Postgraduate Certificate
Data Structure

tech *technological university*

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Postgraduate Certificate
Data Structure

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

Website: **www.techtitute.com/pk/information-technology/postgraduate-certificate/data-structure**

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01
Introduction

The student will learn about different applications and purposes of database systems, as well as their operation and architecture, with this high-level education. You will develop your skills and knowledge in Data Structure, in a practical and rigorous way, with the best didactic resources.

tech

This Postgraduate Certificate will allow you to update your knowledge in Data Structure in a practical way, 100% online, without renouncing to the maximum academic rigor"

This program is intended for those people interested in achieving a higher level of knowledge in Data Structure. The main objective is to educate the student to apply in real world the knowledge acquired in this Postgraduate Certificate, in a working environment that reproduces

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

The students will be able to take the opportunity and study this program in a 100% online format, without neglecting their obligations.

This **Postgraduate Certificate in Data Structure** 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 Data Structuring
- Its graphic, schematic and eminently practical contents provide scientific and practical information on data structure
- News on the latest developments in Data Structuring
- 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 sucess as an IT Engineer"

Take advantage of the latest educational technology to get updated in Data Structure without leaving home.

Learn about the latest techniques in Data Structure from experts in the field.

" *Specialize in Data Structure with this intensive program, from the comfort of your home"*

It includes in its teaching staff professionals belonging to the field of computer engineering, who pour their work experience into this program, in addition to 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 to say, a simulated environment that will provide an immersive learning programmed to prepare for real situations.

The program design is based on Problem-Based Learning, by means of which the teacher must try to solve the different professional practice situations that arise during the course. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned experts in Data Structure with extensive teaching experience.

02
Objectives

The objective of this program is to provide IT professionals with the knowledge and skills necessary to carry out their activity using the most advanced protocols and techniques of the moment. Through a work approach that is totally adaptable to the student, this course will progressively lead them to acquire skills that will propel them to a higher professional level.

Achieve the level of knowledge you desire and dominate fundamental concepts in Data Structure with this high-level education"

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 a wide knowledge in computing field, computer structure and data structure, including mathematical, statistical and physical basis essential in engineering

Enroll in the best Data Structure program in the current university panorama"


```
student@student-virtual-machine: ~/Programming/lab/lab4
Deg  Radians   RealSine      MySin      RealCos
0    0         0             0          1
15   0.261799  0.258819      0.258819   0.965926
30   0.523599  0.5           0.5        0.866025
45   0.785398  0.707107      0.707107   0.707107
60   1.0472    0.866025      0.866025   0.5
75   1.309     0.965926      0.965926   0.258819
90   1.5708    1             -nan       6.12323e-
105  1.8326    0.965926      -nan       -0.258819
120  2.0944    0.866025      -nan       -0.5
135  2.35619   0.707107      -nan       -0.707107
150  2.61799   0.5           -nan       -0.866025
165  2.87979   0.258819      -nan       -0.965926
180  3.14159   1.22465e-16   -nan       -1
195  3.40339   -0.258819     -nan       -0.965926
210  3.66519   -0.5          -nan       -0.866025
225  3.92699   -0.707107     -nan       -0.707107
240  4.18879   -0.866025     -nan       -0.5
255  4.45059   -0.965926     -nan       -0.258819
270  4.71239   -1            -nan       -1.83697e
285  4.97419   -0.965926     -nan       0.258819
300  5.23599   -0.866025     -nan       0.5
315  5.49779   -0.707107     -nan       0.707107
330  5.75959   -0.5          -nan       0.866025
345  6.02139   -0.258819     -nan       0.965926
360  6.28319   -2.44929e-16  -nan       1

student@student-virtual-machine:~/Programmin
```

```
MyCos
1
0.965926
0.866025
0.707107
0.5
0.258819
-17 0
9      -0.258819
       -nan
7      -nan
6      -nan
6      -nan
       -nan
6      -nan
6      -nan
7      -nan
       -nan
9      -nan
e-16-nan
       -nan
       -nan
       -nan
       -nan
       -nan
        -nan

ng/lab/lab4$ █
```

Specific Objectives

- To learn the basics of programming in C++ language, including classes, variables, conditional expressions and objects
- To understand abstract data types, linear data structure types, simple and complex hierarchical data structures, as well as their implementation in C++
- To understand the operation of advanced data structures other than the usual ones
- To know theory and practice related to the use of priority mounds and queues.
- To learn how *Hash* tables work as abstract data types and functions
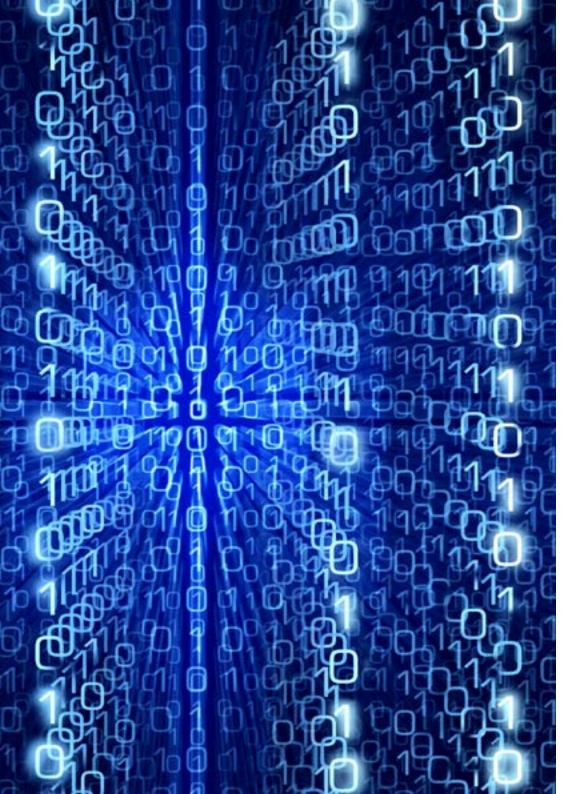- To understand graph theory, as well as advanced graph algorithms and concepts

03
Structure and Content

The content structure has been designed by a team of computer engineering professionals, aware of education's current relevance to deepen in this area of knowledge in order to humanistically enrich the student and raise their knowledge level in Data Structure by means of the latest educational technologies available.

This Postgraduate Certificate in Data Structure contains the most complete and updated learning program in the market"

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

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.

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.

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

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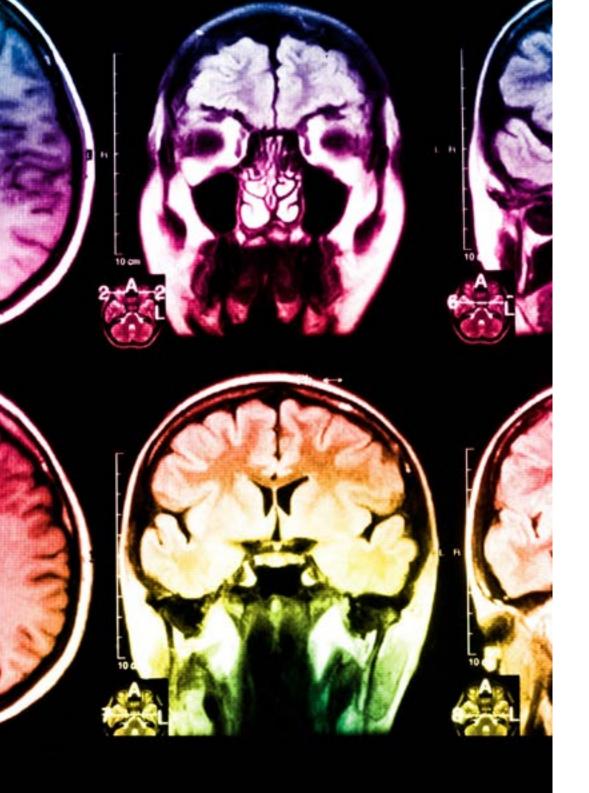
We enhance the Case Study with the best 100% online teaching method: Relearning.

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 Data Structure ensures, in addition to the most rigorous and updated training, access to a 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 Data Structure** contains the most complete and updated educational 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 Data Structure**

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

Data Structure

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: AFWORD23S   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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