

Postgraduate Certificate Animal Nutrition and Feeding





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

Website: www.techtute.com/us/veterinary-medicine/postgraduate-certificate/animal-nutrition-feeding

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01

Introduction

The study of Animal Nutrition is based on two fundamental pillars: animals and food. Thus, nutrition is conceived as a set of interrelated phenomena through which a living organism assimilates food and uses it to carry out different processes, such as growing, repairing and maintaining tissues or manufacturing products.

This course is designed for veterinary professionals to update and improve their technical and practical knowledge in this sector. A complete and effective course that will propel you to a higher level of competence.





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Become one of the most demanded professionals of the moment: train yourself with our Course in Pig Nutrition and Feeding”.

This Course in Animal Nutrition and Feeding is unique given its level of specialization and the logical sequence of learning with which the content is ordered.

Its ultimate goal is to specialize and update professionals in the most advanced technical and scientific aspects of animal nutrition and feeding.

Knowledge that enables the entry, linkage and specialization in one of the most important sectors of animal production at present and with more labor demand and need for specialization.

The current world population estimated at 7.6 billion is expected to increase to 8.6 billion by 2030 and animal nutrition is one of the disciplines called upon to help solve the problem of producing sufficient and economical protein to feed this growing demand in an efficient and sustainable manner.

With an innovative format, this training allows participants to develop autonomous learning and optimal time management.



Join the elite, with this highly effective training and open new paths to your professional progress".

In short, it is an ambitious, broad, structured and interwoven proposal, which covers everything from the fundamental and relevant principles of nutrition to the manufacture of food. All this with the characteristics of a course of high scientific, teaching and technological level.

These are some of its most notable features:

- ◆ Latest technology in online teaching software.
- ◆ Highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand.
- ◆ Practical cases presented by practising experts.
- ◆ State-of-the-art interactive video systems.
- ◆ Teaching supported by telepractice.
- ◆ Continuous updating and recycling systems.
- ◆ Self-regulating learning: full compatibility with other occupations.
- ◆ Practical exercises for self-evaluation and learning verification.
- ◆ Support groups and educational synergies: questions to the expert, debate and knowledge forums.
- ◆ Communication with the teacher and individual reflection work.
- ◆ Content that is accessible from any fixed or portable device with an Internet connection.
- ◆ Supplementary documentation databases are permanently available, even after the course.



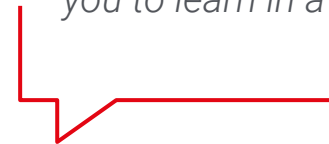
A course that will enable you to work in the sectors of food production for or with animal origin, with the solvency of a high-level professional".

Our teaching staff is made up of professionals from different fields related to this specialty. In this way, we ensure that we provide you with the training update we are aiming for. A multidisciplinary team of professionals trained and experienced in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will put at the service of the course the practical knowledge derived from their own experience: one of the differential qualities of this training.

This mastery of the subject is complemented by the effectiveness of the methodological design of this Expert. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. This way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need in your training.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely, we will use telepractice: with the help of an innovative interactive video system, and learning from an expert, you will be able to acquire the knowledge as if you were actually dealing with the scenario you are learning about. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

With a methodological design that relies on proven teaching techniques, this course in Animal Nutrition and Feeding will take you through different teaching approaches to allow you to learn in a dynamic and effective way.



02

Objectives

Our objective is to train highly qualified professionals for work experience. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is focused on helping medical professionals reach a much higher level of expertise and control. A goal you will easily achieve with a course of high intensity and precision.





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If your objective is to redirect your capacity towards new paths of success and development, this is your course: a training that aspires to excellence".



General Objective

- ♦ Determine the properties, use and metabolic transformations of nutrients in relation to the nutritional needs of an animal.
 - ♦ Provide clear and practical tools so that the professional can identify and classify the different foods that are available in the region and have better elements of judgement to make the most appropriate decision in terms of differential costs, etc. diferenciales, etc.
 - ♦ Propose a series of technical arguments which allow for a better quality of diet and nutrition and therefore, improve the end produce (meat or milk).
 - ♦ Analyze the different raw material components with both positive and negative effects on Animals. Nutrition and how animals use them for the production of animal protein.
 - ♦ Identify and understand the different levels of digestibility for each of the various nutritional components according to their origin.
 - ♦ To analyze the key aspects for the design and creation of diets (food) aimed at achieving the maximum utilization of nutrients by animals intended for animal protein production.
 - ♦ Provide specialized training on the nutritional requirements for the two main species of Pigs to be used in animal protein production.
 - ♦ Develop specialized understanding of the nutritional requirements of the porcine species and the different feeding strategies needed in order to guarantee that they reach the expected welfare and production standards according to their production stage.
 - ♦ Provide specialized theoretical and practical knowledge on the physiology of the digestive system of ruminants..
 - ♦ Analyze the digestive system of ruminants and their particular way of assimilating nutrients from fiber-rich foods.
 - ♦ Analyze the main additive groups used in the food production industry, focused on ensuring the quality and performance of different food products..
- ♦ Analyze, in a clear way, how the complete animal feed manufacturing process is developed: the phases and processes which feed undergoes to guarantee its nutritional composition, quality and safety.



Specific Objectives

- ◆ Describe the digestive systems of the different animal species, recognising the differences in metabolism.
- ◆ Recognise the nutritive components in raw materials and be able to conduct an analysis of them.

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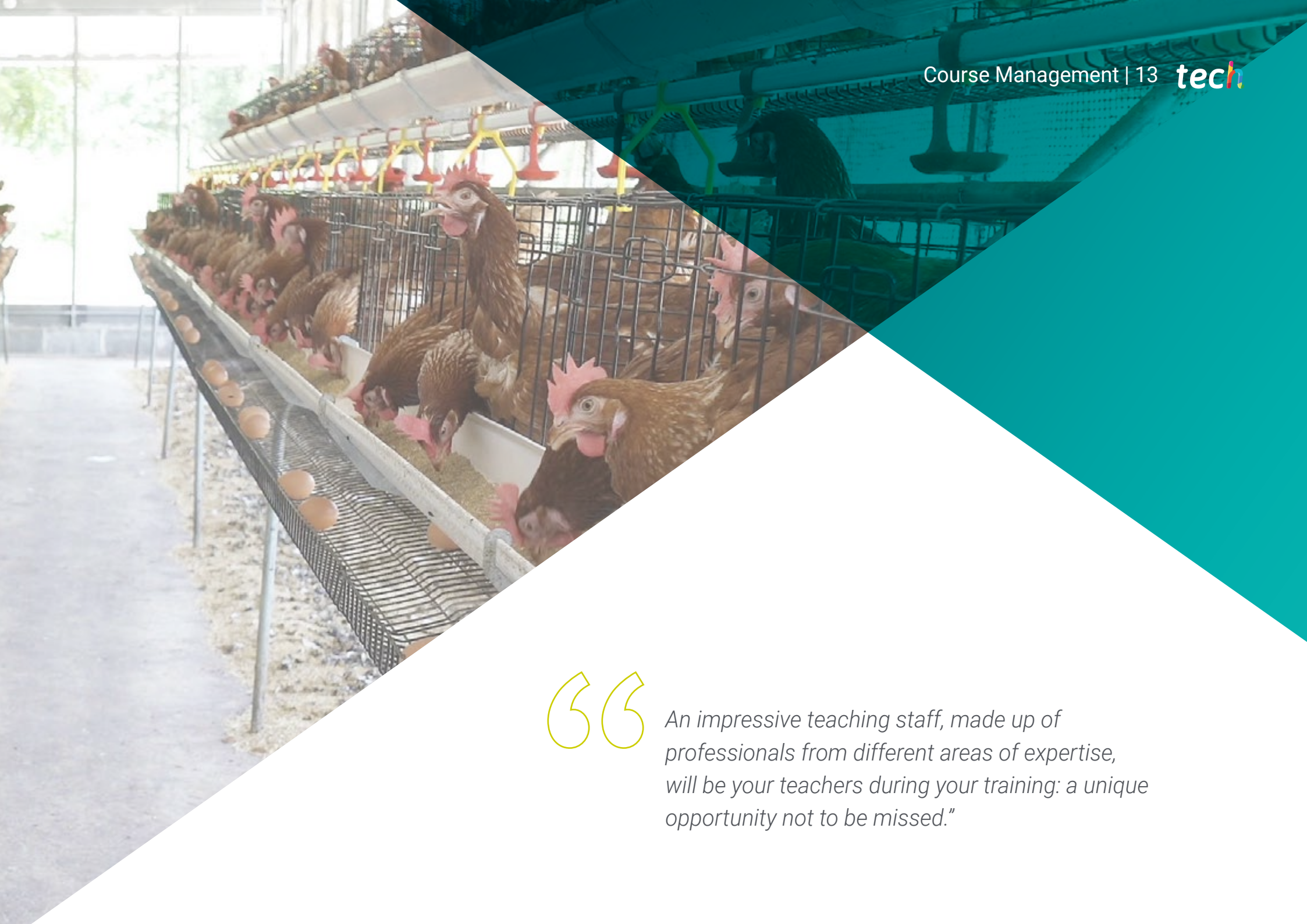
A path to achieve specialization and professional growth that will propel you towards a greater level of competitiveness in the employment market”.

04

Course Management

For our course to be of the highest quality, we are proud to work with a teaching staff of the highest level, chosen for their proven track record. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.





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An impressive teaching staff, made up of professionals from different areas of expertise, will be your teachers during your training: a unique opportunity not to be missed.”

Management



Dr. Sarmiento García, Ainhoa

- ♦ Phd in Science and Chemical Technology. (09/ 09.2017 / 2019) University of Salamanca,
- ♦ University Master's in Innovation of Biomedical Sciences and Health. (10- 10.2015 - 2016) University of León
- ♦ Degree in Veterinary Medicine. (09- 10.2015 - 2014) University of León

Professors

Dr. Fernández Mayer, Anibal Enrique

- ♦ PhD in Veterinary Science
- ♦ Postdoctorate of Veterinary Science, with a focus on: Animal Nutrition in Institute of Animal Science (IAS)
- ♦ Agricultural Engineer, National University of La Plata (1975-1979), Buenos Aires.

Lic. Ordoñez Gómez, Ciro Alberto

- ♦ Animal technician
- ♦ Master's Degree in Animals. Nutrition.
- ♦ University Professor in the area of animal nutrition with emphasis on ruminants.

Dr. Páez Bernal, Luis Ernesto

- ♦ PhD in Monogastric Nutrition and Production
- ♦ Doctor Scientiae in Zootechnics, Nutrition and Monogastric Production. Federal University of Viçosa (UFV), MG, Brazil. 2008, MSc in Zootechnics, Nutrition and Monogastric Production. Federal University of Viçosa (UFV), MG, Brazil. 2004
- ♦ Medical veterinary with a Master's Degree in Monogastric Nutrition and Production
- ♦ Lecturer



D. Portillo Hoyos, Diana Paola

- ♦ Professional Graduated from the National University of Colombia.

D. Rodríguez Patiño, Leonardo

- ♦ Animal technician with a Master's Degree in Veterinary Nutrition..

Dr. Sarmiento García, Ainhoa

- ♦ Phd in Science and Chemical Technology. (09/ 09.2017 / 2019) University of Salamanca,
- ♦ University Master's in Innovation of Biomedical Sciences and Health. (10- 10.2015 - 2016) University of León
- ♦ Degree in Veterinary Medicine. (09- 10.2015 - 2014) University of León

05

Structure and Content

The contents of this training Progression's Degree have been developed by the different experts on this course, with a clear purpose: to ensure that our students acquire each and every one of the necessary skills to become true experts in this field.

A complete and well-structured program that will take you to the highest standards of quality and success.





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A comprehensive teaching program, structured in well-developed teaching units, oriented towards learning that is compatible with your personal and professional life"

Module 1. Introduction to Animal Nutrition and Feeding

- 1.1. Nutrition and Animal Food. Concepts
 - 1.1.1. Introduction to the Concepts of Nutrition and Food
 - 1.1.2. Nutrients: Definition and Characteristics
 - 1.1.3. Importance of Animal Nutrition
- 1.2. Digestive Systems and Food Adaptation
 - 1.2.1. Digestive System and the Digestion Process in Birds
 - 1.2.2. Digestive System and the Digestion Process in Pigs
 - 1.2.3. Digestive System and the Digestion Process in Ruminants
 - 1.2.4. Digestive System and the Digestion Process in Fish (aquatic poikilotherms)
 - 1.2.5. Gastrointestinal Functionality in Animal Nutrition and Health
- 1.3. Digestive System in Ruminants
 - 1.3.1. The Rumen as a Source of Nutrients
 - 1.3.2. Ruminal Physiology.
 - 1.3.3. The Digestion Process in Ruminants
 - 1.3.4. Volatile Fatty Acids
 - 1.3.5. Protein of Bacterial Origin
- 1.4. Measurements of Nutritional Value of Foods and Evaluation Methods
 - 1.4.1. Characterization of Context
 - 1.4.2. Physical and Chemical Characterization
 - 1.4.3. Obtaining Information on the Composition of Nutrients:
 - 1.4.4. Weende Proximate Analysis
 - 1.4.5. Van Soest Analysis
 - 1.4.5.1. Analysis using Specialized Analytical Methods
 - 1.4.5.2. Heat Meter Pump.
 - 1.4.5.3. Amino Acid Analysis
 - 1.4.5.4. Atomic Absorption Spectrophotometry
 - 1.4.5.5. Automated Analysis Equipment
 - 1.4.5.6. Biological and Nutritional 1.4.5.6. Caracterización



- 1.5. Forms of Food Energy
 - 1.5.1. Forms of Energy Expression
 - 1.5.2. Gross Energy.
 - 1.5.3. Digestive Energy.
 - 1.5.4. Metabolizable Energy.
 - 1.5.5. Net Energy.
 - 1.5.6. Calculation of Values (EB-ED-EM-EN) according to the NRC and ARC systems
- 1.6. Energy Content of Food Ingredients
 - 1.6.1. Energy Sources
 - 1.6.2. Energy and Consumption
 - 1.6.3. Energy Balance.
 - 1.6.4. Energetic Density.
- 1.7. Protein and Amino Acid Content of Food Ingredients
 - 1.7.1. Animal Protein Functions
 - 1.7.2. Protein Food Resources
 - 1.7.2.1. Plant Sources - Oilseeds
 - 1.7.2.2. Plant Sources - Legumes
 - 1.7.2.3. Animal Sources.
- 1.8. Protein Quality and Digestibility
 - 1.8.1. Protein Quality
 - 1.8.1.1. Amino Acid Profile
 - 1.8.2. Digestibility
 - 1.8.2.1. Apparent Digestibility.
 - 1.8.2.2. Real Digestibility.
 - 1.8.2.3. Nitrogen Balance
 - 1.8.2.4. Biological Value.
 - 1.8.2.5. Net Usage of Protein
 - 1.8.2.6. Protein Efficiency Ratio or Rate
 - 1.8.2.7. Chemical Score.
 - 1.8.2.8. Protein Digestion
- 1.9. Other Important Nutrients in Veterinary Nutrition.
 - 1.9.1. Minerals and Microminerals
 - 1.9.1.1. Classification, Functions, General Requirements
 - 1.9.1.2. Principal minerals: Calcium, Phosphorous, Magnesium, Sodium
 - 1.9.1.3. Microminerals: Cobalt, Iodine.
 - 1.9.2. Vitamins.
 - 1.9.3. Fibre
 - 1.9.4. Water:
- 1.10. Nomenclature and Classification of Foods (NRC)
 - 1.10.1. Forage or Dry Roughage
 - 1.10.2. Forage or Fresh Coarse Feed
 - 1.10.3. Silage.
 - 1.10.4. Concentrated Energy.
 - 1.10.5. Protein Energy.
 - 1.10.6. Mineral Supplement.
 - 1.10.7. Vitamin Supplement.
 - 1.10.8. Non- nutritious Additives



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

06

Methodology

This training provides you with a different way of learning. Our methodology is developed through a cyclical way of learning: relearning. This teaching system is used in the most prestigious medical schools in the world, and major publications such as the New England Journal of Medicine have considered it to be one of the most effective.





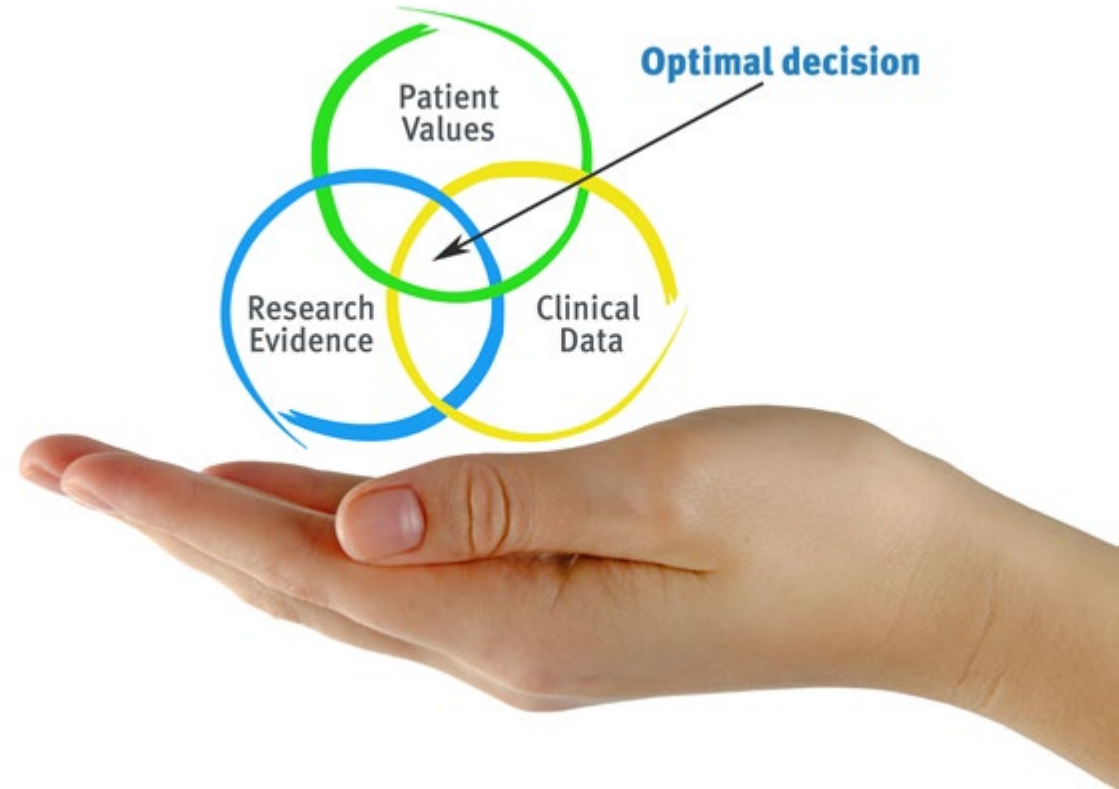
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Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization”.

In a given situation, what would you do? Throughout these months, the professional will face multiple simulated clinical cases based on real patients in which he/she will have to investigate, establish hypotheses and finally, resolve the situation. This method ensures specialists learn better as they accept more responsibility and get closer to the reality of their professional future.



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



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 potential or because of its uniqueness or rarity. Ideally, the case should be based on current professional life, trying to recreate the real conditions of professional practice in the veterinary field.

It is a technique that develops critical skills and prepares the nursing professional to make decisions, defend their arguments, and contrast opinions.

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

01

Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.

02

The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.

03

Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.

04

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 program.



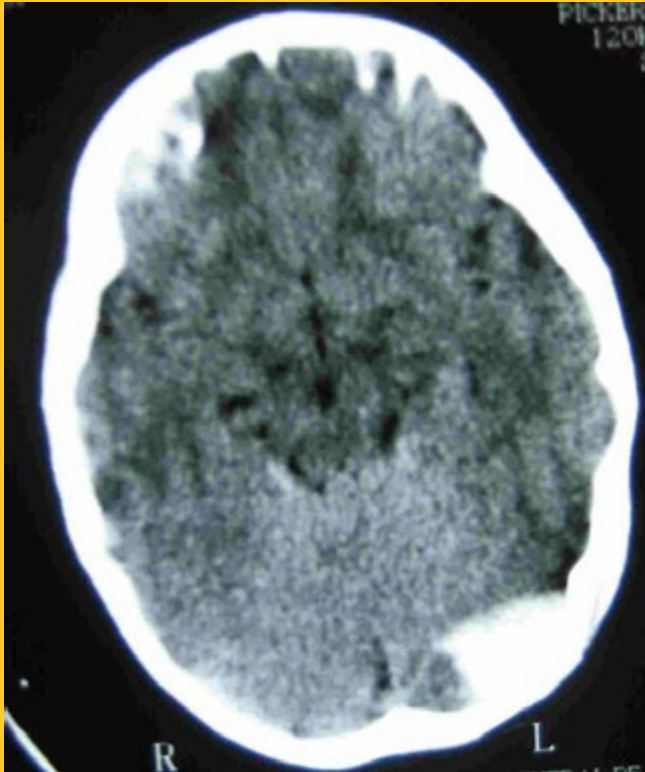


The student will be able to learn with the advantages of access to simulated learning environments and the "Learning from an expert approach in which they learn by observation".

An immersive system of knowledge transmission, through participation in the resolving real problems and supported by the best audiovisual technology on the educational market".

Our university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining 8 different elements in each lesson, which represent a revolution with respect to simply studying and analyzing cases.





The Relearning method, at the forefront of world pedagogy, 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 in the Spanish-speaking world. The teaching quality, the materials, the structure of the course and the objectives achieved were all highly valued.

With more than 150,000 professionals trained in this methodology and an international satisfaction level of 8.01, relearning has proven to be at the level of the most demanding assessment environments.

In our system, learning is not a linear process, but happens in a spiral (we learn, unlearn, forget and relearn). Therefore, we combine each of these elements concentrically.

More than 150,000 professionals have been trained through this methodology, achieving unprecedented success. All this in a demanding setting, with the highest standards of evaluation and monitoring.

This training will mainly be based on experience. A process in which you will test the knowledge you will acquire, consolidating and improving it gradually.

In this program you will have access to the best educational material, prepared with you in mind.



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

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



Rehabilitation techniques and clinical procedures on video

We bring you closer to the latest techniques, to the latest educational advances, to the forefront of educational news. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



Interactive Summaries

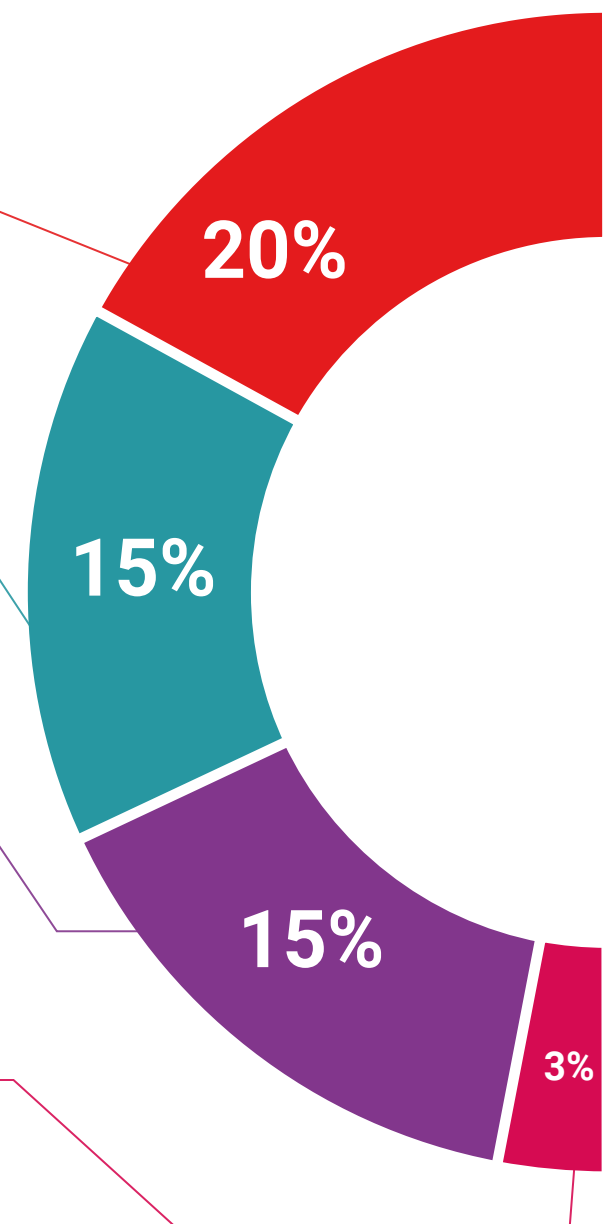
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge. This unique training system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

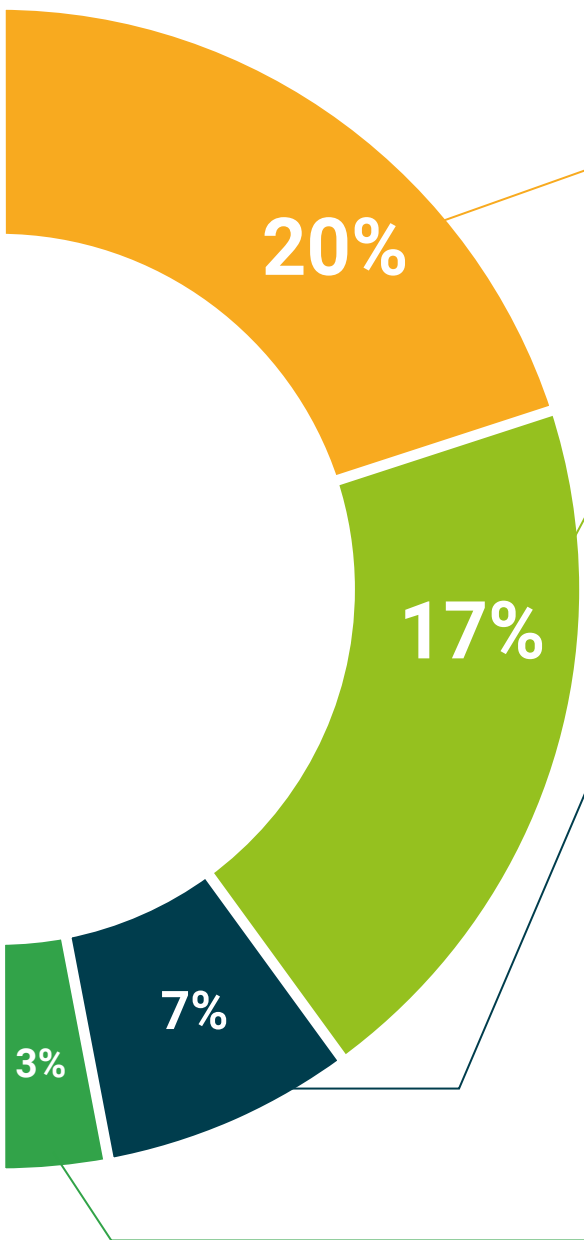


Additional Reading

By participating in this course you will have access to a virtual library where you will be able to complement and keep your training up-to-date with the latest articles on the subject, consensus documents, international guidelines...

An invaluable resource that you will be able to use even when you finish your course with us.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



Testing & Re-testing

We periodically evaluate and re-evaluate your knowledge throughout the program through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



Learning from an expert

Observing an expert performing a task is the most effective way of learning. It is called Learning from an expert: a proven way to reinforce knowledge and recall what has been learned. For this reason, we include this type of learning in our course 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 our future difficult decisions.



Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



07

Certificate

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



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Include in your training a degree in Animal Nutrition and Feeding: a highly qualified added value for any professional in this area".

This program will allow you to obtain your **Postgraduate Certificate in Animal Nutrition and Feeding** 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 Animal Nutrition and Feeding**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



*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.

future

health

confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

tech global
university

personalized service innovation

knowledge present
and Feeding

online training

development languages

virtual classroom

Postgraduate Certificate Animal Nutrition and Feeding

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

Postgraduate Certificate

Animal Nutrition and Feeding

