

# Postgraduate Certificate

## Definition and Pathogenesis of HPV





## Postgraduate Certificate

### Definition and Pathogenesis of HPV

Course Modality: Online

Duration: 2 months.

Certificate: TECH Technological University

7 ECTS Credits

Teaching Hours: 175 hours

Website: [www.techtitute.com/us/medicine/postgraduate-certificate/postgraduate-certificate-definition-pathogenesis-hpv](http://www.techtitute.com/us/medicine/postgraduate-certificate/postgraduate-certificate-definition-pathogenesis-hpv)

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01

# Presentation

The Human Papillomavirus is currently one of the most widely occurring infections in the world. Having in-depth knowledge of the symptoms and effects with which the infection can manifest itself is key to a quick and accurate diagnosis. This Postgraduate Certificate in Definition and Pathogenesis of HPV offers the professional a compendium of essential knowledge for this field of practice.



HPV - Test

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*A complete and effective up-to-date training in the scientific innovations in the field of the Definition and Pathogenesis of HPV created for professionals in this specialist area”*

During this comprehensive Postgraduate Certificate, the student will have the opportunity to acquire the necessary basic knowledge to face situations that arise in patients suspected of having contracted HPV. From the moment of diagnosis and the development of the guidelines that the specialist must follow, to the information on procedures or attitudes to eradicate in this medical practice, the student will learn to integrate new techniques and the most advanced procedures in this discipline into their work.

What distinguishes this course from others, is its eminent practical vision. This approach has been implemented in all the teaching materials that the student will use during their training. Our goal: to enable you to start applying what you have learned immediately in your work.



*With a practice-focused vision, this innovative training approach will allow you to offer your patients the most up-to-date and concrete information"*

This **Postgraduate Certificate in Definition and Pathogenesis of HPV** offers you the advantages of a high-level scientific, teaching, and technological course. 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.
- ♦ Banks of complementary documentation permanently available, even after the course.

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*It incorporates the most advanced knowledge in different situations occurring in the patient with HPV, through highly effective online learning. The most practical, useful and efficient way to update your knowledge on this subject"*

Our teaching staff is composed of medical professionals and practising specialists. In this way, we ensure that we provide you with the most innovative training we are aiming for. A multidisciplinary team of professors with training and experience in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will bring their practical knowledge derived from their own experience to the course: one of the differential qualities of this course.

This mastery of the subject is complemented by the effectiveness of the methodology used in the design of this course. 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.

*The most outstanding aspect of our educational formula is the possibility of hands-on learning, even while learning remotely: a challenge that we have achieved and that provides our students with the best results"*

*Observing the expert, while performing the task, triggers brain mechanisms similar to those activated when performing the same activity: this is the principle of the high efficiency of our "learning from an expert"*



02

# Objectives

This program aims to train highly qualified professionals for the workplace. 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 that, in just six months, you will be able to achieve with a highly intensive and precise course.







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*Our goal is yours: to provide you with the best online training and specialization course in the Definition and Pathogenesis of HPV on the market. A highly qualified step, from the hands of the best professionals in this specialty"*



## General Objective

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- Gain a broad understanding of HPV infections and the burden of disease that it generates.
- Understand the natural history of HPV infection, the biological behavior of the virus and the development of associated lesions.

*Advance your clinical practice and add to your CV the knowledge and prestige of a high quality course from the world's largest online university.*





## Specific Objectives

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### Module 1. The Human Papillomavirus: Characteristics and Epidemiology

- ♦ Learn the structure of the HPV genome and their specific proteins.
- ♦ Know the different viral genotypes and their different biological action.
- ♦ Analyze the different techniques for detecting the virus.
- ♦ Study the clinical applications of the different techniques.
- ♦ Analyze the prevalence of HPV according to population and age.
- ♦ Analyze the population variations of HPV and the burden of disease generated.

### Module 2. Pathogenesis of HPV: Intraepithelial Neoplasia.

- ♦ Study the dissemination routes of the virus and its transmission.
- ♦ Analyze how the immune system clears the virus.
- ♦ Understanding how HPV evades the host immune system.
- ♦ Study the role of vaginal microbiota in the acquisition, progression and development of HPV.
- ♦ Understand how intraepithelial neoplasia develops through the viral infection.
- ♦ Study how cancer or even relapse can develop from intraepithelial neoplasia.
- ♦ Know the terminology associated with HPV lesions and its international consensus through the LAST project and its terminology.

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# Course Management

For our Postgraduate Certificate 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 in the field of education. 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”*

## International Guest Director

Distinguished twice by Phoenix Magazine with the Top Doctor award in 2021 and 2022, Dr. Dana Meredith Chase has become an international reference in the field of Gynecologic Oncology. These awards are the result of her great clinical work in healthcare spaces such as the Arizona Center for Cancer Care and St. Joseph's Hospital and Medical Center.

As a specialist, she has dedicated her career to the diagnosis and treatment of Gynecologic Cancer and has performed more than 1,500 robotic surgeries. Therefore, as a surgeon in this area, she has become an expert in the use of techniques and tools for Minimally Invasive Gynecological Surgery Dr. Chase also stands out in the field of Medical Research having participated in several clinical trials. Specifically, she has a special interest in chemotherapy for Ovarian, Cervical and/or Uterine Cancers, so she has focused her studies on the search for new formulas to deal with resistant and recurrent Cancer. .

Dana Chase is also an associate professor in the School of Medicine at UCL and teaches Gynecologic Oncology at Valleywise Medical Center. Her passion for high-level teaching has marked much of her career, as she has also been part of the School of Medicine at Creighton University and the Department of Obstetrics and Gynecology at the University of Arizona. Not surprisingly, she is a recipient of the Teacher of the Year Award for Obstetrics and Gynecology given by St. Joseph's Hospital (2016).

As a leading specialist in her field, she has published a multitude of articles and has participated as a reviewer in different scientific publications, all of them specialized in Gynecologic Oncology. In addition, she is frequently present at national and international congresses where she participates both as a speaker and attendee.



## Dra. Chase, Dana Meredith

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- Researcher at the Women's Health Clinical Research Unit at UCLA
- Professor of Gynecologic Oncology at Valleywise Medical Center
- Associate Professor in the Division of Gynecologic Oncology, David Geffen School of Medicine at UCLA
  - Medical Degree from the University of California
- Fellow in Obstetrics and Gynecology, University of California, California
- Reviewer of scientific publications specialized in Gynecologic Oncology
- Revisora de publicaciones científicas especializadas en Ginecología Oncológica
- Teacher of the Year Award for Obstetrics and Gynecology, St. Joseph's Hospital (2016)
- Top Doctor Award, Phoenix Magazine (2021 and 2022)
- Honor Health Physician Recognition Award for Patient Experience (2022)
- Member of: NRG Oncology, Society of Gynecologic Oncology, GOG Foundation, Inc., International Gynecological Cancer Society, American Congress of Obstetricians and Gynecologists y American Society of Clinical Oncology



*Thanks to TECH you will be able to learn with the best professionals in the world"*

## Management



### Pluvio Coronando, Martín

- Director of the José Botella Llusía Women's Health Clinic of San Carlos Clinical Hospital in Madrid.
- Associate Professor at the Faculty of Medicine of the Complutense University of Madrid.
- Academic Correspondent of the Royal Academy of Medicine of Spain.



### Serrano Cogollor, Luis

- HM Gabinete Velázquez. HM Hospitals.





## Professors

- ♦ Dr. Ballesteros, Juan
- ♦ Dr. Bellón del Amo, Mónica
- ♦ Dr. De la Fuente, Jesús
- ♦ Dr. De Santiago, Javier
- ♦ Dr. Gallego, Inmaculada
- ♦ Dr. García Santos, Javier
- ♦ Dr. Hernández Aguado, Juan José
- ♦ Dr. Ruipérez
- ♦ Dr. Ramirez, Mar
- ♦ Dr. Serrano, Luis
- ♦ Dr. Sendagorta, Elena
- ♦ Dr. Vidart, José A.

05

# Structure and Content

The content of this course has been created by establishing an exhaustive overview of each and every one of the essential topics in the Definition and Pathogenesis of HPV. With a sequential process that will take you through the topics, constantly acquiring new knowledge, this training will become an incredible leap towards the clinical forefront in this specialty.

A multidisciplinary team of experts has created the content of this course, bringing their years of experience to the training program.





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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 The Human Papillomavirus: Characteristics and Epidemiology

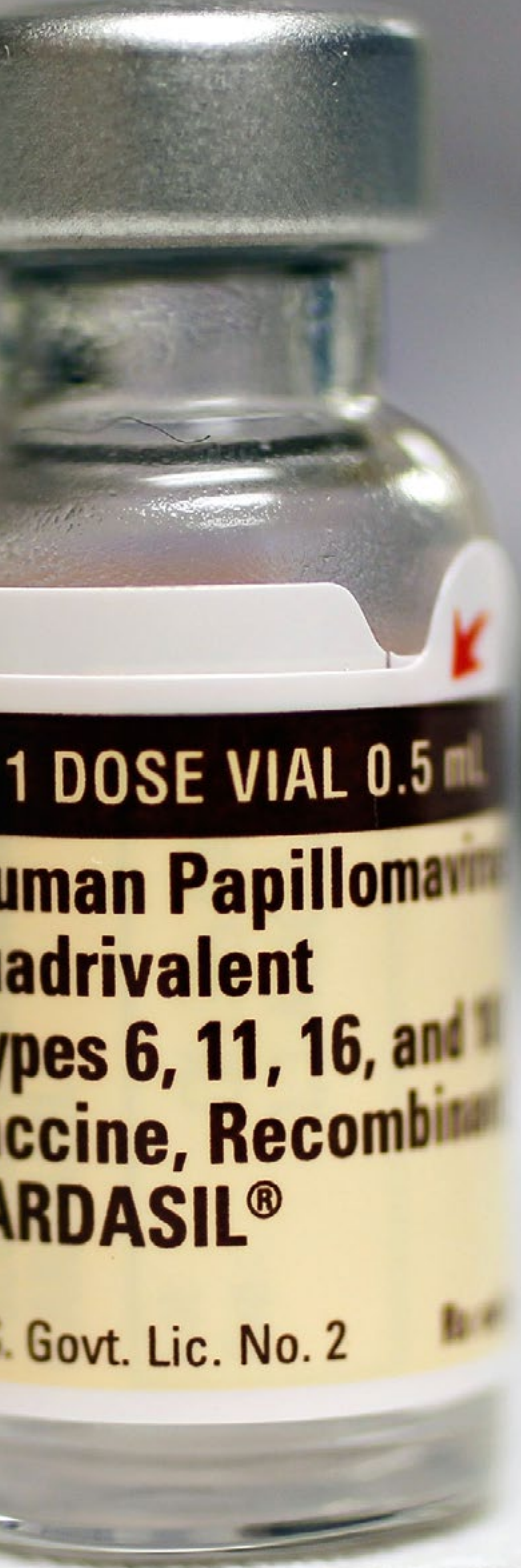
- 1.1. Structure and Composition of HPV.
  - 1.1.1. General Description.
  - 1.1.2. Capsid.
  - 1.1.3. Genome.
- 1.2. Genetic Map of HPV and its Biological Functions.
  - 1.2.1. Long Control Region.
  - 1.2.2. Early Gene Expression.
  - 1.2.3. Late Gene Expression.
  - 1.2.4. Replicative Cycle.
- 1.3. Genotypes and their Clinical Importance.
  - 1.3.1. Concept of High and Low Risk.
  - 1.3.2. Low Risk Genotypes.
  - 1.3.3. High Risk Genotypes.
  - 1.3.4. Geographic Variations.
- 1.4. HPV Detection Techniques.
  - 1.4.1. HPV Detection Techniques.
  - 1.4.2. DNA-VPH Detection Technique with Hybrid Capture.
  - 1.4.3. DNA-VPH Detection Technique with Partial Genotyping.
  - 1.4.4. DNA-VPH Detection Technique with Complete Genotyping.
  - 1.4.5. RNA Detection Techniques.
  - 1.4.6. FDA Validation for Screening and Diagnosis.
- 1.5. Distribution of Genotypes in the World and in Our Environment.
  - 1.5.1. Epidemiology in Relation to the Burden of Disease.
  - 1.5.2. Geographic Variations.
  - 1.5.3. Genotype Distribution in Spain.
- 1.6. Prevalence According to Age.
  - 1.6.1. In Women.
  - 1.6.2. In Men.
- 1.7. Disease Burden of HPV.
  - 1.7.1. Pathology Associated with Genital Infection in Women (cervix, vagina, vulva.)



- 1.7.2. Pathology Associated with Genital Infection in Men (scrotum, penis and glans)
- 1.7.3. Pathology Associated with Anal Infection.
- 1.7.4. Pathology Associated with Oropharynx Infection.
- 1.7.5. Pathology Associated with Other Areas.

## Module 2. Pathogenesis of HPV and Immune Response: Intraepithelial Neoplasia.

- 2.1. Infection Routes.
  - 2.1.1. Sexual Contact.
  - 2.1.2. Objects.
  - 2.1.3. In the Medical Consultation.
  - 2.1.4. Role of Condoms.
  - 2.1.5. Vertical Transmission.
  - 2.1.6. Protection of Surgeons During Vaporization.
- 2.2. Effect on the Immune System on HPV.
  - 2.2.1. Innate Immunity and Adaptive Immunity.
  - 2.2.2. General and Local Antibody Response.
  - 2.2.3. Inhibition of the Immune Response.
  - 2.2.4. Cellular Immunity Against the Lesion.
  - 2.2.5. Immunosenescence.
- 2.3. Viral Production and Genome Integration.
  - 2.3.1. Difference Between High and Low Risk Viruses.
  - 2.3.2. Early and Late Gene Expression.
  - 2.3.3. Viral Persistence and Quiescence.
  - 2.3.4. Viral Clearance According to Age and Genotype.
- 2.4. Role of Vaginal Microbiota.
  - 2.4.1. Definition of the Status Types of Bacteria Communities.
  - 2.4.2. Relationship Between Lesions and Different Types of Status.
  - 2.4.3. Role of Lactobacilli on Immunity.
- 2.5. Development of Cervical Intraepithelial Neoplasia and Genital Warts.
  - 2.5.1. Dysregulation of Cellular Mechanisms by Viral Proteins.
  - 2.5.2. Progression.
  - 2.5.3. Regression.
  - 2.5.4. Relapse.



05

# Methodology

This training program provides you with a different way of learning. Our methodology follows a cyclical learning process: ***Re-learning***.

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.





*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"*

## At TECH we use the Case Method

In a given situation, what would you do? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you 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 potential 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 in professional medical practice.



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*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. Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.
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.



## Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

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 a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.



*The physician 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 physicians 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.

*Re-learning 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.*

In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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



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



#### Study Material

All the teaching materials are specifically created for the course by specialists who teach on 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.



#### Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. 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 multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





**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.



**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.



06

# 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 Postgraduate Certificate in the Definition and Pathogenesis of HPV: a high-quality added value for any medical professional"*

This **Postgraduate Certificate in Definition and Pathogenesis of HPV** contains the most complete and up-to-date scientific program on the market.

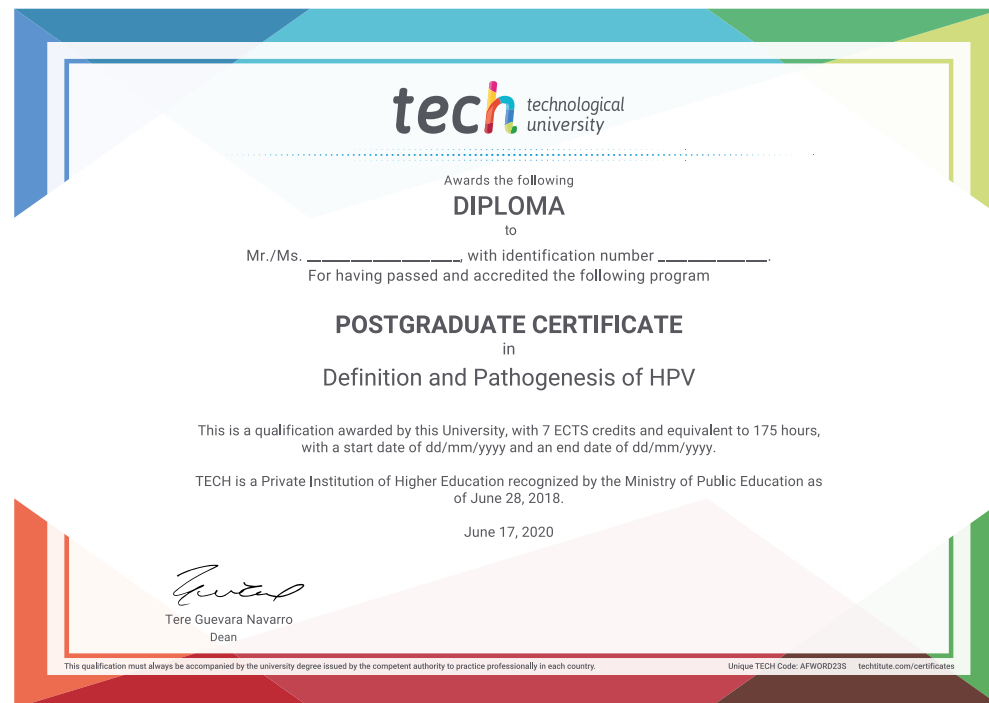
After the student has passed the evaluations, they will receive their corresponding University Course Certificate issued by TECH Technological University by tracked mail.

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

Title: **Postgraduate Certificate Definition and Pathogenesis of HPV**

ECTS: 7

Official Number of Hours: **175**



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



future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
development languages  
virtual classroom

**tech** technological  
university

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## Definition and Pathogenesis of HPV