

Postgraduate Diploma Programming and Costing of a Technology Project

USE LOG PASSIVE

Timeline Total Use=2540 Hr.

◆ Main Project

◆ Final Project



Postgraduate Diploma Programming and Costing of a Technology Project

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

Website: www.techtute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-programming-costing-technology-project

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01

Introduction

Any technology project must have a budget and a comprehensive schedule detailing the activities and steps to be followed to successfully complete the work. This program will cover the fundamental aspects that will help computer science and engineering students to develop a cost plan, using a series of tools and techniques to obtain useful information. Students will also learn how to make a correct estimation of the time and scope of a project, making a proper planning, using methods such as Scope Creep and Gold Plating. All this will mean a great contribution to your professional profile and job improvement.



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*Elaborate a work breakdown structure,
setting short-term goals”*

In this Postgraduate Diploma, students will enhance their management, organization, planning and analysis skills to ensure the success of their Technology Projects. To achieve this, we will begin by defining the role of each member of the team, starting with the manager in charge. This will be essential to know the degree of responsibility of each of the parties.

After the planning is done, some changes may occur that were not considered and that may cause an increase in the time it will take to execute the work, also increasing costs. With this program, students will learn how to avoid these types of incidents by developing different action strategies based on the scope and requirements of the project.

In addition, they will have the opportunity to perform a work breakdown structure, which consists of defining a hierarchical structure that divides each activity into smaller, more manageable tasks, allowing users to view each deliverable independently. This will help to better understand the importance of knowing how to manage working time in order to maximize the benefits to the company.

Ultimately, students will evaluate a cost management plan, in which some tools and techniques are used to ensure results when submitting a budget for approval. To do this, they will need to know what information they need to enter into the management tools. One of them is the "earned value", which is a parameter that reports the cost and time deviations involved for the project. As a result, students will be able to gain in-depth knowledge of all these procedures, making them more effective in their daily work.

With the knowledge provided in this Postgraduate Diploma, the student will be able to make accurate, fast and effective decisions, which will be supported by a series of concrete data on the reality of the job.

This **Postgraduate Diploma in Programming and Costing of a Technology Project** 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 Technology Project Management
- ◆ The graphic, schematic and practical contents of the system provide business and practical information on those 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



Ensures the success of a technology project by performing cost management that helps to make the best use of time"

“

Learn more than you can imagine and jump-start your career”

The program’s teaching staff includes professionals from the sector who contribute their work experience to this training 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 training programmed to train 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 during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

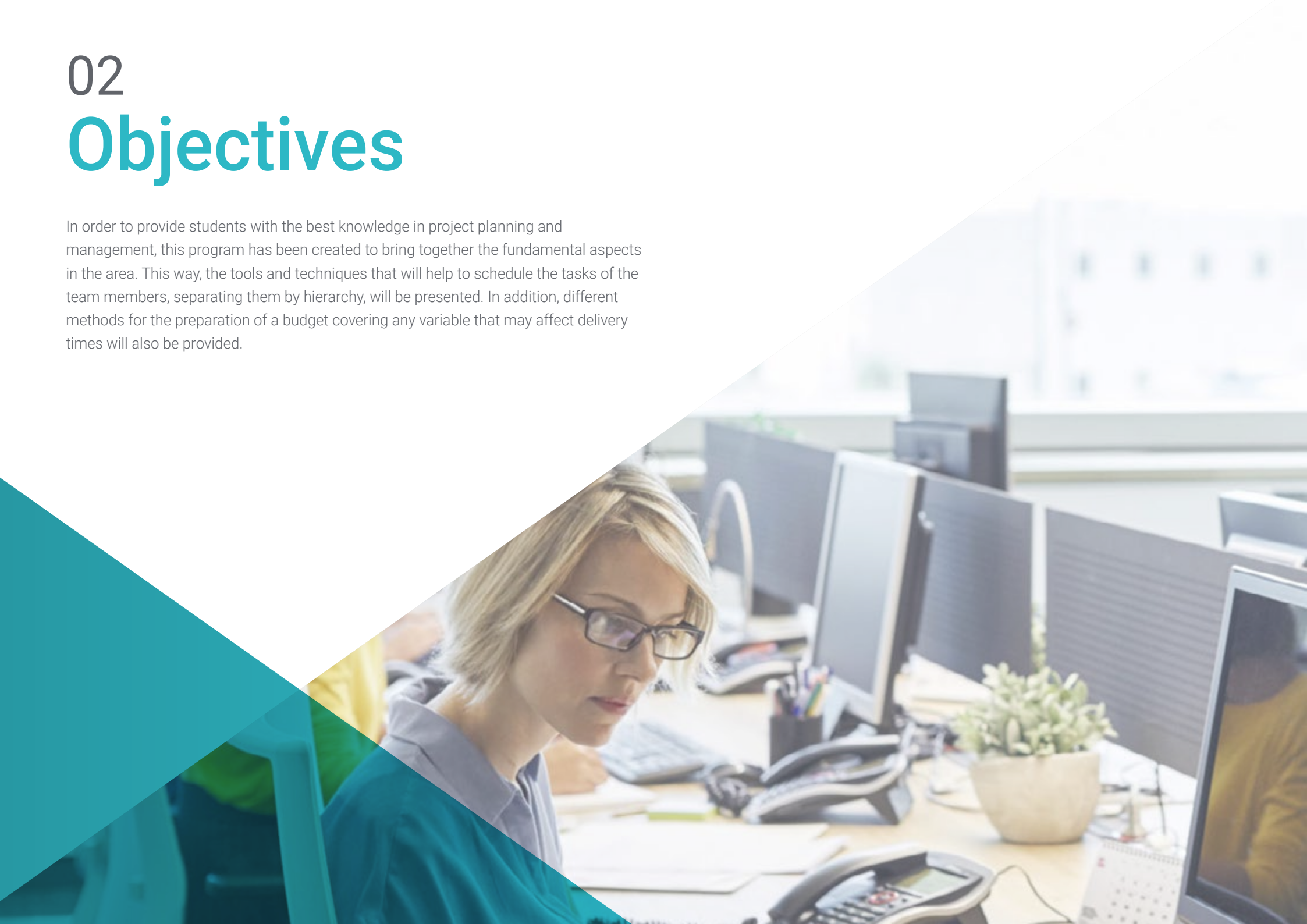
With this program, you will learn the fastest way to see and test an earned value technique.

Objectively estimate all the activities and resources needed for your IT project.



02 Objectives

In order to provide students with the best knowledge in project planning and management, this program has been created to bring together the fundamental aspects in the area. This way, the tools and techniques that will help to schedule the tasks of the team members, separating them by hierarchy, will be presented. In addition, different methods for the preparation of a budget covering any variable that may affect delivery times will also be provided.



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TECH Technological University offers you the best program to achieve your goals: planning and managing a technological project"



General Objectives

- ◆ Develop skills and abilities required to make decisions in all types of projects, especially in technological projects and those developed in multidisciplinary contexts and environments
- ◆ Acquire the ability to analyze and diagnose business and management problems.
- ◆ Master advanced business management tools
- ◆ Provide a global and strategic vision of all operational departments of the company
- ◆ Take responsibility and think in a transversal and integrative way to analyze and solve situations in uncertain environments
- ◆ Develop acts of incorporation of Technology Projects
- ◆ Carry out a comprehensive control of all projects
- ◆ Knowing how to estimate time in each process of project design and development
- ◆ Evaluate the processes and estimate the cost of developing a technology project
- ◆ Give importance to the quality of the projects
- ◆ Understanding the cost of failing to meet project quality
- ◆ Perform quality controls at each stage of the project
- ◆ Gain skills and techniques to manage human resources and be able to resolve conflicts in the team
- ◆ Knowing the emerging trends in the market
- ◆ Develop communication skills to communicate the reality of a technology project
- ◆ Understand and manage the risks of technology projects





Specific Objectives

Module 1. Introduction to Technology Project Design and Management and Technology Project Integration Management

- ◆ Introduce students to the basic concepts of Technology Project Management, such as the role of the manager and the definition of the project
- ◆ Know the regulations and best practices of technology project management, PRINCE2, PMP and ISO 21500:2012
- ◆ Define the plan for the design and management of Technology Projects

Module 2. Technology project scope management

- ◆ Perform scope analysis of a technology project and product
- ◆ Know the basic concepts for estimating the scope of a technological project
- ◆ Identify the benefits of a project by means of Scope Creep and Gold Plating
- ◆ Creating the Work Breakdown Structure (WBS)

Module 3. Time management for technology projects

- ◆ Estimate the duration of project tasks by means of different strategies, such as three-value estimation, analogous estimation, bottom-up estimation, etc.
- ◆ Evaluate and deconstruct the activities to be carried out, starting with their definition and ending with the expected objectives
- ◆ Know the different software that help in time management

Module 4. Technology project cost management

- ◆ Learn how to make a cost management plan using the relevant planning tools and techniques
- ◆ Know useful information to prepare a budget
- ◆ Study the Earned Value Management technique (EVM), analyzing the base and state variables

03

Course Management

The faculty of this program is made up of a group of highly qualified experts with years of experience and studies in the sector. In this way, the best content will be provided so that students can apply it almost immediately in their daily functions within a company. This will represent a great improvement opportunity for those who wish to test their skills and capabilities in a technology team.





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*Learn how to perform adequately
in your profession with the help
of leading professionals”*

Management



Dr. Romero Mariño, Brunil Dalila

- Database Administrator, OCREM Association, Granada, Spain
- Software Projects and Technology Architecture Consultant for different companies, Venezuela
- University Professor of Computer Science. Department of Processes and Systems, Simón Bolívar University (USB), Venezuela
- Researcher in Software Engineering and related areas, Department of Processes and Systems, Simón Bolívar University (USB), Venezuela
- Systems Engineer from Bicentenario de Aragua University (UBA), Venezuela
- Doctorate in Information and Communication Technologies from the University of Granada (UGR), Spain
- Master's Degree in Systems Engineering, Simón Bolívar University (USB), Venezuela
- Expert in Communications and Data Communication Networks, Central University of Venezuela (UCV)



04

Structure and Content

All the content of this Postgraduate Diploma has been carefully designed to meet the demands of an industry that requires IT specialists with specific skills. Therefore, we will begin by presenting the basic aspects of project planning in the technology department of a company. The first one is essential to learn how to manage the time of each task, and the second one to elaborate a budget that adapts to the needs of the job.



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*Know the influence of the organization
in the design and management of
Technology Projects"*

Module 1. Introduction to Technology Project Design and Management and Technology Project Integration Management

- 1.1. Introduction to Technology Project Management
 - 1.1.1. The Role of the Project Manager
 - 1.1.2. Project Definition
 - 1.1.3. Organizational Structure
- 1.2. Project Management, Program Management, and Portfolio Management
 - 1.2.1. Portfolios, Programs and Projects
 - 1.2.2. Strategic Management
- 1.3. Standards and Good Practices for Technology Project Management
 - 1.3.1. PRINCE2
 - 1.3.2. PMP
 - 1.3.3. ISO 21500:2012
- 1.4. Organizational Influences on Technology Project Design and Management
 - 1.4.1. Environmental Factors of a Company
 - 1.4.2. Assets of an Organization's Processes
- 1.5. Technology Project Management Processes
 - 1.5.1. Technology Project Life Cycle
 - 1.5.2. Process Groups
 - 1.5.3. Dynamics of Process Groups
- 1.6. Development of the Technology Projects Constitution Act
 - 1.6.1. Definition of the Technology Projects Constitution Act
 - 1.6.2. Tools and Techniques
- 1.7. Development of the Plan for Technology Project Design and Management
 - 1.7.1. Definition of the Plan for Technology Project Design and Management
 - 1.7.2. Tools and Techniques.
- 1.8. Knowledge Management of Technological Projects
 - 1.8.1. Importance of Knowledge Management in Technology Projects
 - 1.8.2. Tools and Techniques
- 1.9. Monitoring the Technology Projects Work
 - 1.9.1. Work Monitoring and Control
 - 1.9.2. Follow-up Reports on Technological Projects
 - 1.9.3. Tools and Techniques

- 1.10. Integrated Control of Changes in Technological Projects
 - 1.10.1. Objectives and Benefits of Project Change Control
 - 1.10.2. CCB (*Change Control Board*)
 - 1.10.3. Tools and Techniques
- 1.11. Delivery and Closing of Technology Projects
 - 1.11.1. Objectives and Benefits of Project Closure
 - 1.11.2. Tools and Techniques

Module 2. Technology Project Scope Management

- 2.1. Introduction to Scope Management
 - 2.1.1. Project Scope
 - 2.1.2. Product Scope
- 2.2. Fundamentals of Scope Management
 - 2.2.1. Basic Concepts
 - 2.2.2. Scope Baseline
- 2.3. Benefits of Scope Management
 - 2.3.1. Stakeholder Expectation Management
 - 2.3.2. *Scope Creep* and *Gold Plating*
- 2.4. Considerations for Adaptive Environments
 - 2.4.1. Types of Adaptive Projects
 - 2.4.2. Scope Definition in Adaptive Projects
- 2.5. Scope Management Planning
 - 2.5.1. Scope Management Plan
 - 2.5.2. Requirements Management Plan
 - 2.5.3. Tools and Techniques
- 2.6. Gathering Requirements
 - 2.6.1. Gathering and Negotiation of Requirements
 - 2.6.2. Tools and Techniques
- 2.7. Scope Definition
 - 2.7.1. Project Scope Statement
 - 2.7.2. Tools and Techniques
- 2.8. Creation of the Work Breakdown Structure (WBS)
 - 2.8.1. Work Breakdown Structure (WBS)
 - 2.8.2. Types of EDT
 - 2.8.3. *Rolling Wave*
 - 2.8.4. Tools and Techniques

- 2.9. Scope Validation
 - 2.9.1. Quality vs. Validation
 - 2.9.2. Tools and Techniques
- 2.10. Scope Control
 - 2.10.1. Project Management Data and Information
 - 2.10.2. Types of Work Performance Reports
 - 2.10.3. Tools and Techniques

Module 3. Time Management for Technology Projects

- 3.1. Estimated Duration of Project Tasks
 - 3.1.1. Three-Point Estimation
 - 3.1.1.1. Most Likely
 - 3.1.1.2. Best-Case
 - 3.1.1.3. Worst-Case
 - 3.1.2. Analogous Estimate
 - 3.1.3. Parametric Estimation
 - 3.1.4. Bottom-up Estimates
 - 3.1.5. Decision-Making
 - 3.1.6. Expert Judgment
- 3.2. Definition of Activities and Breakdown of Project Work
 - 3.2.1. Decomposition
 - 3.2.2. Define Activities
 - 3.2.3. Breakdown of Project Work
 - 3.2.4. Activity Attributes
 - 3.2.5. List of Milestones
- 3.3. Sequencing of activities
 - 3.3.1. List of Activities
 - 3.3.2. Attributes of the Activities
 - 3.3.3. Method of Diagramming Provenance
 - 3.3.4. Determination and Integration of Units
 - 3.3.5. Advances and Delays
 - 3.3.6. Network Diagram of the Project Schedule
- 3.4. Estimation of Activity Resources
 - 3.4.1. Register of Assumptions
 - 3.4.2. List of Activities
 - 3.4.3. Attributes of the Activities
 - 3.4.4. Register of Assumptions
 - 3.4.5. Lessons Learned Register
 - 3.4.6. Project Team Assignments
 - 3.4.7. Resource Breakdown Structure
- 3.5. Estimated Duration of Activities
 - 3.5.1. Law of Diminishing Returns
 - 3.5.2. Number of Resources
 - 3.5.3. Technological Advances
 - 3.5.4. Staff Motivation
 - 3.5.5. Project Documentation
- 3.6. Schedule Development
 - 3.6.1. Schedule Network Analysis
 - 3.6.2. Critical Path Method
 - 3.6.3. Resource Management
 - 3.6.3.1. Resource Leveling
 - 3.6.3.2. Stabilization of Resources
 - 3.6.4. Advances and Delays
 - 3.6.5. Schedule Compression
 - 3.6.5.1. Intensification
 - 3.6.5.2. Fast Execution
 - 3.6.6. Baseline Schedule
 - 3.6.7. Project Timeline
 - 3.6.8. Schedule Data
 - 3.6.9. Project Schedules
- 3.7. Types of Relationships and Types of Dependencies between all Project Activities
 - 3.7.1. Mandatory Dependencies
 - 3.7.2. Discretionary Units
 - 3.7.2.1. Preferred Logic
 - 3.7.2.2. Preferential Logic
 - 3.7.2.3. Soft Logic
 - 3.7.3. External Units
 - 3.7.4. Internal Units

- 3.8. Time Management Software in Technology Projects
 - 3.8.1. Analysis of Different Software
 - 3.8.2. Types of Software
 - 3.8.3. Functionalities and Coverage
 - 3.8.4. Uses and Advantages
- 3.9. Schedule Control
 - 3.9.1. Job Performance Information
 - 3.9.2. Schedule Forecasts
 - 3.9.3. Change Requests
 - 3.9.4. Update to the Time Management Plan
 - 3.9.5. Project Document Updates
- 3.10. Time Recalculation
 - 3.10.1. Critical Path
 - 3.10.2. Calculation of Minimum and Maximum Times
 - 3.10.3.1. What Is It?
 - 3.10.3.2. How to Use It
 - 3.10.4. Total Slack
 - 3.10.5. Free Slack

Module 4. Technology Project Cost Management

- 4.1. What Is the Cost Management Plan?
 - 4.1.1. Planning Tools and Techniques
 - 4.1.2. Cost Planning Results
- 4.2. Estimate Costs. Types of Estimates. Reserve Analysis
 - 4.2.1. Useful Information for Cost Estimation
 - 4.2.2. Tools and Techniques for Cost Estimation
 - 4.2.3. Results of Cost Budget Preparation
- 4.3. Types of Project Costs
 - 4.3.1. Direct and Indirect Costs
 - 4.3.2. Fixed and Variable Costs



- 4.4. Project Evaluation and Selection
 - 4.4.1. Financial Dimensions of a Project
 - 4.4.2. VAN
 - 4.4.3. TIR & RRN
 - 4.4.4. Recovery Period or *Payback*
- 4.5. Setting the Budget
 - 4.5.1. Useful Information for the Preparation of the Project Budget
 - 4.5.2. Tools and Techniques for Cost Budget Preparation
 - 4.5.3. Results of Project Budget Preparation
- 4.6. Cost Projections
 - 4.6.1. Cost Management Data and Information
 - 4.6.2. Types of Cost Performance Reports
- 4.7. Earned Value Management Technique (EVM)
 - 4.7.1. Base Variables and Status Variables
 - 4.7.2. Forecasts
 - 4.7.3. Emerging Techniques and Practices
- 4.8. Project Cash Flow
 - 4.8.1. Types of cash flows
 - 4.8.2. Estimation of Net Cash Flows Associated with a Project
 - 4.8.3. Discounted Cash Flows
 - 4.8.4. Application of Risk to Cash Flows
- 4.9. Cost Control
 - 4.9.1. Objectives and Benefits of Cost Control
 - 4.9.2. Tools and Techniques

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Enroll in this program and become a computer scientist capable of offering quality work in your company"

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.

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

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.



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.





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 Diploma in Programming and Costing of a Technology Project guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 Diploma in Programming and Costing of a Technology Project** 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 Diploma** 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 Diploma in Programming and Costing of a Technology Project**

Official N° of Hours: **600 h.**



*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

tech technological
university

personalized service innovation

knowledge present

online training

development language

classroom

Postgraduate Diploma Programming and Costing of a Technology Project

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

Postgraduate Diploma Programming and Costing of a Technology Project

