.1.2. Liposoluble Vitamins
    1.7.2.   Digestion and Absorption of Vitamins.: Physiological Utility
    1.7.3.   Food Sources and Recommended Intakes
    1.7.4.   Pathologies Associated with Vitamins
        1.7.4.1. B Group Vitamins:
        1.7.4.2. Vitamin C
        1.7.4.3. Liposoluble Vitamins
1.8.   Alcohol
    1.8.1.   Introduction and consumption of alcohol
    1.8.2.   Alcohol metabolism
    1.8.3.   Recommended Daily Intakes and Caloric Dietary Value
    1.8.4.   Harmful Effects of Alcohol Consumption
1.9.   Energy Metabolism and Nutrient Interactions
    1.9.1.   Energy Content of Foodstuffs
        1.9.1.1. Immediate Principles and Calorimetry
        1.9.1.2. Energy Needs of the Organizations
    1.9.2.   Basal Metabolism and Physical Activity
        1.9.2.1. Metabolism During Intense Exercise: Cori Cycle
        1.9.2.2. Biochemical Process of Thermogenesis
    1.9.3.   Calculating Energy Needs

Don't wait any longer and take the next step in your professional career with the best multimedia content"

04
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.
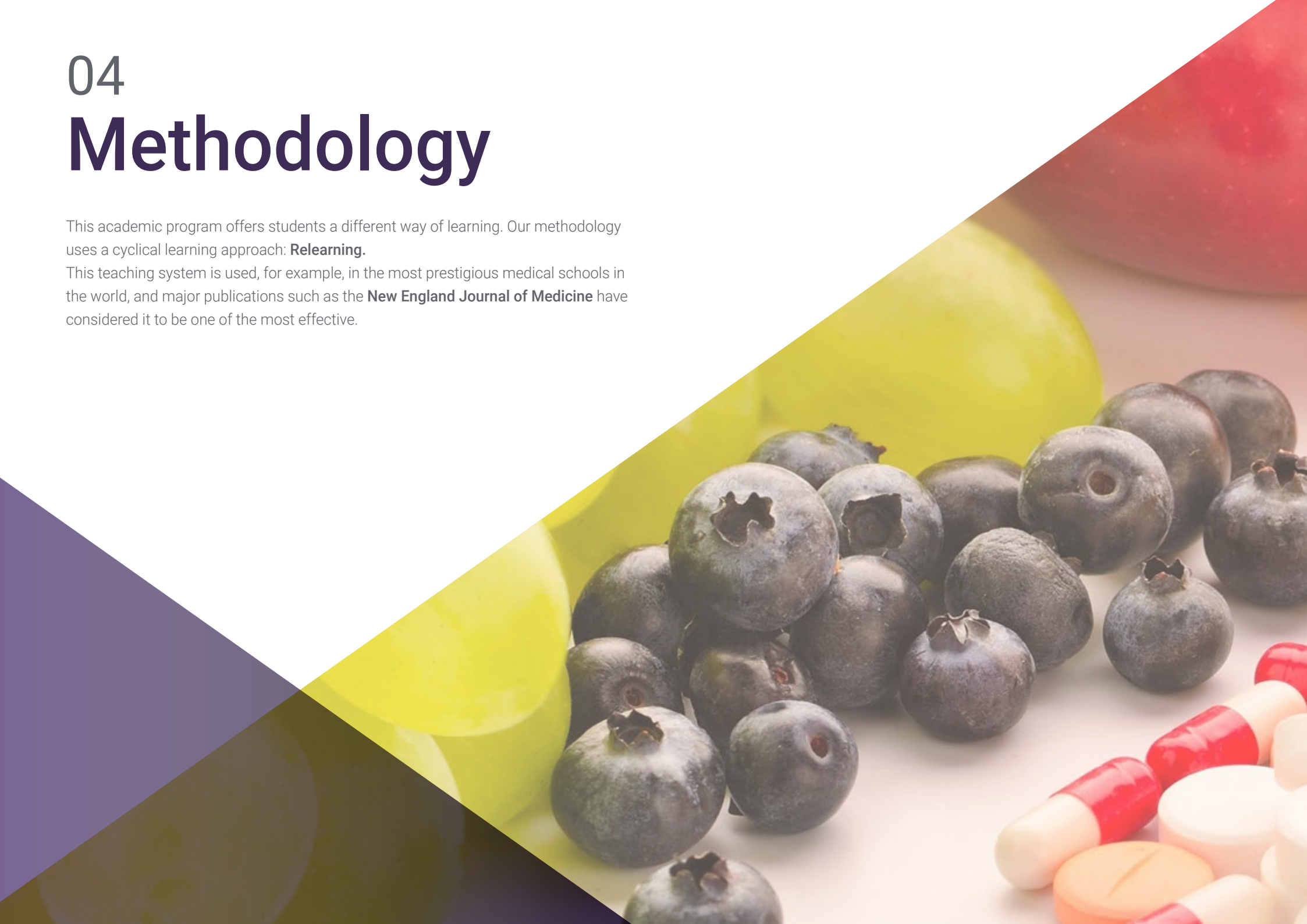
" *Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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.

20%

15%

15%

3%

20%

17%

7%

3%

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.

Certificate

The Postgraduate Certificate in Physiology of Nutrition 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 Physiology of Nutrition** 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 Physiology of Nutrition**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**

tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Certificate in Physiology of Nutrition

This is a program of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy
and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st
of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.   Unique TECH Code: AFWORD23S   techtitute.com/certificates

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

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