Postgraduate Certificate
Advanced Algorithms Design

tech *technological university*

Postgraduate Certificate

Advanced Algorithms Design

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

Website: **www.techtitute.com/in/information-technology/postgraduate-certificate/advanced-algorithms-design**

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01
Introduction

The student will be able to update their knowledge in Advanced Algorithms Design, with this 100% online learning. You will learn dynamic programming concepts and algorithms for NP problems from industry experts. A unique opportunity to give your career the boost it needs.

This Postgraduate Certificate will allow you to update your knowledge in Advanced Algorithm Design in a practical way, 100% online, without renouncing to the highest academic rigor"

This program is intended for those interested in achieving a higher level of knowledge in Advanced Algorithms Design.. The main objective is to learn student to apply in real world the knowledge acquired in this Postgraduate Certificate, in a work environment that reproduces the conditions that can be found in their future, in a rigorous and realistic way.

This Postgraduate Certificate will prepare the student for professional practice of computer engineering, thanks to a transversal and versatile study adapted to new technologies and innovations in this field. You will obtain wide knowledge in Advanced Algorithms Design, from the hand of professionals in the sector.

The student will be able to take advantage of the opportunity and take this course in a 100% online format, without having to give up their obligations.

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

- Development of 100 simulated scenarios presented by experts in Advanced Algorithms Design
- Its graphic, schematic and eminently practical contents provide scientific and practical information on Advanced Algorithms Design
- News on the latest advances in Advanced Algorithms Design
- Contains practical exercises where the self-assessment process can be performed to improve learning
- Interactive learning system based on the case method and its application to real practice
- All of this will be complemented by 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

Learn the latests techniques and strategies with this program and achieve success as an IT Engineer"

Get qualified in Advanced Algorithms Design with this intensive program, from the comfort of your own home"

Take advantage of the latest educational technology to get updated in Advanced Algorithms Design without leaving home.

Learn the latest techniques in Advanced Algorithms Design from experts in the field.

It includes in its teaching staff professionals belonging to the Computer Engineering field, who pour into this learning their work experience, as well as recognized specialists belonging to reference societies and prestigious universities.

Thanks to its multimedia content developed with the latest educational technology, this Postgraduate Certificate will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive learning programmed to prepare for real situations.

The program's design is focused on Problem-Based Learning, by means of which the professor must try to solve different professional practice situations that arise throughout the Postgraduate Certificate. For this, the professional will be assisted by an innovative interactive video system created by recognized experts in Advanced Algorithms Design with extensive teaching experience.

02
Objectives

The objective of this training is to provide IT professionals with necessary knowledge and skills to perform their activity using the most advanced protocols and techniques of the moment. Through a work approach that is totally adaptable to the students, this Postgraduate Certificate will progressively lead them to acquire the competencies that will propel them to a higher professional level.

Achieve your desired level of knowledge and master fundamental concepts in Advanced Algorithms Design with this high-level study"

General Objectives

- To educate scientifically and technologically, as well as to prepare for professional practice of Computer Engineering, all this with a transversal and versatile education adapted to new technologies and innovations in this field
- To obtain wide knowledge in computing field, computer structure and Advanced Algorithm Design, including mathematical, statistical and physics basis essential in engineering

Enroll in the best Advanced Algorithms Design program on the university scene today"

Specific Objectives

- To deepen in advanced design of algorithms, analyzing recursive and divide and conquer algorithms, as well as performing amortized analysis
- To understand dynamic programming concepts and algorithms for NP problems
- To understand combinatorial optimization operation, as well as different randomization algorithms and parallel algorithms
- To know and understand the operation of different local and candidate search methods
- To learn mechanisms of formal program verification and iterative program verification, including first-order logic and Hoare's formal system
- To learn operation of some of the main numerical methods such as bisection method, Newton Raphson method and secant method
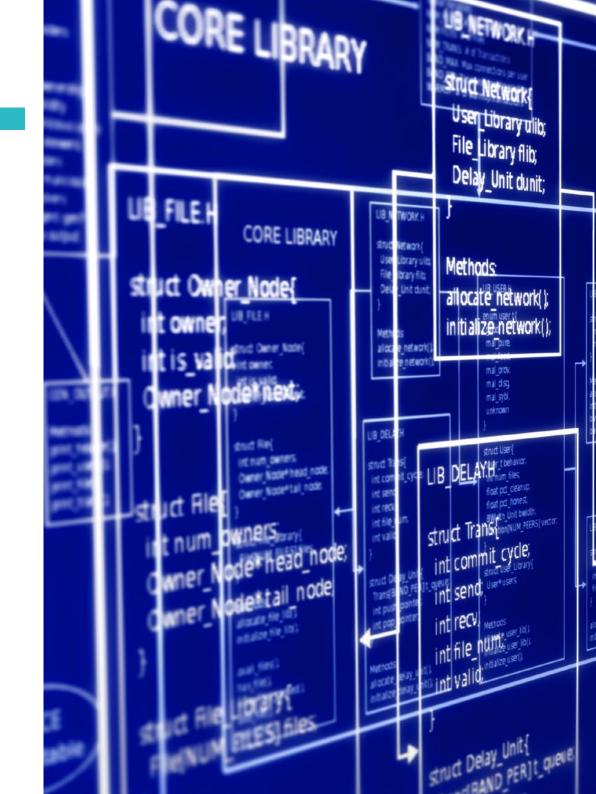
03
Structure and Content

The content structure has been designed by a team of Computer Engineering professionals, aware of the relevance of current study in order to deepen this area of knowledge in order to humanistically enrich students and raise their knowledge level in Advanced Algorithms Design through the latest educational technologies available.

This Postgraduate Certificate in Advanced Algorithms Design contains the most complete and updated learning program in the market"

Module 1. Advanced Algorithms Design

A unique, key, and decisive training experience to boost your professional development"

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"

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 has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. 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 course, students 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 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.

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.

30%

10%

8%

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.

05

Certificate

The Postgraduate Certificate in Advanced Algorithms Design guarantees, in addition to the most rigorous and updated 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 Advanced Algorithms Design** 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 Advanced Algorithms Design**

Official Nº of Hours: **150 h.**

tech technological university

Awards the following

CERTIFICATE

to

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

POSTGRADUATE CERTIFICATE

in

Advanced Algorithms Design

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

Unique TECH Code: AFWOR023S   techtitute.com/certificates

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

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