



Postgraduate Certificate

Airport Pavements

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/pk/engineering/postgraduate-certificate/airport-pavements

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tech 06 | Introduction

The content of this Postgraduate Certificate is intended to deepen the experience, projects and interventions in airport pavements of expert teachers in the field. In order to develop the student's critical sense to choose paving materials, detect errors and make correct calculations, a perfectly structured study plan has been devised.

This program covers from the importance of pavement management throughout the life of the airport, to how to intervene or repair them, thus prolonging the useful life of the airport pavement. The study plan is approached from a theoretical and practical perspective, to encourage the application of learning to professional challenges.

This program also provides in-depth knowledge of the materials used to build esplanades, the calculation and design of pavements themselves, whether rigid or flexible pavements, and pavement inspection. In this sense, a catalog of the most common defects in an esplanade built with different types of pavements is presented.

This Postgraduate Certificate is offered online. Since all multimedia content is uploaded to the digital platform, it can be accessed whenever you want and have an Internet connection. In addition, it is taught with Learning by Doing methodology, in order to delve into the practical notions and that they can be applied to possible real professional challenges.

This **Postgraduate Certificate in Airport Pavements** contains the most complete and up-to-date program on the market. The most important features include:

- The development of case studies presented by experts in airport pavements
- 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 the self-assessment process can be carried out 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



With the catalog of the most common defects of the esplanade, you will be able to determine, with critical sense, which is the defect of the pavement and how to solve it"



A complete program adjusted to the demands of the sector specialized in materials and Airport pavements"

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.

The 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 immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

Open yourself to new professional challenges thanks to this Postgraduate Certificate in Airport Pavements.

Learn how to calculate and design rigid and flexible pavements.







tech 10 | Objectives



General Objectives

- Provide the professional with the specific and necessary knowledge to perform with a critical and formed opinion in any phase of planning, design, construction or operation of the airport
- Determine the problems of airport design and look for solutions adjusted to the airport's needs
- Master the main constraints involved in an airport project
- Acquire a specialized approach and be able to monitor the management of any airport department
- Apply the latest techniques used in the industry today
- Outline the new trends that airports plan to implement in the post-COVID era
- To deepen the knowledge of the different critical and common airside infrastructures and their design





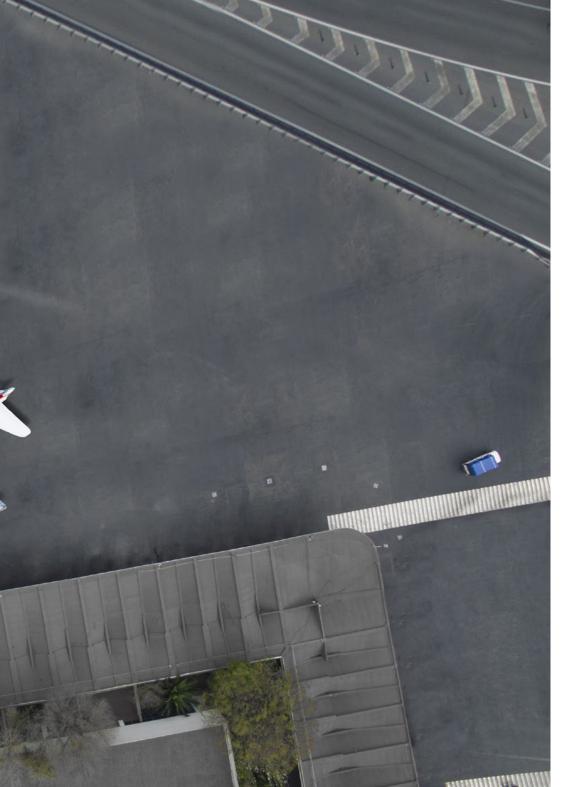


Specific Objectives

- Identify the importance of pavements in the life of the airport
- Identify the constituent materials of pavements
- Know the requirements for the installation of the work units that make up the pavements
- Learn more about the design parameters of an apron
- Go in depth into the dimensioning of rigid pavements, to dimension flexible pavements
- Detailing of pavement monitoring methods
- Identify pavement defects and the causes of these defects
- Distinguish the repair and reinforcement actions to be recommended in each situation



Learn how to apply calculations and to choose materials for the construction of esplanades and to detect flaws in them"







tech 14 | Course Management

Management



D. Moreno Merino, Rafael

- High Speed Projects Technician. Risk Assessment Expert at INECO
- Airport Maintenance Project Manager at INECO
- Engineer at INECO
- Director of the Master's Degree in Project, Construction and Operation of Airport Infrastructures
- Head of Occupational Risk Prevention and Production at ACCIONA
- Master's Degree in Business Administration at Polytechnic University of Madrid
- Master's Degree in Business Administration from Polytechnic University of Madrid
- Degree in Civil Engineering from San Antonio Catholic University of Murcia

Professors

D. Martín Ramos, Jorge

- Specialist in Airport Pavements
- Experience in airport pavements in airports in different continents
- Trainer for the Spanish Ministry of Public Works in Airport Issues
- Master's Degree in Physical Sciences
- Master's Degree in Airport Systems from the Polytechnic University of Madrid
- Bituminous Mixes Course: Dosage, Manufacture, Laying and Quality Control by INTEVÍA
- Professional Expert Course on Civil Works Pavements at the Technical Association of Roads
- Course on Pavement Evaluation Software Program ELMOD 6 by DYNATEST



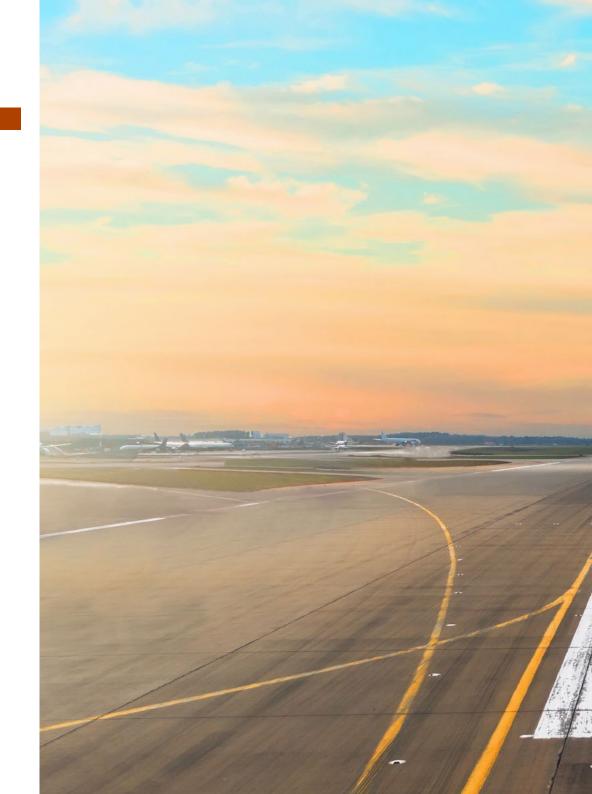


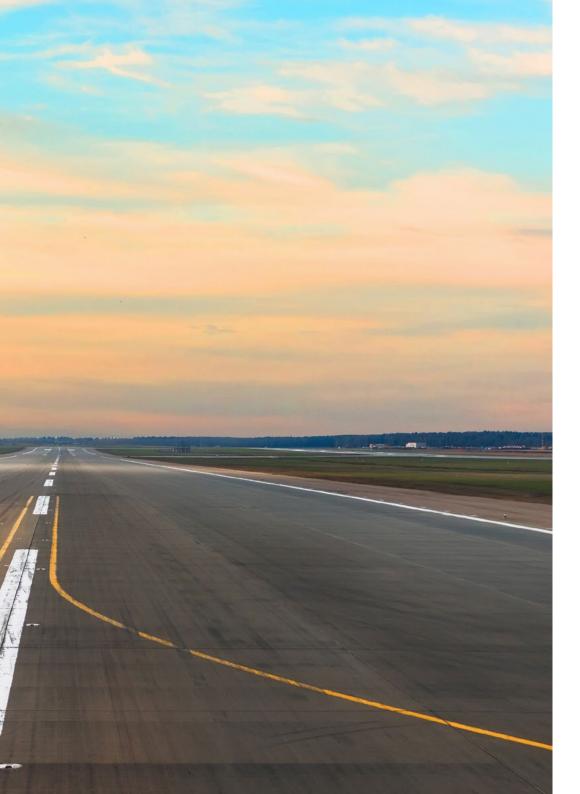


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Module 1. Airport Pavements

- 1.1. Airport Pavement Typology
 - 1.1.1. Pavements in the Life of the Airport
 - 1.1.2. Pavement Types and Design Parameters
 - 1.1.3. Economic Management of Pavements
- 1.2. Materials to Build Pavements
 - 1.2.1. Bituminous Mixtures
 - 1.2.2. Concretes
 - 1.2.3. Granular Bases
- 1.3. Design and Preparation of the Esplanade
 - 1.3.1. Types of Soils
 - 1.3.2. Parameters that Determine the Strength of a Slab
 - 1.3.3. Land Improvements
- 1.4. Design of Flexible Airport Pavements
 - 1.4.1. Standard Flexible Pavement Cross-Sections and Minimum Cross-Sections
 - 1.4.2. Design of Flexible Pavements Airport Regulations
 - 1.4.3. Design of Flexible Resistance Pavements Airport Regulations
- 1.5. Design of Rigid Airport Pavements
 - 1.5.1. Typical rigid Pavement Cross-Sections and Minimum Cross-Sections
 - 1.5.2. Design of Resistant Rigid Pavements Under Airport Regulations
 - 1.5.3. Design of NO Resistant Rigid Pavements Under Airport Regulations
 - 1.5.4. FAARFIELD Case Study
- 1.6. Evaluation of Surface Parameters
 - 1.6.1. Coefficient of Friction
 - 1.6.2. Surface Texture
 - 1.6.3. Surface Regularity
 - 1.6.4. Pavement Condition Index (PCI)





Structure and Content | 19 tech

- 1.7. Evaluation of Structural Parameters
 - 1.7.1. Non-Destructive Testing for Structural Capacity Determination
 - 1.7.2. Destructive Testing to Determine Structural Capacity
 - 1.7.3. Notification and Action Procedures
- 1.8. Skill Evaluation
 - 1.8.1. Type of Esplanades
 - 1.8.2. Strength of Compacted Soils (CBR test)
 - 1.8.3. Strength of Compacted Soils (plate load)
- 1.9. Catalog of Pavement Defects
 - 1.9.1. Defects in Flexible Pavements
 - 1.9.2. Defects in Rigid Pavements
 - 1.9.3. Defects in Esplanades
- 1.10. Screening, Reinforcement or Deep Reclamation
 - 1.10.1. Pavement Service Life Analysis
 - 1.10.2. Screeds to Improve Pavement Surface Condition
 - 1.10.3. Reinforcements and Deep Rehabilitation to Improve the Structural Condition of the Pavement



Learn the keys to paving and materials for airport concourses with this fully online Postgraduate Certificate"





tech 22 | Methodology

Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.



At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"



You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.



The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.



Our program prepares you to face new challenges in uncertain environments and achieve success in your career"

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

tech 24 | Methodology

Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

In 2019, we obtained the best learning results of all online universities in the world.

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



Methodology | 25 tech

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.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.

This program offers the best educational material, prepared with professionals in mind:



Study Material

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

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



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.



Methodology | 27 tech





Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.



This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.





20%





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This **Postgraduate Certificate in Airport Pavements** contains the most complete and up-to-date program 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 Airport Pavements

Official No of hours: 150 h.



Mr./Ms. _____, with identification number ____ For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Airport Pavements

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

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Tere Guevara Navarro

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que TECH Code: AFWORD23S techtitute.com/certifi

technological university Airport Pavements

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