Postgraduate Certificate
Air Navigation Systems

tech *technological university*

tech technological university

Postgraduate Certificate
Air Navigation Systems

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

Website: **www.techtitute.com/us/engineering/postgraduate-certificate/air-navigation-systems**

Index

01
Introduction

In a world where the airline industry is constantly growing, the demand for specialists in air navigation systems is increasing. Therefore, this program responds to current market needs by offering a rigorous and updated education in an area that is essential to ensure the safety of air operations. With this academic program, students will obtain comprehensive training in navigation and air traffic control systems, from the fundamentals to the latest technologies, and will be able to develop their career in a sector in constant growth. In addition, the program is developed in a 100% online format, which allows students to access the program from anywhere and at any time.

" *Only 150 teaching hours and one button separate you from perfecting your knowledge in Air Navigation Systems. Hurry up and sign up"*

The airline industry is a sector that is evolving at a dizzying pace. In this context, the safety of air operations becomes an imperative need. Air navigation systems are the key to ensuring safety in the industry. Therefore, this Postgraduate Certificate in Air Navigation Systems offers a solid and updated training in this area. Thus, this program is a response to the need for trained professionals to work in a sector in constant growth and evolution.

This program provides the necessary skills for the integration of knowledge in navigation systems and air traffic control, from the fundamentals to the latest technologies. With this academic program, the engineers will be able to develop their career in a sector that demands specialization, as they will acquire the necessary skills to successfully perform their job.

TECH employs the effective *Relearning* pedagogical methodology in all its programs, which consists of reiterating key concepts throughout the program so that the students integrate the knowledge in a natural and progressive way, without the need for memorization. In this way, a deep understanding of the contents is achieved and the students are prepared to apply the knowledge acquired in real situations.

Finally, it is important to mention that this program is developed in a 100% online format. This allows the graduates to access the content from anywhere and at any time, adapting to their needs and allowing them to combine their education with their work or any other activity they perform.

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

- Development of case studies presented by experts in Aeronautical Engineering
- 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

With the Relearning system you will achieve effective and natural learning. Leave the past behind and forget about memorizing"

"You will have at your disposal a Virtual Campus available 24 hours a day, without the usual pressure of adapting to rigid academic calendars or unchangeable class schedules"

You'll delve into the benefits of aviation navigation resources and procedures with this TECH program.

Enroll and you'll gain access to a library full of premium multimedia content.

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 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.

02
Objectives

The main objective of this Postgraduate Certificate is to provide the engineers with the most advanced and up-to-date knowledge on Air Navigation Systems in a reduced time of 150 hours. During the program, the students will deepen their knowledge of surveillance systems and will understand the extension of flight paths through air navigation. Thus, the achievement of these general and specific objectives will be made possible by following the rigorous syllabus. Thus, learning will be assured and the students will be prepared to face the challenges of their professional career.
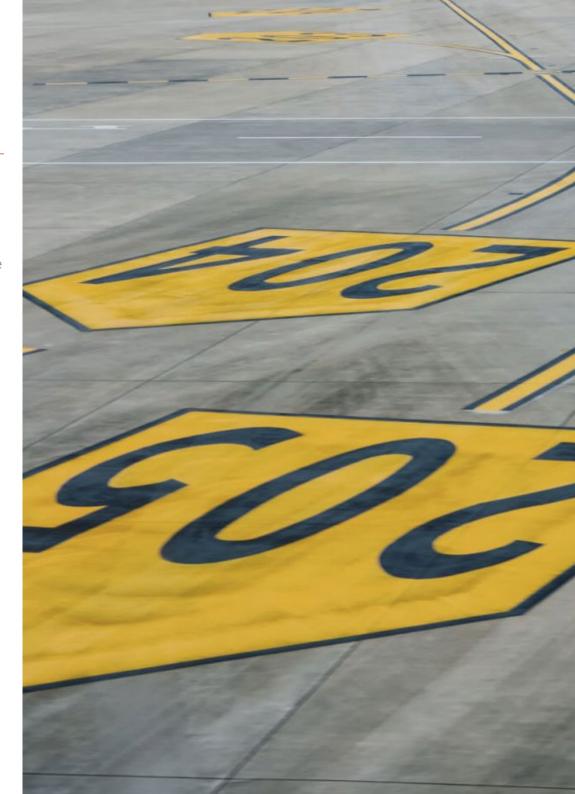
> *Thanks to this Postgraduate Certificate, you will gain in-depth knowledge of traffic monitoring tools"*

General Objectives

- Provide the professionals with the specific and necessary knowledge to perform, with a critical and informed opinion, in any phase of planning, design, manufacture, construction or operation in the various companies of the aviation sector

- Identify the problems in aeronautical designs and projects in order to know how to propose effective, viable and sustainable overall solutions

- Acquire the fundamental knowledge of existing technologies and innovations under development in transport systems, in order to be able to conduct research, development and innovation studies in aeronautical companies and technology centers

- Analyze the main conditioning factors involved in the aeronautical activity and how to efficiently apply the latest techniques used in the aviation sector today

- Acquire a specialized approach and be able to monitor the management of any aeronautical department, as well as to execute the general management and the technical management of designs and projects

- Delve into the knowledge of the different critical aeronautical areas according to their different relevant actors, as well as achieve the knowledge, understanding and ability to apply the applicable aeronautical or non-aeronautical legislation and regulations
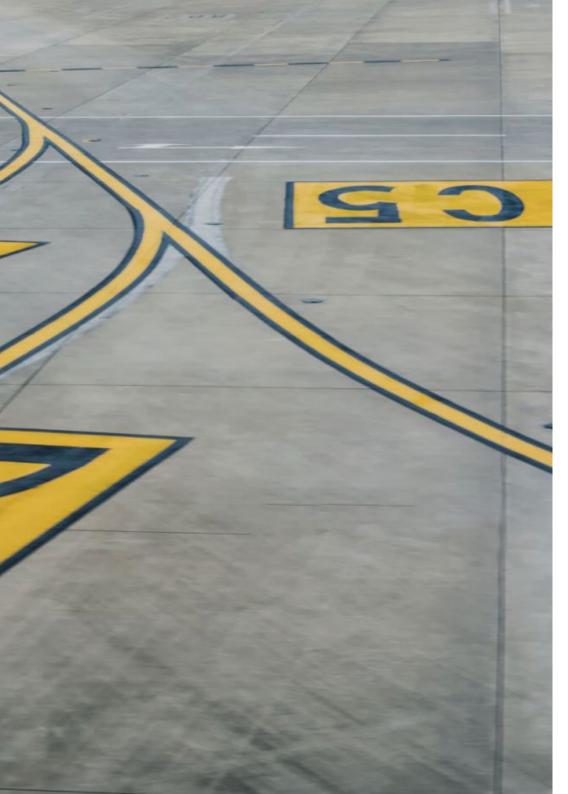
Specific Objectives

- Analyze the evolution of different technologies in the field of navigation
- Specify the applicability of air traffic surveillance tools
- Justify the benefits of aviation navigation resources and procedures
- Determine the significant impact on safety and efficiency derived from the provision of ATS services
- Evaluate the benefits of airspace management through new models
- Compile management methods in systems maintenance
- Examine the significance of information sharing among aviation users
- Identify trends and impacts of new air navigation systems

Achieve your goals by getting up to speed on aeronautical communications systems with this exclusive TECH certification"

Course Management

This program has a teaching team highly committed to the high educational level that characterizes TECH. Thus, the best specialists active in the field of Aeronautical Engineering have been selected to be part of this team. These professionals are responsible for creating the teaching materials that the students will use during the course, ensuring that the content is up-to-date and in line with the latest developments in the sector. In this way, the dedication and experience of this teaching team guarantees a quality and cutting-edge education in the field of Air Navigation Systems, which will allow graduates to be prepared to face the many challenges of their profession.

TECH offers you a first class Postgraduate Certificate made up of renowned specialists in the aeronautical sector and you can learn from them"

Management

D. Torrejón Plaza, Pablo

- Engineering Technician at ENAIRE
- Head of the Regulatory Unit of the National Airports Autonomous Organization
- Head of the Analysis Section of the National Airports Autonomous Organization Cabinet of the General Director
- Head of the Operations Section, Head of the Airport Security Office and Service Executive at
- Tenerife Sur Airport
- Head of the Procedures and Organization Section in the Office of the General Director of Aena Airports
- Head of the Programming Department and in the Office of the President of Aena
- Head of the Institutional Coordination and Parliamentary Affairs Division
- Associate Professor and Collaborator in the Aeronautical Management Degree at the Universidad Autónoma de Madrid
- Head of the Regulatory Unit of the National Airports Autonomous Organization
- Head of the Analysis Section of the National Airports Autonomous Organization Cabinet of the General Director
- Head of the Operations Section, Head of the Airport Security Office and Service Executive at Tenerife Sur Airport
- Master's Degree in Airport Systems from the Polytechnic University of Madrid
- Master in Organizational Management in Knowledge Economy from the Universitat Oberta de Catalunya (Open University of Catalonia)
- Master's Degree in Executive MBA from the Instituto de Empresa in Madrid
- Aerospace Engineer from the University of León
- Aeronautical Technical Engineer by Universidad Politécnica de Madrid
- Aeronautical Manager from the Autonomous University of Madrid
- Honorary decoration "Alférez Policía Nacional del Perú Mariano Santos Mateos gran General de la Policía Nacional del Perú" for exceptional services in aeronautical consultancy and training

Professors

D. Fernández Domínguez, Manuel

- Technician in ENAIRE E.P.E. in the CNS/ATM Operational Safety Area
- Technician in ENAIRE E.P.E. in the CNS/ATM Operational Safety Area.. ACC MADRID, Regional Directorate of Air Navigation Center-North
- Technician in the area of Short/Medium and Long-Range Fleet Maintenance and in the area of Aircraft Assistance for Iberia at Adolfo Suarez Madrid-Barajas Airport
- Technician in the Operations Area at Palma de Mallorca Airport and Josep Tarradellas Barcelona-El Prat Airport
- Lecturer in the Aeronautical Management Degree at the Autonomous University of Madrid
- AVSAF Instructor certified by AESA
- Degree in Tourism from the Autonomous University of Madrid
- Master's Degree in Aeronautical Management from the Autonomous University of Barcelona
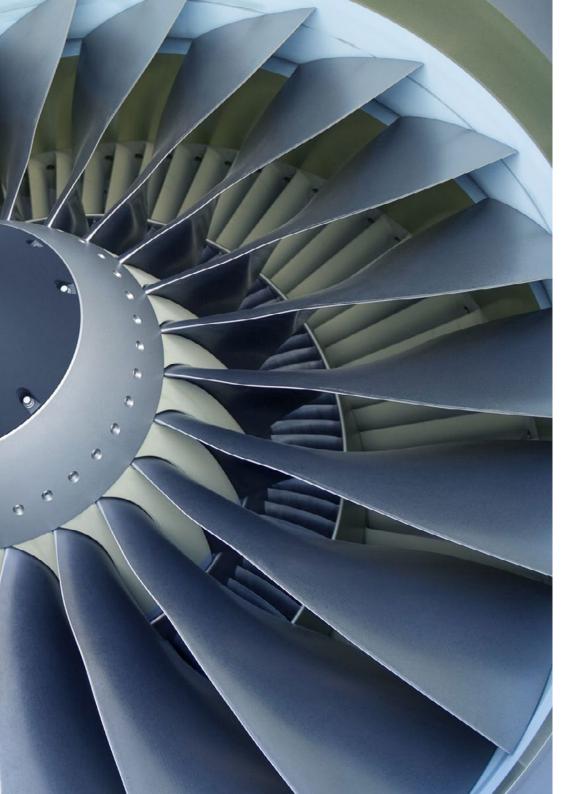
Structure and Content

This program consists of three modules designed for the students to acquire in-depth knowledge in the future of air communications. In the same vein, the teaching resources used in this Postgraduate Certificate are available in a wide variety of formats, both multimedia and textual, to provide an enjoyable and individualized learning experience. As a result, the program is delivered entirely online, allowing the engineers to access the content from anywhere and to distribute the course load according to their needs and dispositions.

"A 100% online Postgraduate Certificate that adapts to your needs and allows you to self-manage your time to access the syllabus"

Module 1. Air Navigation Systems

1.1.   Air Navigation Systems
    1.1.1.   Air Navigation. Key Concepts
    1.1.2.   CNS/ATM system. Key Concepts
    1.1.3.   Air Navigation Services

1.2.   Aeronautical Communications Systems: From Sea to Air
    1.2.1.   Communications Systems and Services
    1.2.2.   Aeronautical Fixed Service
    1.2.3.   Aeronautical Mobile Service
    1.2.4.   Future of Aeronautical Communications

1.3.   Navigation Systems Accuracy
    1.3.1.   Autonomous Systems
    1.3.2.   Non-Autonomous Systems
    1.3.3.   Augmentation Systems

1.4.   Surveillance Systems. Traffic Monitoring Tools
    1.4.1.   Surveillance Functions and Systems
    1.4.2.   Contribution of Radar to the Development of Aviation
    1.4.3.   Dependent Surveillance (ADS): Justification and Application
    1.4.4.   Multilateration: Advantages and Applications

1.5.   Extension of Flight Paths through Air Navigation
    1.5.1.   The PBN Concept
    1.5.2.   RNAV/RNP Relationship
    1.5.3.   Advantages of the PBN Concept

1.6.   AFTM Management
    1.6.1.   AFTM Principles in Europe
    1.6.2.   Traffic Flow Management: need for centralization and objectives
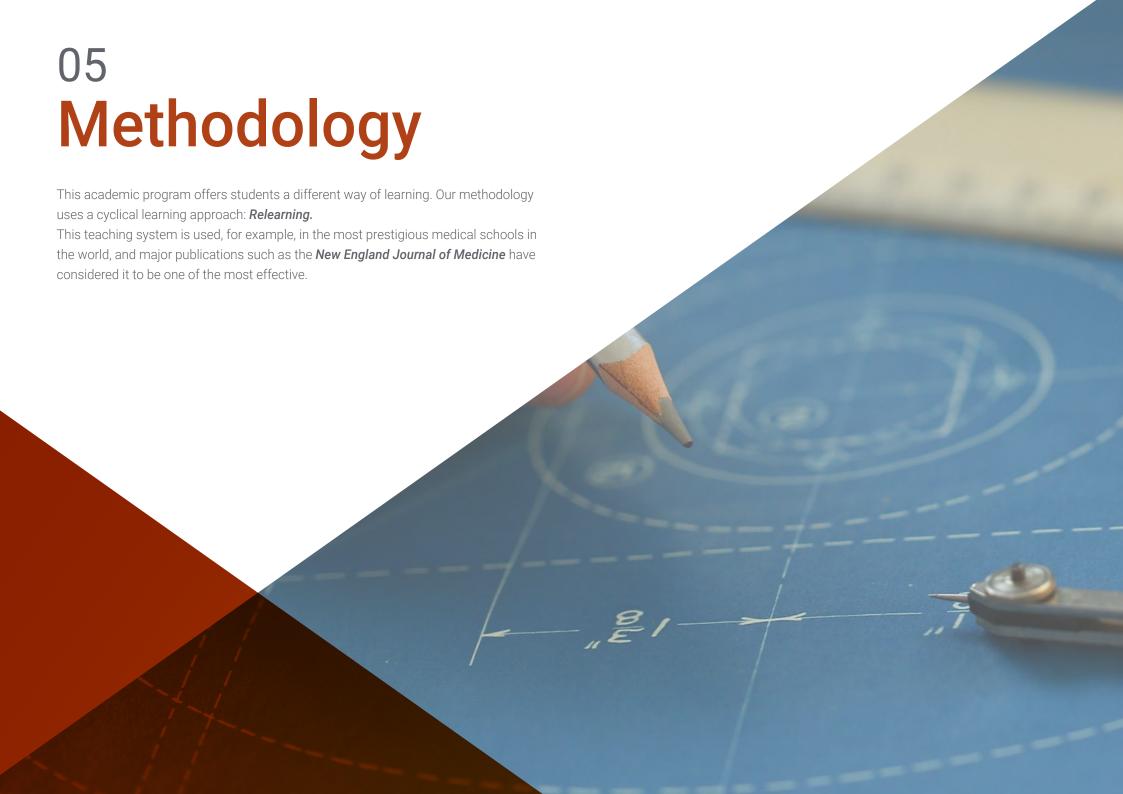   1.6.3.   ATFCM-CFMU Systems and their phases

A complete and multidisciplinary syllabus presented in different audiovisual supports so that you can internalize the information quickly and effectively"

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"

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.

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.

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)

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.

30%

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.

10%

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.

8%

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%

25%

4%

3%

Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.

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.

06
Certificate

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

Title: **Postgraduate Certificate in Air Navigation Systems**

Official Nº of hours: **150 h.**

tech technological university

Awards the following
DIPLOMA
to

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

POSTGRADUATE CERTIFICATE
in
Air Navigation Systems

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.

June 17, 2020

Tere Guevara Navarro
Dean

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 EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

tech technological university

Postgraduate Certificate
Air Navigation Systems

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

Postgraduate Certificate
Air Navigation Systems

tech technological university